

ISSUE NO.

21

CATEGORY	NO.
PBX CABLING DIAGRAM	SD-65746-01
756A FEATURE CABLE	SD-66920-01
EQUIPMENT INFORMATION	J-58829H-() J-58823AP() J-58829AS()
VOLTAGE REDUCTION DETECTOR	ED-5E009-() SD-5E037-01

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

DWG ISSN	CD ISSUE	DWG ISSN	CD ISSUE	DWG ISSN	CD ISSUE
1	1	20	20	30	APP 11
RA	20	APP 2A	APP 2B	6A	APP 11
7D	APP 5D	8B	APP 6B	9B	APP 7B
10B	APP 8B	11B	APP 9B	12B	3B
13D	APP 13	14B	APP 14	15A	APP 15
16D	KB	17B	APP 17		
DWG ISSUE	CD ISSUE	DATE ISSUED	DRAWN BY	APP'D BY	
18A	4B APP 2A	9-13-62	RT AS	SZ H.F. PD	
19B	4B APP 3B	4-30-63	EG LWH	EG LWH	
20AC	4B APP 4C	4-30-63	EG LWH	EG LWH	
71B	4B APP 5B	7-30-63	WVH WVH	PD H.F.	
22AC	4B APP 6C	4-6-63	JJG RG	EG H.F. PI	
23D	5D	4-14-64	ZEN DHC	GKO ARM	
24D	5D APP 1D	8-21-64	WPA SAK	AEK RAV	
25D	5D APP 2D	2-8-65	GAP SAK	GAM KFJ	
26AC	5D APP 3AC	3-8-65	GAP SAK	GAM KFJ	
27D	5D APP 4D	9-15-65	EWE SAK	RRS ZAV	
28D	5D APP 5D	8-4-65	PJ SAK	SRH GKH	
29B	APP 6B	3-29-66	JJH SAK	MES RAV GFH	
30D	6D	6-24-66	DWB HGB	LAG LHJ	
31D	6D APP 1D	10-27-66	PMC RJS	KRS LAH	
32D	6D APP 2D	5-19-67	EWE SAK	JJM LAH	
33D	7D	12-8-67	ROZ PJS	JJM LHJ	
34D	7D APP 1D	12-8-67	ROZ PJS	JJM LHJ	
35D	7D APP 2D	12-8-67	ROZ PJS	JJM LHJ	
36B	7D APP 3B	7-3-68	ROZ PJS	JJM LHJ	
37B	7D APP 4B	9-3-68	ROZ PJS	JJM LHJ	
38D	7D APP 5D	9-3-68	ROZ PJS	JJM LHJ	

SD-65741-01		IJO7	AT&TCO STANDARD	
PBX SYSTEMS NO. 756A LINE, LINK, AND MARKER CIRCUIT		(2)	SD-65741-01-A1	
BELL TELEPHONE LABORATORIES		DWG. SIZE 6S	106 SHEETS PRINTED IN U.S.	

SHEET INDEX (CONT)

[illegible]

(CONT ON SHEET A3)

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LINE, LINK, AND MARKER CIRCUIT SD-65741-01-A2

BELL TELEPHONE LABORATORIES
(INCORPORATED)

2
DWG SIZE
65

PRINTED IN U. S. A.

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DRAWING	ISSUE	DATE	BY	CHKD	APPD	REV
12B	1	01/11/01	W/H	P/D		
13D	1	01/11/01	W/H	P/D		
14B	1	01/11/01	W/H	P/D		
15A	1	01/11/01	W/H	P/D		
16B	1	01/11/01	W/H	P/D		
17B	1	01/11/01	W/H	P/D		
19B	1	01/11/01	W/H	P/D		
20AC	1	01/11/01	W/H	P/D		
21B	1	01/11/01	W/H	P/D		
22AC	1	01/11/01	W/H	P/D		
23D	1	01/11/01	W/H	P/D		
24D	1	01/11/01	W/H	P/D		
25D	1	01/11/01	W/H	P/D		
26AC	1	01/11/01	W/H	P/D		
27D	1	01/11/01	W/H	P/D		
29B	1	01/11/01	W/H	P/D		
30D	1	01/11/01	W/H	P/D		
31D	1	01/11/01	W/H	P/D		
32D	1	01/11/01	W/H	P/D		
33D	1	01/11/01	W/H	P/D		
34D	1	01/11/01	W/H	P/D		
35D	1	01/11/01	W/H	P/D		
36B	1	01/11/01	W/H	P/D		
37B	1	01/11/01	W/H	P/D		
38D	1	01/11/01	W/H	P/D		

3- PHOENIX 6188
① YES/ING CLOSING
88740

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BELL TELEPHONE LABORATORIES
INCORPORATED

APPARATUS INDEX

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
A	3685	20	EXT
ACA	8A7	7	6-V
ACB	8B7	7	6-U
ALBA	22B2,40A1	9,22	6-P
ALBB	22D2,40B1	9,22	6-P
ARBA	2A8	4	6-AB
ARBB	2C8	4	6-AA
B	36D5	20	EXT
BSYA	12D3	7	6-V
BSYB	12E3	7	6-U
BSYBA	12F3	7	6-U
BTCA	15H2	8	6-T
BTCS	15H2	8	6-S
BTDA	16B4	8	6-T
BTDB	16F4	8	6-S
BTTC	16D4	8	6-R
BYA	12C3	7	6-V
BYB	12F2	7	6-U
CCC	16D1	8	6-R
CO20-29	35H3	3	SWBD OR
CO30-79	1E4	3	APP CAB
COA	16B4	8	6-T
COAA	16B4	8	6-P
COB	16E4	8	6-S
COBA	16E4	8	6-R
COAL	32D1	11	1AB
CONA	16B4	8	6-T
CONAA	16A4	8	6-T
CONB	16E4	8	6-S
CONBA	16E4	8	6-S
COS	23D4	9	6-P
COSA	22D4,40F3	9,22	6-P
COSB	22E4,40H3	9,22	6-P
COTA	15F6	8	6-T
COTB	15G6	8	6-S
DCKA	26A5	8	6-R
DCKB	26C5	8	6-R
HCA	9B1	7	6-Y
HCB	9C1	7	6-Y
HCKA	9B4	7	6-V
HCKB	9C4	7	6-U
HMTA	15C2	8	6-T
HMTAA	15C2	8	6-T
HMTB	15E2	8	6-S
HMTBA	15D2	8	6-S
ICTA	16D4	8	6-T
ICTB	16G4	8	6-S
IN20-24	35G5	1	2-N
IN25-29	35G5	1	2-P
JR0	13A1	7	6-X
JR1	13C1	7	6-X
JR2	13D1	7	6-X
JR3	13E1	7	6-X
JR4	13F1	7	6-X
JR5	13G1	7	6-X
JRAL	29A9	11	1-AA
JREA	13B8	7	6-Y
JREB	13B8	7	6-X
JTA	14A6	7	6-Y
JTAA	14H5	7	6-Y
JTB	14B6	7	6-X
JTBA	14H7	7	6-X
L20-24	35C6	1	2-N
L25-29	35C6	1	2-P
L30-39	1D6	1	2-L
L40-59	1D6	2	3-L
L60-79	1D6	2	4-L
LAL1	32B4	11	1-AA

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
LAL2	32B7	11	1-AA
LAL2A	32A7	11	1-AA
LBA	22B2,40A1	9,22	6-Q
LBB	22E2,40C1	9,22	6-Q
LCK1	24F3	9,22	6-P
LCK2	24H3	9,22	6-P
LEA	23A4,38G2	9,22	6-Q
LEAA	23B4,38H2	9,22	6-Q
LEB	23B4,38H7	9,22	6-Q
LEBA	23C4,38H7	9,22	6-Q
LSHA	22A2,40B3	9,22	6-N
LSHB	22C2,40C3	9,22	6-N
LT2	20A2,38C1	9,22	6-N,P
LT3	20D2,38E1	9,22	6-N,P
LT4	20F2,38E6	9,22	6-N,P
LT5	20A7,38E6	9,22	6-N,P
LT6	20D7,39C1	9,22	6-N,P
LT7	20F7,39E1	9,22	6-N,P
LT8	21A2,39C6	9,22	6-N,P
LT9	21D2,39E6	9,22	6-N,P
LTA	22A7,40A7	9,22	6-Q
LTA1	22A7,40A7	9,22	6-Q
LTB	22A4,40B7	9,22	6-Q
LTBA	22B4,40B7	9,22	6-Q
LTC	22G1,40C1	9,22	6-N
LTCB	22G5,40D1	9,22	6-N
LTS2	21F2	9	6-P
LTS3	21A7	9	6-P
LTS4	21C7	9	6-P
LTS5	21E7	9	6-P
LTS6	21F7	9	6-P
LTS7	22F1	9	6-P
LTS8	22E1	9	6-P
LTS9	22E1	9	6-P
LUCA	8F5	7	6-V
LUCB	8H5	7	6-U
MAL	30D0	11	1-AB
MON 2-7	1F3	3	SWBD
MON A,B,C	1H2	3	APP CAB
MS	36F5	21	EXT
MTA	25D2	10	6-K
MTB	25D7	10	6-J
NAA	25B2	10	6-K
NAB	25B7	10	6-J
NCA	25C2	10	6-K
NCB	25C7	10	6-J
NT	18G5	9,22	6-L,M
OT20-24	35F5	1	2-N
OT25-29	35F5	1	2-P
RC	2E8	4	6-AA
RI	2G8	4	6-AA
RAOA	17A7	5	6-G
RAOB	17A7	5	6-G
RA1A	17C7	5	6-G
RA1B	17C7	5	6-G
RCAO	5A1	5	6-H
RCA1	5E1	5	6-H
RCBO	5B1	5	6-H
RCB1	5E1	5	6-H
RCCO	5C1	5	6-H
RCCI	5F1	5	6-H
RCD0	5C1	5	6-H
RCD1	5G1	5	6-H
RCEO	5D1	5	6-H
RCE1	5G1	5	6-H
RCKA	26A7	8	6-R
RCKB	26B7	8	6-R
RCTA	14C6	7	6-Y
RCTAA	14C6	7	6-V

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
RCTB	14D6	7	6-X
RCTBA	14D6	7	6-U
RGA	17E7	5	6-G
RGAA	17F7	5	6-G
RGB	17G7	5	6-G
RGBA	17H7	5	6-G
RHKA	17A1	5	6-G
RHKB	17B1	5	6-G
RLO	37E6	19	EXT
RLI	37B6	19	EXT
RLA	15A6	8	6-T
RLAA	15B6	8	6-T
RLAB	15C6	8	6-T
RLAL	30C2	11	1-AA
RLB	15C6	8	6-S
RLBA	15D6	8	6-S
RLBB	15E6	8	6-S
RLSA	25G1	10	6-K
RLSAA	25F1	10	6-K
RLSB	25G1	10	6-J
RLSBA	25H1	10	6-J
RPO	3G1	4	6-Z
RPI	3G2	4	6-Z
RPAO	5H6	7	6-W
RPA1	5H6	7	6-W
RUCA	8D5	7	6-V
RUCB	8E5	7	6-U
S0	10C0	7	6-W
S1	10C2	7	6-W
S2	10C4	7	6-W
S3	10C5	7	6-W
S4	10C7	7	6-W
S5	11C0	7	6-W
S6	11C2	7	6-W
S7	11C4	7	6-W
S8	11C5	7	6-W
S9	11C7	7	6-W
SAA	25B2	10	6-K
SAB	25B7	10	6-J
SEA	12D6	7	6-V
SEAA	12D6	7	6-V
SEB	12F6	7	6-U
SEBA	12F6	7	6-U
SL20-29	35F8	17	2-Q
SMCO	24A0	16	4-AA
SMC1	24C0	15	3-V
SMC2	24D0	1	2-L
SMC3	24D0	1	2-L
SMC4	24E0	15	3-V
SMC5	24E0	15	3-V
SMC6	24F0	16	4-AA
SMC7	24G0	16	4-AA
SMCB	24G0	16	4-AA
SMRA	15E2	8	6-T
SMRAA	15F2	8	6-T
SMRB	15F2	8	6-S
SMRBA	15G2	8	6-S
SMTA	23F2	9,22	6-Q
SMTB	23G2	9,22	6-Q
SOA	15A2	8	6-R
SOB	15B2	8	6-R
STA	25A2	10	6-K
STAR	25A2	10	6-K
STB	25A7	10	6-J
STBR	25A7	10	6-K
T2	3A1	4	6-AA
T3	3C1	4	6-AA
T4	3A4	4	6-AA
T5	3C4	4	6-AA

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
T6	3A8	4	6-AA
T7	3C8	4	6-AA
TA2	2D4	4	6-AB
TA3	2D4	4	6-AB
TA4	2D4	4	6-AB
TA5	2D4	4	6-AB
TA6	2D4	4	6-AB
TA7	2D4	4	6-AB
TAA	25G7	10	6-K
TAAL	30F2	11	1-AA
TAB	25H7	10	6-J
TACA	4A8	7	6-Y
TACAA	4B8	7	6-Y
TACB	4B8	7	6-Y
TACBA	4C8	7	6-Y
TAL	31A0	11	1-AA
TCK1	3F0	4	6-Z
TCK2	3G0	4	6-Z
TCK3	3F0	4	6-Z
TCK4	3H0	4	6-Z
TCS2	4A1	1	2-M
TCS3	4D1	1	2-M
TCS4	4F1	2	3-M
TCS5	4A3	2	3-M
TCS6	4D3	2	4-M
TCS7	4F3	2	4-M
TEA0	2E1	4	6-AB
TEA1	2F1	4	6-AB
TEA2	2F1	4	6-AB
TEA3	2F1	4	6-AB
TEB0	2G1	4	6-AA
TEB1	2H1	4	6-AA
TEB2	2H1	4	6-AA
TEB3	2H1	4	6-AA
THC2	4B1	1	2-M
THC3	4D1	1	2-M
THC4	4G1	2	3-M
THC5	4B3	2	3-M
THC6	4D3	2	4-M
THC7	4G3	2	4-M
TKC	5A6	6	4-Z
TKB	5D6	1	2-L
TKS	5F6	6	4-Z
TKAO	5B6	6	4-Z
TKA8	5D6	1	2-L
TKA9	5F6	6	4-Z
TKB0	5C6	6	4-Z
TKB8	5E6	1	2-L
TKB9	5G6	6	4-Z
TM2	4C1	1	2-M
TM3	4E1	1	2-M
TM4	4H1	2	3-M
TM5	4C3	2	3-M
TM6	4E3	2	4-M
TM7	4H3	2	4-M
TMA	25G4	10	6-K
TMB	25H4	10	6-J
TOA	25F7	10	6-K
TOAL	33B2	11	1-AA
TOALA	33B2	11	1-AA
T0B	25F7	10	6-J
TOKA	26F2	10	6-K
TOKB	26G2	10	6-J
TOLA	26F7	10	6-K
TOLB	26G7	10	6-J
TP2	3G4	4	6-Z
TP3	3G5	4	6-Z
TP4	3G6	4	6-Z

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
TP5	3G7	4	6-Z
TP6	3G7	4	6-Z
TP7	3G8	4	6-Z
TRO	2A1	4	6-AB
TRI	2C1	4	6-AA
TRA	25D2	10	6-K
TRA0	2A4	4	6-AB
TRA1	2A4	4	6-AB
TRAL	31D4	11	1-AA
TRB	25D7	10	6-J
TRC0	4E8	6	4-Z
TRC1	4H8	6	4-Z
TRCA	14A2	7	6-Y
TRCAA	14B2	7	6-Y
TRCB	14E2	7	6-X
TRCBA	14E2	7	6-X
TRKA	14C2	7	6-Y
TRKAA	14B2	7	6-Y
TRKB	14F2	7	6-X
TRKBA	14F2	7	6-X
TRLA	22B7,40C7	9,22	6-Q
TRLB	22C7,40C7	9,22	6-Q
TRMO	4D8	6	4-Z
TRM1	4F8	6	4-Z
TRPC	3G3	4	6-Z
TRPI	3G4	4	6-Z
TRU0	4E8	6	4-Z
TRU1	4G8	6	4-Z
TS	19D2	8	6-R
TSDA	18E5	8	6-R
TSDB	18F5	8	6-R
TT	18B5	8	6-R
TU2	4B1	1	2-M
TU3	4E1	1	2-M
TU4	4G1	2	3-M
TU5	4B3	2	3-M
TU6	4E3	2	4-M
TU7	4G3	2	4-M
U0	6B1	7	6-V
U1	6E1	7	6-V
U2	6B6	7	6-V
U3	6E6	7	6-V
U4	7B1	7	6-V
U5	7E1	7	6-V
U6	7B6	7	6-U
U7	7E6	7	6-U
U8	8B1	7	6-U
U9	8E1	7	6-U

APPARATUS INDEX (CONT)

DESIG	LOCATION		
	FS	APP FIG.	EQPT
DIODES			
A	36B5	20	
B	36E5	20	
CC1	16C4	8	
CC2	16F4	8	
CO1	9C7	8	
CO2	9C8	8	
CO3	9C7	8	
CO4	9C8	8	
COSA	40E3	22	
COSB	40H3	22	
D1	38B3	8	
D2	39B3	8	
H	1G3	2	
H	6F5	1	
H	7H4	1	
H	35A2	1	
HA	2B7	8	
HB	2C7	8	
HE	2C7	8	
HO	2B7	8	
L	35C6	1	
LT2	38C1	22	
LT3	38E1	22	
LT4	38C6	22	
LT5	38F6	22	
LT6	39C1	22	
LT7	39F1	22	
LT8	39C6	22	
LT9	39F6	22	
LTSA	20G1,	8	
	38D0		
LTSB	21F0,	8	
	39E5		
LTSC	21E2,	8	
	39G5		
RLSA,B	3702-3	10	
S(0-9)	10C-,	7	
	11C-		
SCC	35H5	1	
SMT(A,B)	9C4,	9,22	
	9D4		
TP2-7	3G4-8	4	
TRPO,I	3G3	4	

JACKS			
L20-29	35D0	3	
L30-79	1D1	3	

LAMPS			
CS	18A0	7	
COAL	33B9	11	
JRAL	33D8		
LAL1	33F8		
LAL2	33F8		
MAL	33H8		
RLAL	33D8		
TAAL	33G8		
TAL	33E8		
TOAL	33E8		
TRAL	33C8		
TS	33G8		
UAL	33B8		
UAL1	33B8		
UAL2	33C8		
XCAL	33B9	11	

DESIG	LOCATION		
	FS	APP FIG.	EQPT
MAGNETS, HOLD			
LHM(20-29)	35H5	14	2
LHM(30-39)	1E6	14	2
LHM(40-59)	1E6	13	3
LHM(60-79)	1E6	12	4
THM(00-04)	34D6	12	4
THM(05-06)	34F9	12	4
THM07	34G6	12	4
THM(08-09)	17B3	12	4
THM(10-17)	20D5	13	3
THM(18-19)	17C3	13	3
THM80	34F9	12	4
THM(81-84)	9F3	12	4
THM(85-89)	34D6	12	4

MAGNETS, SELECT			
SM(0-8)0	24H6	12,13,14	
SM(0-8)1	24G6	12,13,14	
SM(0-8)2	24A3	12,13,14	
SM(0-8)3	24B3	12,13,14	
SM(0-8)4	24B3	12,13,14	
SM(0-8)5	24C3	12,13,14	
SM(0-8)6	24D3	12,13,14	
SM(0-8)7	24D3	12,13,14	
SM(0-8)8	24E3	12,13,14	
SM(0-8)9	24F3	12,13,14	

RESISTORS			
COSA	23D5,40F3	9,22	
COSB	23D5,40G3	9,22	
L02	20B3	9	
L03	20D3	9	
L04	20G3	9	
L05	20B3	9	
L06	20D8	9	
L07	20G8	9	
L08	21B4	9	
L09	21E4	9	
L12	20B3	9	
L13	20D3	9	
L14	20G3	9	
L15	20B8	9	
L16	20D6	9	
L17	20G8	9	
L18	21B4	9	
L19	21E4	9	
LTA2	20A0,38B0	9,22	
LTA3	20C0,38E0	9,22	
LTA4	20F0,38B5	9,22	
LTA5	20F5,38E4	9,22	

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RESISTORS			
LTA6	20C5,39C0	9,22	
LTA7	20F5,39E0	9,22	
LTA8	21A0,39C4	9,22	
LTA9	21C0,39E4	9,22	
LTB2	20B0	9	
LTB3	20B0	9	
LTB4	20G0	9	
LTB5	20G0	9	
LTB6	20D5	9	
LTB7	20D5	9	
LTB8	21B1	9	
LTB9	21B8	9	
PC	36G4	21	
S20-29	35D7	1	
SMO-9	24A4-F4	9,22	
	24H5-G5		
TKA9	5G6	6	
TKB9	5E6	1	
WIL	24C7	9,22	
WILA	32F8	9,22	
WL	24A7	9,22	
WLA	32D8	9,22	
WLAGA	22E8,	9,22	
	40D8		
WU	12B7	9,22	
WUA	29G4	9,22	
ZU	12C7	9,22	

DESIG	FS LOC	
	FS	LOC
MARKER TO MARKER		
A1	31G4	
A2	31G4	
A3	31F2	
A4	31G5	
A5	31F5	
A6	31G2	
A7	31E6	
A8	31E6	
A9	31F6	
A10	31E7	
A11	31G6	
A12	31F8	
BAT	36C3	
COA	32D1	
COSA	22E5,40F4	
COSB	22E5,40H4	
COT	18D4	
CS0	18B2	
CS1	18C2	
CS3	18D2	
CS4	18D2	
CS5	18E2	
CS6	18F2	
CS7	18F2	
CS8	18G2	
CS9	18H2	
GRD	36G3	
HE	3G4	
HO	9G8	
JRAL	29A9	
L2	3A0	
L3	3C0	
L4	3A4	
L5	3C4	
L6	3A7	
L7	3C7	
LAL1	32B3	
LAL2	32B7	
LG	21E1,39G4	
LH0	6D1	
LH1	6G1	
LH2	6D6	
LH3	6G6	
LH4	7D1	
LH5	7G1	
LH6	7D6	
LH7	7G6	
LH8	8D1	
LH9	8G1	
M1	1F2	
M2	31B6	
MS80-89	35H6	
OF	3F5	
RO	3F5	
RI	3F5	
R02	27D1	
R03	27C1	
R04	27C1	
R05	27C1	

DESIG	FS LOC	
	FS	LOC
MARKER TO MARKER		
R06	27C1	
R07	27C1	
R08	27C1	
R09	27B1	
R12	27D1	
R13	27C1	
R14	27C1	
R15	27C1	
R16	27C1	
R17	27C1	
R18	27C1	
R19	27B1	
RC0	36C3	
RC1	36C3	
RL	37A5	
RLO	37E5	
RL1	37B5	
RLAL	30C3	
RSA	19D4	
RSB	19E4	
RSC	19D4	
RSD	19E4	
S02	27D1	
S03	27C1	
S04	27C1	
S05	27C1	
S06	27C1	
S07	27C1	
S08	27C1	
S09	27B1	
S12	27D1	
S13	27C1	
S14	27C1	
S15	27C1	
S16	27C1	
S17	27C1	
S18	27C1	
S19	27B1	
SD6	10G5	
SD7	10G3	
SD8	10G1	
SD9	10G0	
SLT0	10F0	
SLT1	10F2	
SLT2	10F4	
SLT3	10F6	
SLT4	10F8	
SLT5	11F0	
SLT6	11F2	
SLT7	11F4	
SLT8	11F6	
SLT9	11F8	

DESIG	FS LOC	
	FS	LOC
MARKER TO MARKER		
SMC0	24A0	
SMC1	24C0	
SMC6	24F0	
SMC8	24G0	
SMTA	23F7	
SMTB	23G7	
T C	19G4	
TO2	27E1	
TO3	27C1	
TO4	27C1	
TO5	27C1	
TO6	27C1	
TO7	27C1	
TO8	27C1	
TO9	27C1	
T12	27D1	
T13	27C1	
T14	27C1	
T15	27C1	
T16	27C1	
T17	27C1	
T18	27C1	
T19	27B1	
TAL	31A0	
TAAL	30G3	
TDM0	36E3	
TDMI	36A3	
THC	6D1	
THI	6G1	
TH2	6C6	
TH3	6G6	
TH4	7C2	
TH5	7G1	
TH6	7D6	
TH7	7G6	
TH8	8D1	
TH9	8G1	
TK00	36H3	
TK01	36H3	
TK98	36C0	
TKL0	5A6	
TKL8	5D6	
TKL9	5F6	
TKU0	5A5	
TKU8	5D5	
TKU9	5F5	

DESIG	FS LOC	
	FS	LOC
MARKER TO MARKER		
TML2	4A1	
TML3	4D1	
TML4	4F1	
TML5	4A4	
TML6	4D4	
TML7	4F4	
TMU2	4A0	
TMU3	4D0	
TMU4	4F0	
TMU5	4A3	
TMU6	4D3	
TMU7	4F3	
TOAL	33B2	
TOKAL	26F5	
TOKAU	26F0	
TOKBL	26G5	
TOKBU	26G0	
TPA	4F2	
TPB	4D5	
TRAL	31E4	
TRCLO	4D8	
TRCLI	4F8	
TRCUO	4D8	
TRCU1	4F8	
TS	33G8	
TTOA	19B4	
TTEA	19B4	
U00	6B2	
U01	6F2	
U02	6B8	
U03	6F7	
U04	7B2	
U05	7E2	
U06	7B7	
U07	7F7	
U08	8B2	
U09	8E2	
UAL	29B4	
UAL1	29D3	
UAL2	29A2	
XCA	32D1	

SUPER-SEDES	DWB
ISS 298	PJS
	GFH
	PMC
310	PJS
	RHP
	EWE
320	(SAX)
	RHP
	ROZ
330	PJS
	RHP
	ROZ
350	PJS
	RHP
	ROZ
370	PJS
	LDJ
380	PJS
	LDJ

SD-65741-01-A5

LINE, LINK, AND MARKER CIRCUIT SD-65741-01-A5

BELL TELEPHONE LABORATORIES 6S PRINTED IN U.S.A.

LEAD INDEX (CONT)

DESIG	FS LOC
3A CODE CALL CKT OR INTERFACE TRUNK CKT	
R1	35G8
R2	35E8
S	35G8
S1A	35G8
S2	35E8
T1	35G8
T2	35E8

ALARM, TRANSFER, AND TEST CKT	
AT	33C5
CA	19D1
JA	29B8
KA	31E4
LA	32A3
LAI	32D1
MT	33D5
QA	33C2
R	1B6, 1C5
R1	1C5
RA	30E2
S	1F7
S1	1F6
T	1B5, 1B6
T1	1B5
TA	31A0
TT	33B5
UA	29C2

ATT TRUNK CKT	
BAT	34F9
HM	34F9
IT00-02	34F6
IT05-07	34F6
KO	18H6
R	27H3
S	27H3
T	27H3
TR01	2B1
TR02	2B1
TR10	2D1
UO	6A3
U5	7E3
U6	7A8

AUXILIARY POSITION CKT	
COSA	22D5, 40F4
COSB	22E5, 40G4
COSA1	22E6, 40F5
COSB1	22E6, 40G5
R2	35E8
S2	35E8
T2	35E8

DESIG	FS LOC
BUSY TONE TRUNK CKT	
BAT	34G7
HM07	34H7
R	27G3
S	27G3
T	27G3

BUSY VERIFICATION AUX TRUNK CKT	
BY	19G9
IT07	34F6
LK	19G2
ME	9F9
NN	19G3
NT	18F6
R	27H3
RLSE	19G9
RSE	19G9
S	27H3
ST90	34D6
ST90-1	34D6
T	27H3
UO	7A7
U6	7A8

CENTRAL OFFICE AND RINGDOWN TIE TRUNK CKT	
BAT	34D7
BYE	19H8
BYO	19C9
CW	23D3
FFE	19H8
FFO	19C9
IT90-99	34D7
ME	34C7
MO	34C7
NT	18G6
R	27G1
RLSE	19H8, 34E7
RLSO	19C9, 34E7
RSO	19C9
RSE	19H8
RTE	19H8
RTO	19C9
S	27G1
ST90-99	34D7
T	27G1
TLAE	19H8
TLAO	19C9

DESIG	FS LOC
CENTRAL OFFICE AND RINGDOWN TIE TRUNK CKT (CONT)	
TRO	2A0
TR1	2C0
TTE	19H8
TTO	19C9
UO	6B3
U1	6E3
U2	6B8
U3	6E8
U4	7B3
U5	7F3
U6	7B8
U7	7F8
U8	8B3
U9	8E3

CORDLESS POS CKT	
BL20-29	35A7
BL30-79	1A7
BL80-89	35A7

DIAL CONFERENCE CKT	
R2	35E8
S2	35E8
T2	35E8

DIAL CONFERENCE TRUNK CKT (ATT CONT)	
CCC	16D0
CO	35A3
DB	5D3
OT1-5	35E6
R1	35A8
RLSE	19F9
RSE	19F9
S1	35A8
T1	35A8

DESIG	FS LOC
DIAL CONFERENCE TRUNK CKT (STA CONT)	
CCC	16D0
DO	5B3
DB	5D3
D9	5B3
HM	35C3
TT	35B3
MON 1	35D6
MON 2	35D6
OTG	35H5
R1	35A8
R2	35E8
RLSE	19F9
RSE	19F9
S1	35A8
S2	35E8
T1	35A8
T2	35E8

JUNCTION CKT	
BAT	9F3
OHMO-5	9F4
RO	27G4
RT	27G6
SO	27G4
ST	27G6
THMO-5	9F4
TO	27G4
TT	27G6

LINE CKT	
HM	35C1
IT	35C1
S2	35C1

LOUDSPEAKER PAGING TRUNK CKT	
HM	35D1
IT	35D1
R2	35D1
S2	35D1
T2	35D1

MESSAGE WAITING SERVICE KEY, INTERRUPTER, AND POWER SUPPLY CKT	
L	105, 35A6
R	105, 35A6

RECORDED TELEPHONE DICTATION TRUNK CKT	
R2	35E8
S2	35E8
T2	35E8

DESIG	FS LOC
REGISTER CKT	
A	10H1
B	10H1
BTA0	17B4
BTA1	1704
BYO	17G5
BY1	17E5
C	10H1
COT0	18D8
COT1	18E8
CPC0	34F1
CPC1	34F2
CTA0	15F7
CTA1	15G7
CTB0	15F7
CTB1	15G7
D	10H1
DC1	2E9
DC2	2E7
DC3	2G9
DC4	2G7
E	10G3
F	10G3
G	10G5
H	10G5
JTA0	14A9
JTA1	14B9
JTB0	14B9
JTB1	14B9
KPC0	18E8
KPC1	18E7
ON0	17A8
ON1	17D8
ONB0	17A8
ONB1	17D6
ONG0	17A6
ONG1	17D6
PCG0	34F1
PCG1	34F3
R	27G7
RA	28G3, 28G6
RA1	28G3, 28G6
RB	28G3, 28G6
RB1	28G3, 28G6
RCTA0	14C9
RCTA1	14C9
RCTB0	14D9
RCTB1	14E9
RHMO	17B4
RHM1	17D4
RRAO	17G5
RRR1	17E5

DESIG	FS LOC
REGISTER CKT (CONT)	
RRB0	17G5
RRB1	17E5
RTT0	18D8
RTT1	18E8
RVO	17H1
RV1	17H2
S	27G7
T	27G7
T0	5A5
T2	4C0
T3	4E0
T4	4H0
T5	4C3
T6	4E3
T7	4H3
T8	5D5
T9	5F5
TL00	19B2
TL01	19D3
TL10	19B2
TL11	19D3
TLA0	18D8
TLA1	18E8
TLD0	18D8
TLD1	18E8
TPC0	34G1
TPC1	34G3
TR00	19B2
TR01	19D3
TR10	19B2
TR11	19D3
TT00	36E1
TT01	36A1
TT1	36B0
UO	6D2
U1	6G2
U2	6D7
U3	6H7
U4	7D2
U5	7H2
U6	7D7
U7	7H7
U8	8D2
U9	8H2
MB & BY DISPL CKT	
HM07	34H6
L3 BAT	20C6, 38B4
LB80-89	35E4
LD80-89	35F4
S02	20B5, 38C3
S12	20C4, 38D3
S03	20C4, 38F3
S13	20F4, 38F3
S04	20F4, 38D8
S14	20H4, 38D8
S05	20A9, 38F8
S15	20C9, 38F8
S06	20C9, 39D3
S16	20F9, 39D3
S07	20F9, 39G3
S17	20G9, 39G3
S08	21A4, 39D8
S18	21C4, 39D8
S09	21C4, 39G7
S19	21F4, 39G7
THM(0-5)	9G4

DESIG	FS LOC
STATION DIAL TRANSFER CONTROLLER CKT	
R02-R09	27A0
R12-R19	27A0
RGB	18F6
RGC	18F7
S02-S09	27A0
S12-S19	27A0
SM0, SM1	24G7
SM2-SM9	24C2
SMTA	23F8
SMTB	23F8
T02-T09	27A0
T12-T19	27A0
TFA	11F8
TFB	11F6
TR8	8D3
TR9	8E3
TRA	11F8
TRB	11F6
TRT	4F8
TRO	2A1
TROA	2A1
TR1	2C1
TR1A	2C1

STATION DIAL TRANSFER TRUNK CKT	
CCC	16E0
DO	5F3
DB	5H3
D9	5G3
DB	8C7
DC	8C7
DE	8C6
DG	8C6
FF (E,0)	19D9
RLS (E,0)	19D9
RS (E,0)	19D9

STATION EQUIPMENT	
S	35H8
S1	35H8

DESIG	FS LOC
STATION LINE	
R	1D2, 35B1
T	1B2, 35B1

TRAFFIC REGISTER CKT	
BAT	34G4
BT0F	34C0
BTPC	34C4
JOF	34E0
JPC	34D4
LOF	34B0
NCPC	34E4
OF0	34E0
OF8	34D0
OF9	34D0
OPC	34D4
OPC8	34F0
OPC9	34F0
ROF	34A0
STPC	34B4
TOPC	34A4
TPC	34G4
TPC0	34H0
TPC8	34G0
TPC9	34H0
TRPC	34F4

TWO-WAY TIE TRUNK CKT	
R1	36H5
R2	35B8
S1	35B8
S2	35B8
T1	35B8
T2	35B8

LINE OR TRUNK ACCESS CKT	
R	1D2, 35B1
T	1B2, 35B1

DESIG	FS LOC
MESSAGE REGISTER CKT	
M--	1D7
	35G5

STATION MESSAGE REGISTER PULSE AND SURCHARGE CKT	
COD	16H1
MR1	9F7
MR2	9F7
MR3	17H5, 32G6
MR4	17H5, 32A1
MR5	26E4, 40D0
MR6	26B4, 40D0
MR7	16A1
MR8	16A0
MR9	16C1
MR10	16C0
MR11	16A0
MR12	16A0
MR13	16C0
MR14	16C0
RSA	19E4
RSB	19E3

INWARD RESTRICTION CKT	
H(A-D)	19H6
HE, HF	9B0
IR2-7	19G4
RLS	19H4
S	1F5
SA	1F5
U(0-9)	19H4
2S	35G6
2SA	35G6

552A, 552B, 552D, 552E, 605A, 607A, 607B, 608A JACK CIRCUIT OR 608D JACK AND LAMP CIRCUIT	
R	1E1, 35F1
S	1E1, 35F1
SL	1E1, 35F1
T	1E1, 35F1

OPTION INDEX

APP OR WIRING	LOCATION	APP OR WIRING	LOCATION	APP OR WIRING	LOCATION	APP OR WIRING	LOCATION	APP OR WIRING	LOCATION	APP OR WIRING	LOCATION
9	19E5, 19F5, 19G6, 24A4, A5, B4, C4, C5, D4, D5, E4, E5, F4, F5, G4, 26A4, C4, 30F5, F6, 32G5, G6, H5	ZB	35F6	ZT	APP FIG. 3, 1D1, 35E0	YN	APP FIGS. 1, 6	XR	19G4	WY	APP FIG. 8, 6C1, 15H1, 26F7, 26F8, 26G8, 26H7
17	35F7	ZC	35E6, 35F6			YO	10G3	XU	2B7, 2C7	WZ	APP FIG. 8, 6C1, 15G1, 15G2, 15H1, 15H2, 26F7, 26F8, 26G7, 26G8
19	36C3, G4, 37D2, D3, B6, E6	ZD	35A5, 35B6			YP	10G5	XV	APP FIG. 8, 9G8, 9G9, 2B7, 2C7	VA	APP FIG. 3, 1B3, 1D2, 1D3, 1D4, 1E1, 1E2, 1E3, 1E4, 1GQ, 1G2, 1H2, 3A6, 35A3, 35B0, 35B2, 35B3, 35D8, 35E2, 35F1, 35F2, 35G5, 35H2
20	36A-H4, E6, F6, G6	ZE	35A5, B1, B5, B6, C1, G7, H8	ZV	APP FIGS. 13, 14, 1A6, D6, E5, 35B5, B7, H5	YQ	19E1	XW	APP FIG. 3, 1B2, 1B3, 1D2, 1D3, 1D4, 1E3, 1E4, 1GQ, 1G2, 1H2, 35A3, B2, B3, E2, F2, 31A6	VB	APP FIG. 3, 1B3, 1D2, 1D3, 1D4, 1E1, 1E2, 1E3, 1E4, 1GQ, 1G2, 1H2, 31B6
21	36E6, F6	ZF	35E3	ZW	APP FIG. 12, 1A6, D6, E5	YR	19D1, 19E1	XX	APP FIG. 3, 1B3, D2, D3, D4, E3, E4, 1GQ, 1G2, 1H2, 31B6	VC	35B5, 35C5
22	9C4, 9D4, 19E5, 19E6, 19F5, 19F6, 19G5, 19G6, 24A4, A5, B4, B5, C4, D4, D5, E4, E5, F4, F5, G4, 26A2, A4, C2, C4, 30F5, F6, 32B4, B6, E2, E3, F2, F3, G6, H5	ZG	35E3	ZX	APP FIGS. 13, 14, 1A6, B7, D6, E5, 35B5, B7, H5	YS	7A8, 34D6, 34F6	XY	35D9	VD	35B5, 35C5
Z	1B3, C2, 35A3, R2	ZH	25E1, 25E6	ZY	APP FIG. 12, 1A6, B7, D6, E5	YT	6B3, 7A8, 19G2, 19F5, 34D5, 34D6, 34F6	XZ	16D4	VE	35D8
Y	APP FIG. 3, 1B3, D2, D3, E3, E4, F3, 31B6, 35A3, B2, B3, E2, E3, F2, G3, H2	ZI	25E1, 25E6	ZZ	APP FIGS. 12, 13	YV	2A1, 2C0, 4F8, 8B3, 8E3, 11F6, 11F8, 18E6, 23F7, 23G7	WA	16D4	VF	35D7, 35E7
X	1G3, 35A2	ZJ	31B7, 31C2, 31D3, 31D4, 31F1, 31F2	YA	APP FIGS. 12, 13	YW	2B1, 2D0, 11F6, 11F8, 18E6	WB	21E1, 21E2	VG	APP FIG. 1, 2, 4C0, 4C3, 4E0, 4F0, 4G0, 4H0, 31C0, 31D0, 31E0
W	APP FIGS. 1, 2, 1G3, 35A2	ZK	31B7, 31C2, 31D3, 31D4, 31F1, 31G1	YB	12B3, 12F2, 19G7	YX	5F3, 5G3, 5H3, 8B6, 8B7, 8C7, 8C8	WC	19F5, 19F6, 19G5, 19G6, 21E1, 21E2	VH	APP FIG. 1, 2, 4B0, 4B3, 4C0, 4C3, 4D0, 4E0, 4G0, 4H0, 31B0, 31C0, 31D0
V	APP FIGS. 2, 4, 14, SHEETS 2, 3, 4, 6, 7, 8, 18, 24, 31, 105, E5, 10G1, G3, G5, G7, G8, 11G1, G3, G5, G9, 17F8, G8, 34B1, E4	ZL	12D1, 12F4	YC	12B3, 12F2, 19G7, 28G4, 28G6	XA	APP FIG. 8, 16B3, 16C3, 16C4, 16B5, 16D1, 16D3, 16D4, 16F3, 16F5, 19D2, 19E2	WD	12B3, 12G3	VI	APP FIG. 2, 4E3, 4F3, 4G3, 4H3, 31F0
T	31F2, F3, G2, G3	ZM	12C1, 12D1, 12F4	YD	1F7, 1F8, 35G7, 35H7	XB	16B5, 16E5, 19E2, 19F5	WE	5H5	VJ	APP FIG. 2, 4D3, 4D5, 4E3, 4G3, 4H3, 31E0, 31F0
S	1B5, C5, F6	ZN	APP FIG. 9, 22A0, 22A1, 22A3, 22B2, 22B3, 22C0, 22C1, 22C3, 22D2, 22D3, 22E1, 22E3, 22G6, 22G7, 22H1, 22H3, 23A2, 23B2, 26A2, 26C2, 32B6, 32B7, 32E2, 32F2, 32F3	YE	10G0	XC	5D3, 5E3, 5F3, 5G3, 5H3, 5I3, 5J3, 5K3, 5L3, 5M3, 5N3, 5O3, 5P3, 5Q3, 5R3, 5S3, 5T3, 5U3, 5V3, 5W3, 5X3, 5Y3, 5Z3	WF	5H5, 7H3, 35H6, 36A2, 36A3, 36B3, 36C0, 36C3, 36D3, 36E2, 36E3, 36F3, 36G3, 36H3, 25E1, 25E6	VK	APP FIG. 4, 3F2, 3F3, 3F4, 3F5, 3F6, 3F7, 3F8
R	1B5, C5, F6	ZO	APP FIG. 9, 22A0, 22A1, 22A2, 22A3, 22B2, 22B3, 22C0, 22C1, 22C3, 22D2, 22D3, 22E1, 22E3, 22G6, 22H2, 23A2, 23B2, 23C3, 32B4, 32B6, 32E2, 32E3, 32F2, 32F3	YF	10G2	XD	APP FIG. 1, 5B3, 5D3, 5E3, 5F3, 5G3, 5H3, 5I3, 5J3, 5K3, 5L3, 5M3, 5N3, 5O3, 5P3, 5Q3, 5R3, 5S3, 5T3, 5U3, 5V3, 5W3, 5X3, 5Y3, 5Z3	WG	24A4-F4, 24G5-H5		
Q	35E7			YG	APP FIG. 1	XE	35H5	WH	1B6, 35B6, 35C6		
N	35E3			YH	35C7	XF	22E5, 22E6	WI	35B6		
M	35G7			YI	APP FIG. 1, 35C6	XG	9B5, 9D5, 10C0, 10C2, 10C4, 10C6, 10C8, 11C0, 11C2, 11C4, 11C6, 11C8, 20B2, 20B7, 20E2, 20E7, 20G2, 20G7, 21C3, 21F2	WJ	18H5, 23D4, 40F0		
K	APP FIGS. 1, 2, 105, 3A3, C0, C3, 6C3, C8, F3, F8, 7C3, C8, F3, F8, 8C3, F3			YJ	APP FIG. 1, 35C6	XH	9C4, 9D4, 10C0, 10C2, 10C4, 10C6, 10C8, 11C0, 11C2, 11C4, 11C6, 11C8, 20B2, 20B7, 20E2, 20E7, 20G2, 20G7, 21C3, 21F2	WK	36D0		
H	35E3			YK	25E3, 25E8, 25G5, 25H5	XI	16B4, 16B5, 16E4, 16E5	WL	19E3, 19E4		
G	APP FIGS. 1, 2, 105, 3A3, C0, C3, 6C3, C8, F3, F8, 7C3, C8, F3, F8, 8C3, F3			YL	25E3, 25E8, 25G5, 25H5	XJ	16B4, 16B5, 16E4, 16E5	WM	19E1, 19D4, 19E3, 19E4		
F	APP FIG. 2, 105, 3A6, C6, 6C3, C8, F3, F8, 7C3, C8, F3, F8, 8C3, F3			YM	APP FIG. 4, 3F2, 3F3, 3F4, 3F5, 3F6, 3F7, 3F8	XK	1E7, 9F7, 16B4, 16B5, 16E3, 16E4, 16E5, 16H1, 17H4, 19E3, 19E4, 26B4, 26D4, 35F5	WN	35D8		
E	APP FIG. 2, 105, 3A6, C6, 6C3, C8, F3, F8, 7C3, C8, F3, F8, 8C3, F3					XL	1F5, 9B0, 9C0, 35G6	WP	35E3, 35F3		
B	APP FIGS. 4, 7, 9, 10, SH5, H6, 12C7, 16B2, B6, F2, F6, 25C1, D1, D3, D5, D8					XM	1F5, 9B0, 9C0, 35G6	WQ	35E3, 35F3		
A	APP FIGS. 4, 7, 9, 10, SH5, H6, 12C7, 16B2, B6, F2, F6, 25C1, D1, D3, D5, D8					XN	1F5, 9B0, 9C0, 35G6	WR	9F3, 20A-H3, 20A-H9, 20B6, 21A-F4, 34H7, 35E4, 35F4, 36B4		
ZA	18E7					XO	1F5, 9B0, 9C0, 35G6	WS	APP FIG. 8, 11, 9C7, 9C8, 9D7, 9D8, 15C2, 15D2, 16B3, 16B5, 16C4, 16G4, 16E3, 16E5, 32F5, 32G5		
						XQ	19G4	WT	APP FIGS. 7, 8, 11, 9C7, C8, D7, D8, 10C0, C2, C4, C6, C8, 11C0, C2, C4, C6, C8, 16B3, B5, C4, G4, E3, E5, 32A1, B1, D1, F5, F6, G5, G6, 33B4, B5, B8, 38A3, D0, 39B3, E5, G5		
								WU	16A4, A5, D3, D4, D5, 32A1, B1, G6, 40C0, D0		
								WV	1E7, 16A3, A4, A5, D3, D5, H1, 32A1, B1, 35F5, 40C0, D0		
								WW	APP FIG. 6, 7, 9 & 22, 15E1, 15E2, 15F1, 15F2, 15G1, 15G2		
								WX	APP FIG. 6, 7, 9, 22, 9B4, 9D4, 12A1, 12H1, 15E1, 15E2, 15F1, 15F2, 15G1, 15G2		

DRAWING
ISSUE
SUPER-
SEDES
ISS 298
RJK
PJS
GFH
30D
PJS
RHP
31D
PJS
RHP
32D
SAK
RHP
33D
FED
PJS
RHP
35D
FED
PJS
RHP
36D
PJS
LDJ
37B
PJS
LDJ
38D
PJS
LDJ

RELAY CONTACT	ASSOCIATED S-LEAD DESIGNATION				
	TM3	TM4	TM5	TM6(V)	TM7(V)
1M	S30	S40	S50	S60	S70
2M	S31	S41	S51	S61	S71
3M	S32	S42	S52	S62	S72
4M	S33	S43	S53	S63	S73
5M	S34	S44	S54	S64	S74
7M	S35	S45	S55	S65	S75
9M	S36	S46	S56	S66	S76
10M	S37	S47	S57	S67	S77
11M	S38	S48	S58	S68	S78
12M	S39	S49	S59	S69	S79

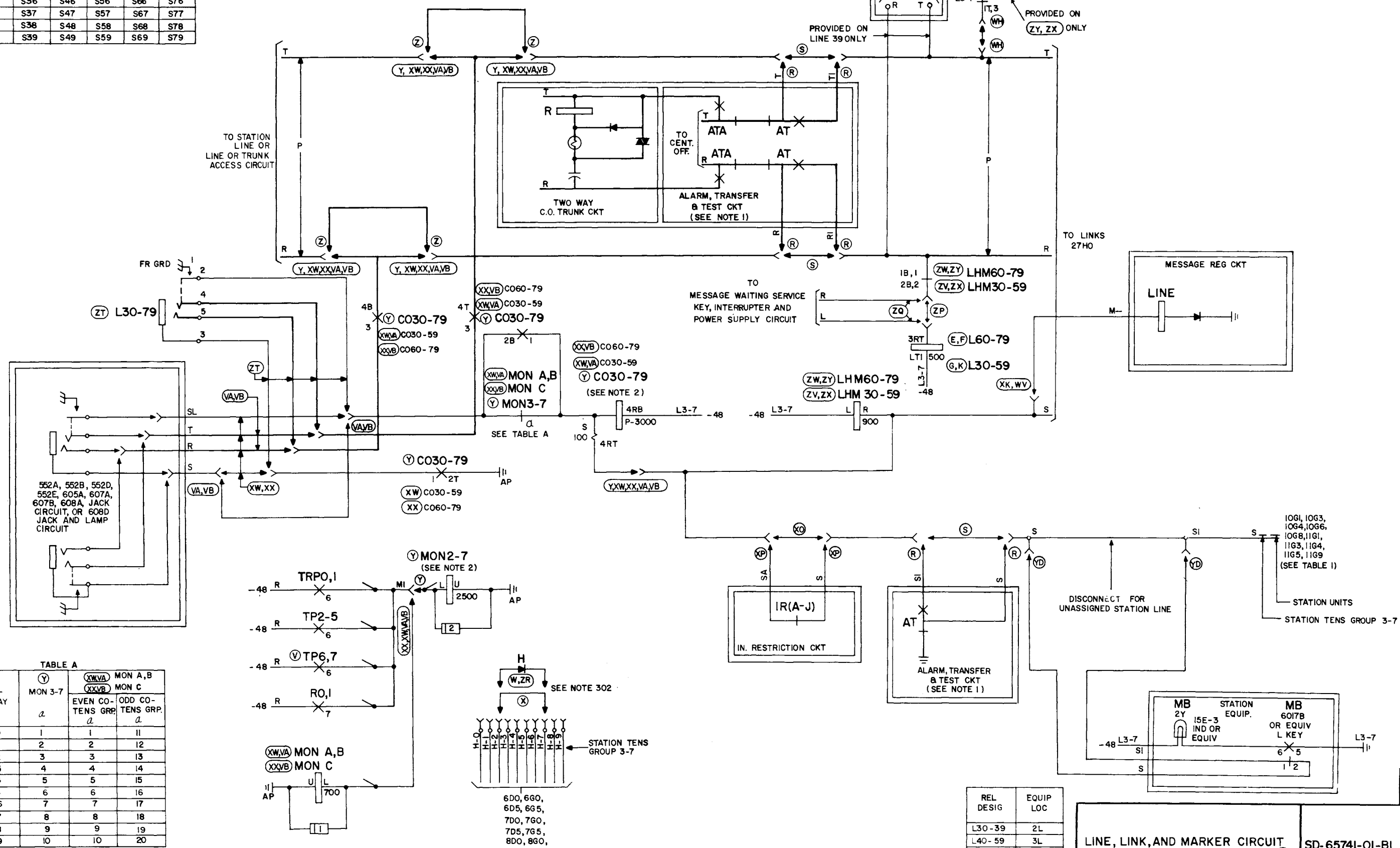
FS I STATION LINE

SHEET NOTES:

- RELAYS (AT) AND (ATA) ARE NORMALLY OPERATED EXCEPT DURING POWER FAILURES.
- FOR Y OPTION, MON 2-7 AND CO 30-79 RELAYS ARE LOCATED AT THE SWITCHBOARD. FOR XW AND XX OPTIONS, MON A,B,C AND CO 30-79 RELAYS ARE LOCATED IN LINE CO UNIT IN APP. CAB. FR GROUND DESIGNATES SWITCHBOARD FRAME GROUND.

1	FS	W.S.
2B	W.S.	
3B	J.F.D.	
5D	R.A.D.	
8B	W.S.A.	
9B	PD	
12B	P.O.B.	
13D	P.O.B.	
16B	HO	
18A	P.D.	
21B	P.D.	
24D	K.F.J.	
25D	K.F.J.	
27D	P.M.T.	
30D	C	
31D	P.M.C.	
32D	R.H.P.	
33D	R.H.P.	
35D	R.H.P.	
37B	R.D.J.	

A
B
C
D
E
F
G
H



CO-RELAY	MON 3-7		
	Y	XXVA	XXVB
CO-0	1	1	11
CO-1	2	2	12
CO-2	3	3	13
CO-3	4	4	14
CO-4	5	5	15
CO-5	6	6	16
CO-6	7	7	17
CO-7	8	8	18
CO-8	9	9	19
CO-9	10	10	20

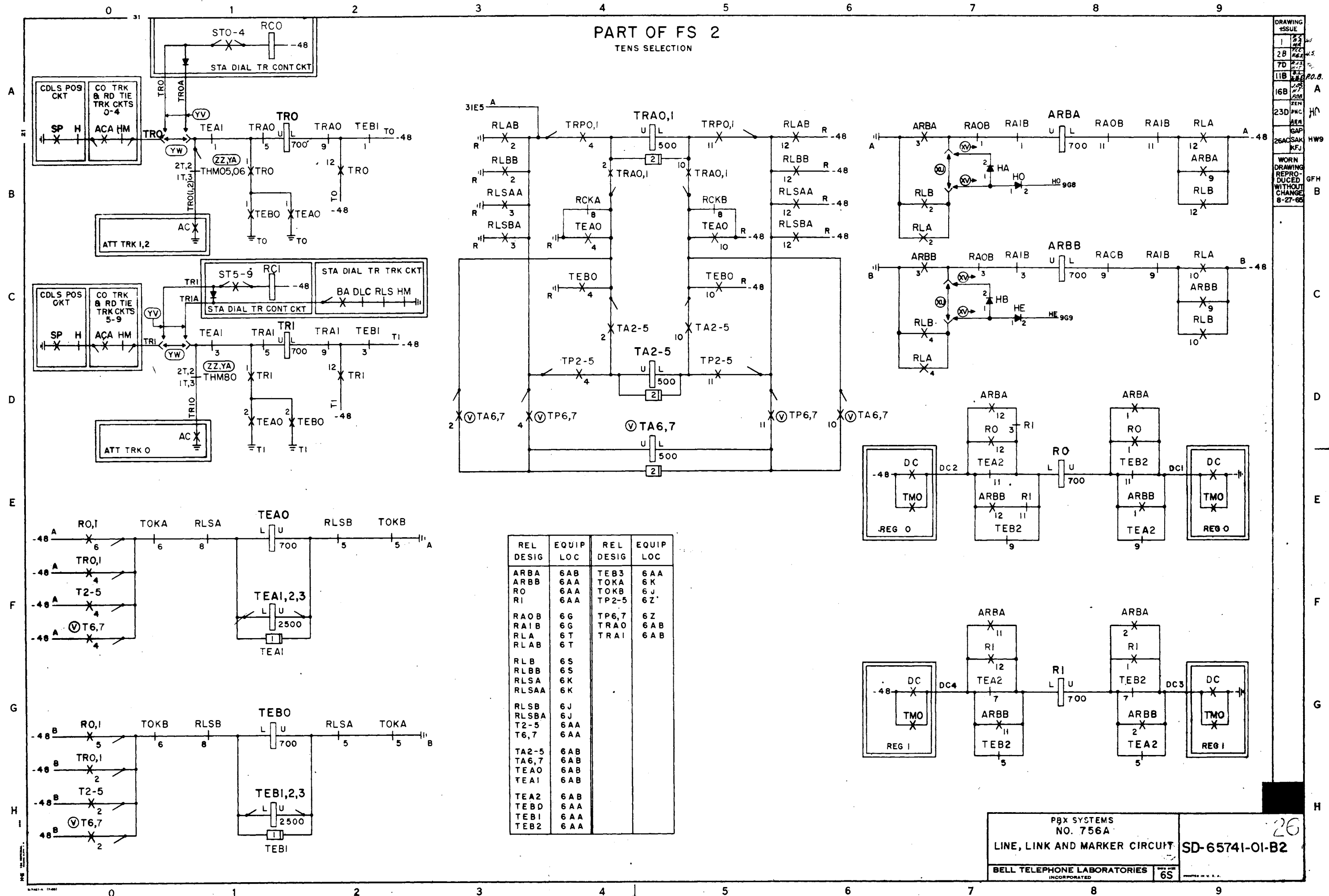
REL DESIG	EQUIP LOC
L30-39	2L
L40-59	3L
L60-79	4L
MON 2-7	SEE
CO 30-79	NOTE 2

LINE, LINK, AND MARKER CIRCUIT

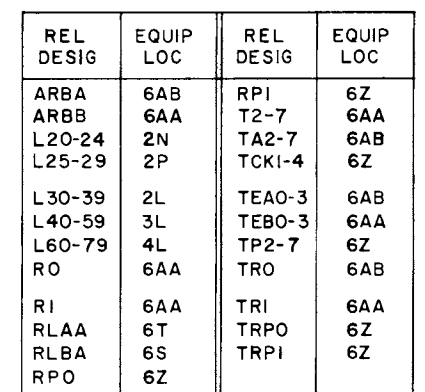
BELL TELEPHONE LABORATORIES

SD-6574I-OI-BI

6S

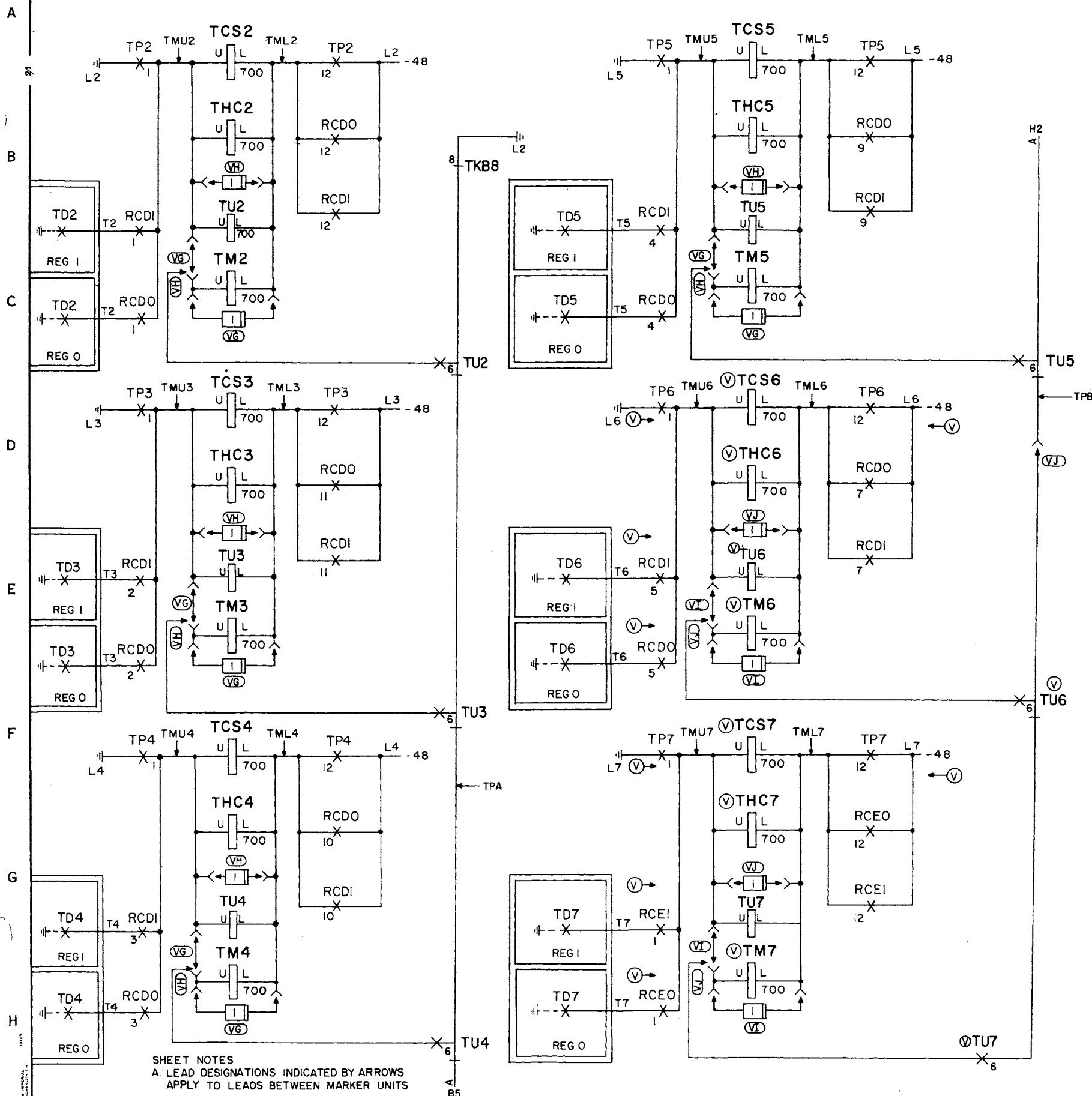


DRAWING ISSUE		
1	P.C. M.R.	NY WS
2B	EN P.D.	WS
3B	J.D. P.D.	J.D. R.A.C.
5D	SGT END	
19B	EG WVH P.D.	MA HO
37B	ROZ PJS LDJ	HW9 HW

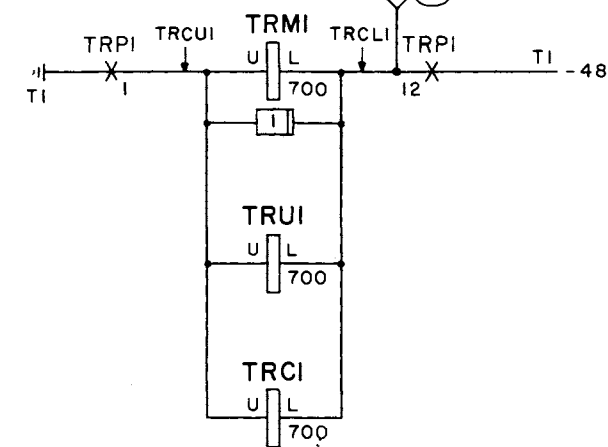
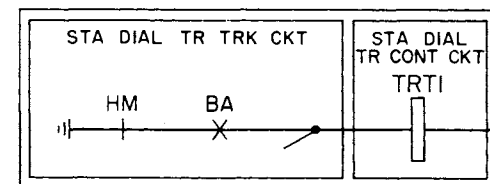
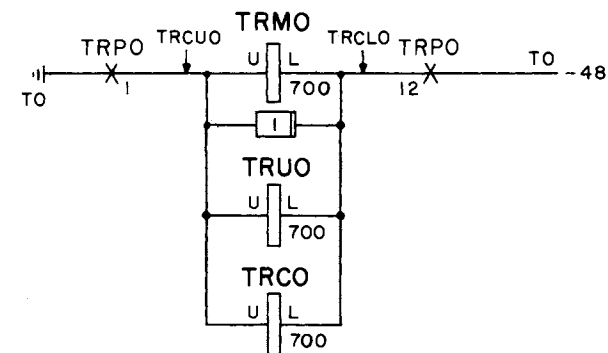
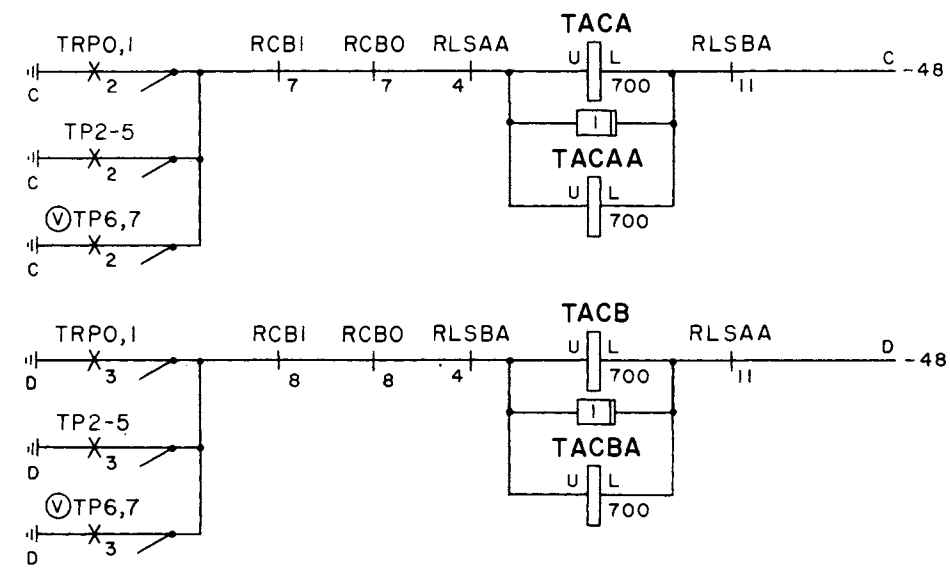


DWG SIZE
6S

PART OF FS 4 TENS CONNECTOR



REL DESIG	EQUIP LOC
RCBO	6H
RCBI	6H
RCDQ,1	6H
RCEO,1	6H
RLSAA	6K
RLSBA	6J
TACA	6Y
TACAA	6Y
TACB	6Y
TACBA	6Y
TCS2	2M
TCS3	2M
TCS4	3M
TCS5	3M
TCS6	4M
TCS7	4M
THC2	2M
THC3	2M
THC4	3M
THC5	3M
THC6	4M
THC7	4M
TKB8	2L
TM2	2M
TM3	2M
TM4	3M
TM5	3M
TM6	4M
TM7	4M
TP 2-7	6Z
TRCO,1	4Z
TRMO,1	4Z
TRPO,1	6Z
TRUO,1	4Z
TU2,3	2M
TU4,5	3M
TU6,7	4M



SHEET NOTES
A. LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS

LINE, LINK AND MARKER CIRCUIT

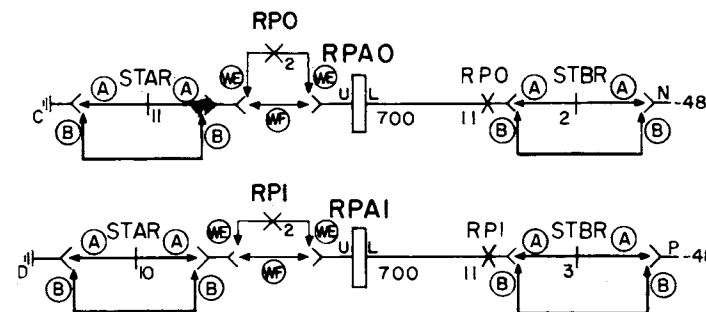
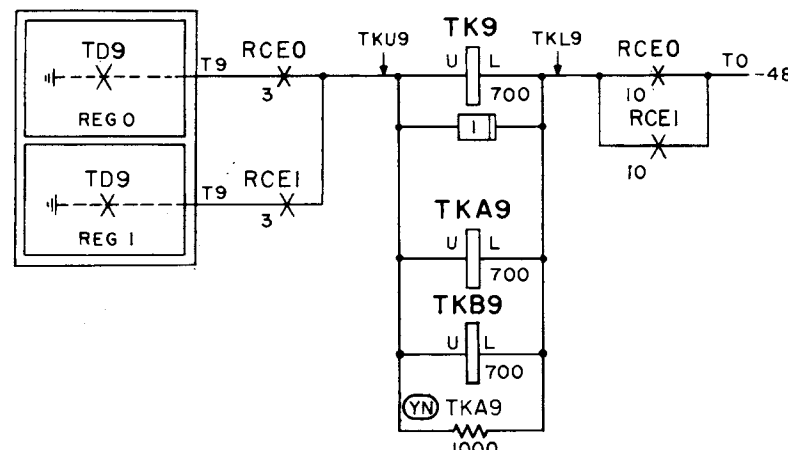
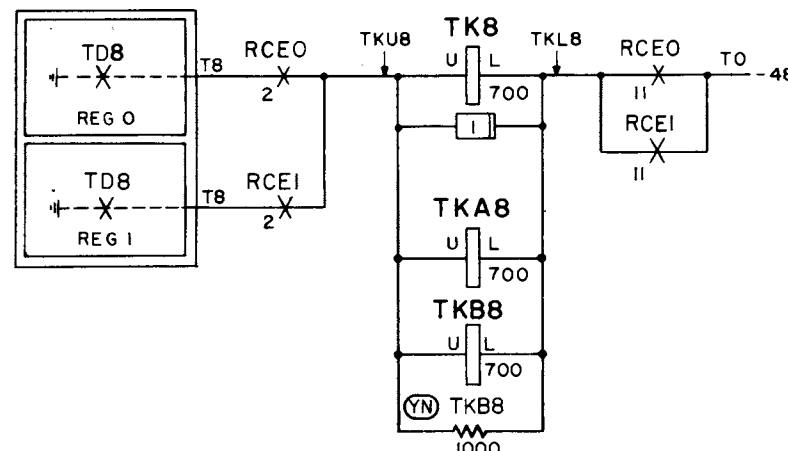
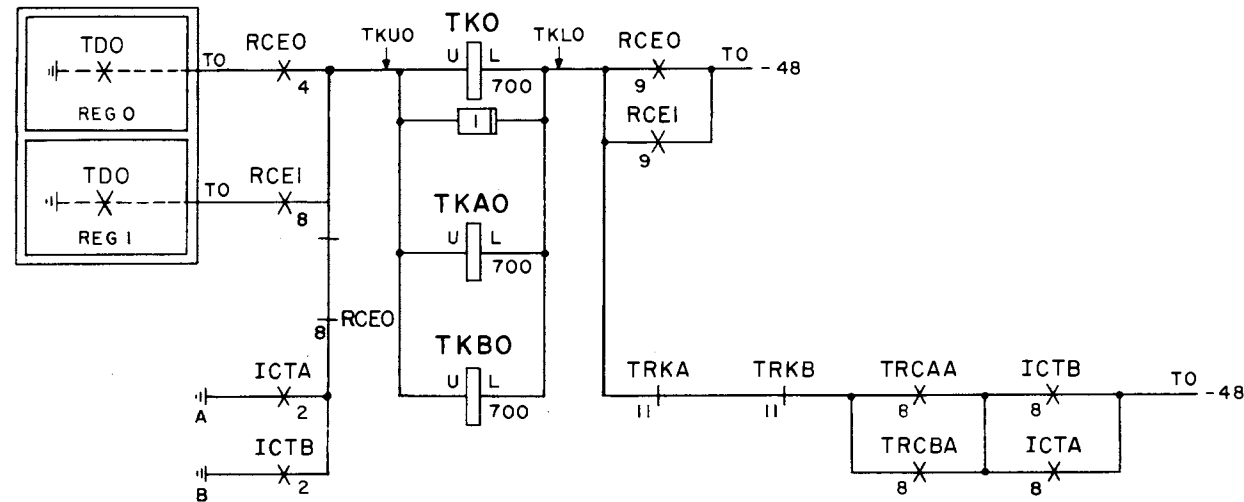
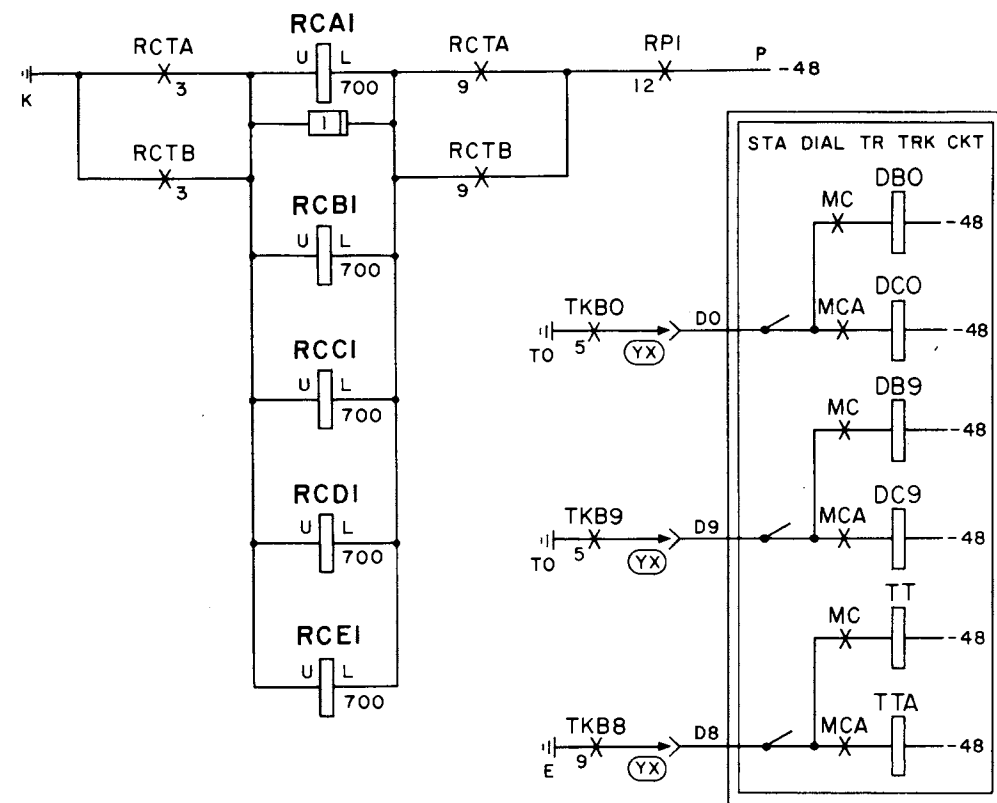
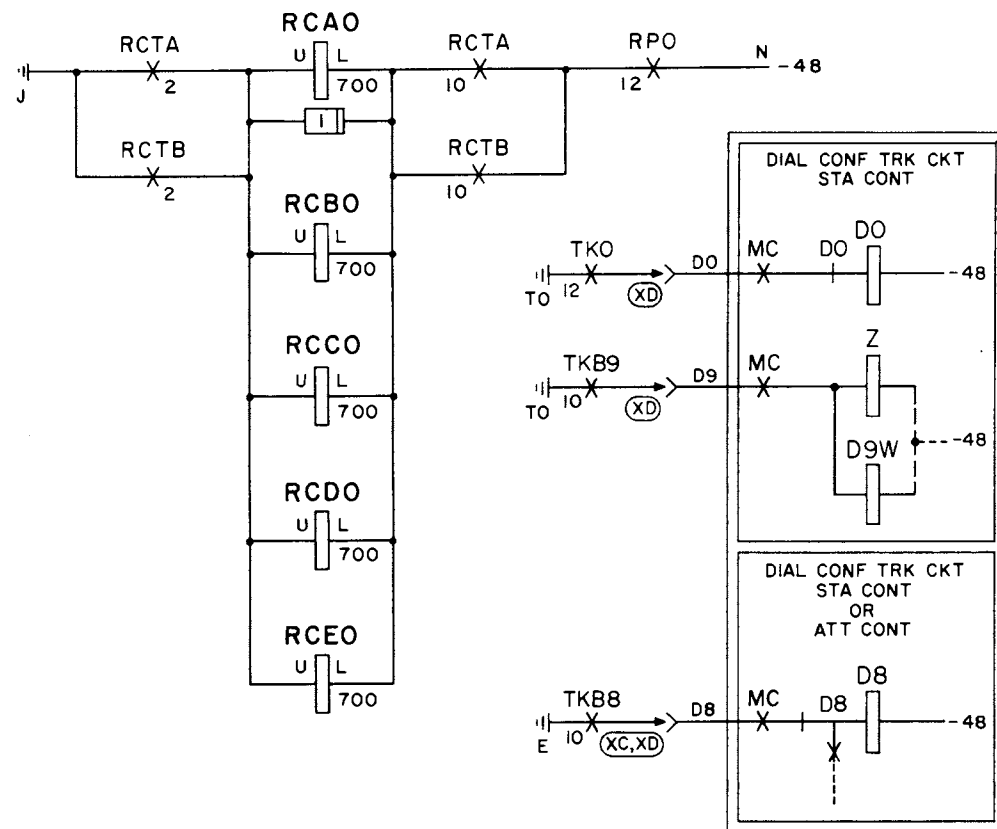
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BELL TELEPHONE LABORATORIES
INCORPORATED

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PART OF FS 4 TENS CONNECTOR



REL DESIG	EQUIP LOC
ICTA	6T
ICTB	6S
RCAO,1	6H
RCBO,1	6H
RCCO,1	6H
RCDO,1	6H
RCEO,1	6H
RCTA	6Y
RCTB	6X
RPO,1	6Z
RPAO,1	6W
TKO	4Z
TK8	2L
TK9	4Z
TKAO	4Z
TKA8	2L
TKA9	4Z
TKBO	4Z
TKB8	2L
TKB9	4Z
TRCAA	6Y
TRCBA	6X
TRKA	6Y
TRKB	6X

SHEET NOTES:
A. LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS

LINE, LINK AND MARKER CIRCUIT

SD-65741-01-B5

BELL TELEPHONE LABORATORIES
INCORPORATED

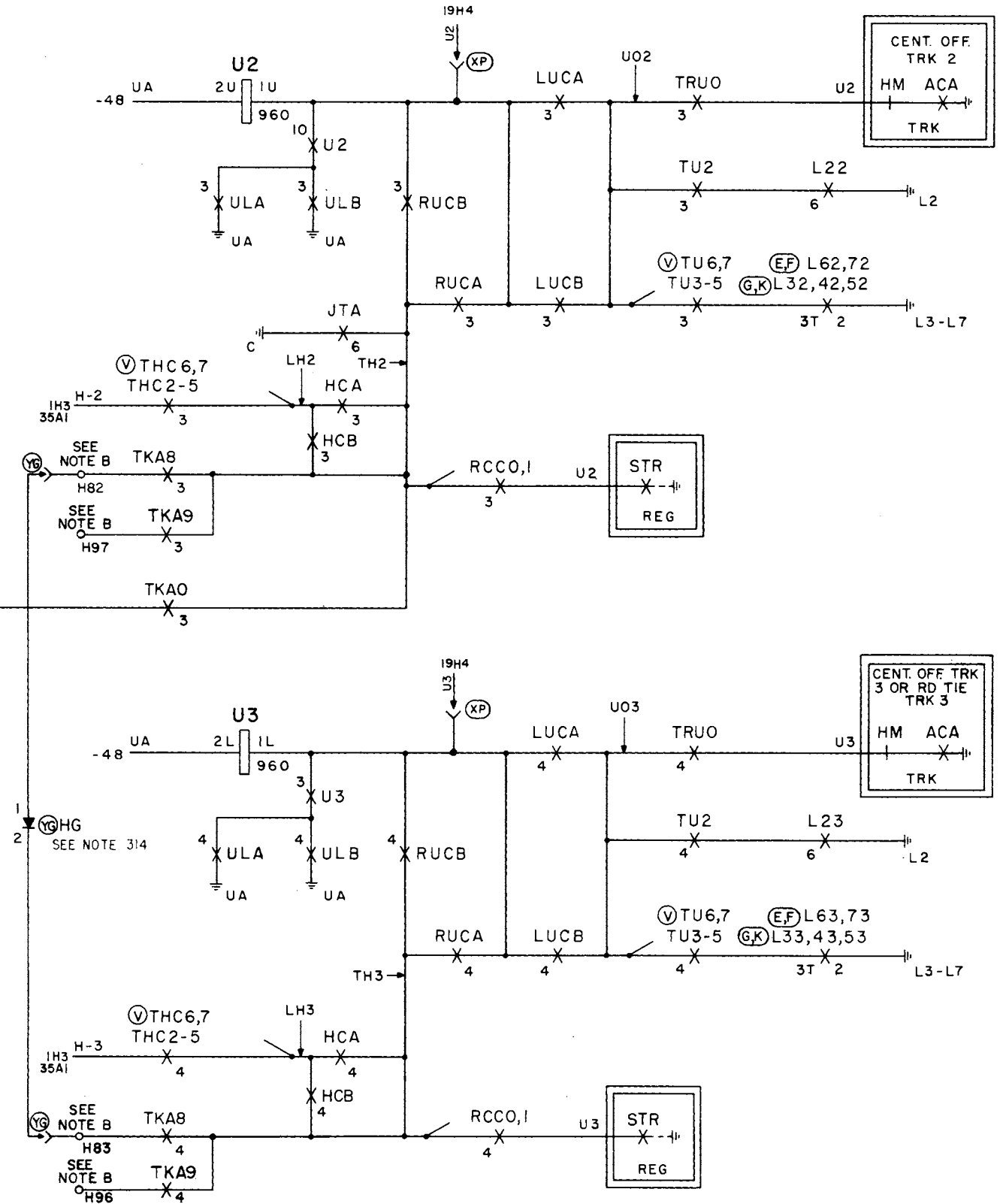
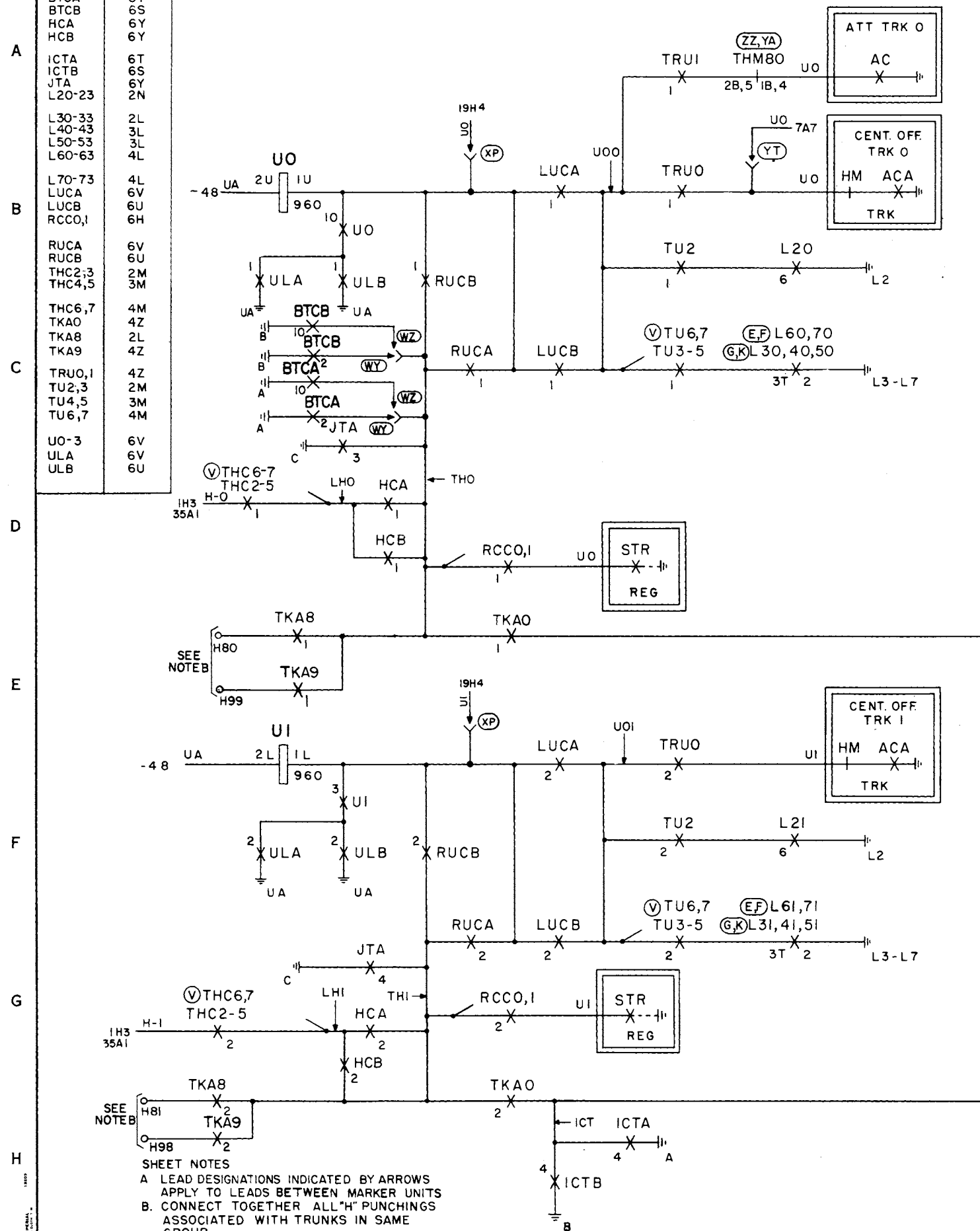
65

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PART OF FS 5

UNITS SELECTION

REL DESIG	EQUIP LOC
BTCA	6T
BTCB	6S
HCA	6Y
HCB	6Y
ICTA	6T
ICTB	6S
JTA	6Y
L20-23	2N
L30-33	2L
L40-43	3L
L50-53	3L
L60-63	4L
L70-73	4L
LUCA	6V
LUCB	6U
RCCO,1	6H
RUCA	6V
RUCB	6U
THC2,3	2M
THC4,5	3M
THC6,7	4M
TKA0	4Z
TKA8	2L
TKA9	4Z
TRU0,1	4Z
TU2,3	2M
TU4,5	3M
TU6,7	4M
U0-3	6V
ULA	6V
ULB	6U



SHEET NOTES
A. LEAD DESIGNATIONS INDICATED BY ARROWS APPLY TO LEADS BETWEEN MARKER UNITS.
B. CONNECT TOGETHER ALL "H" PUNCHINGS ASSOCIATED WITH TRUNKS IN SAME GROUP.

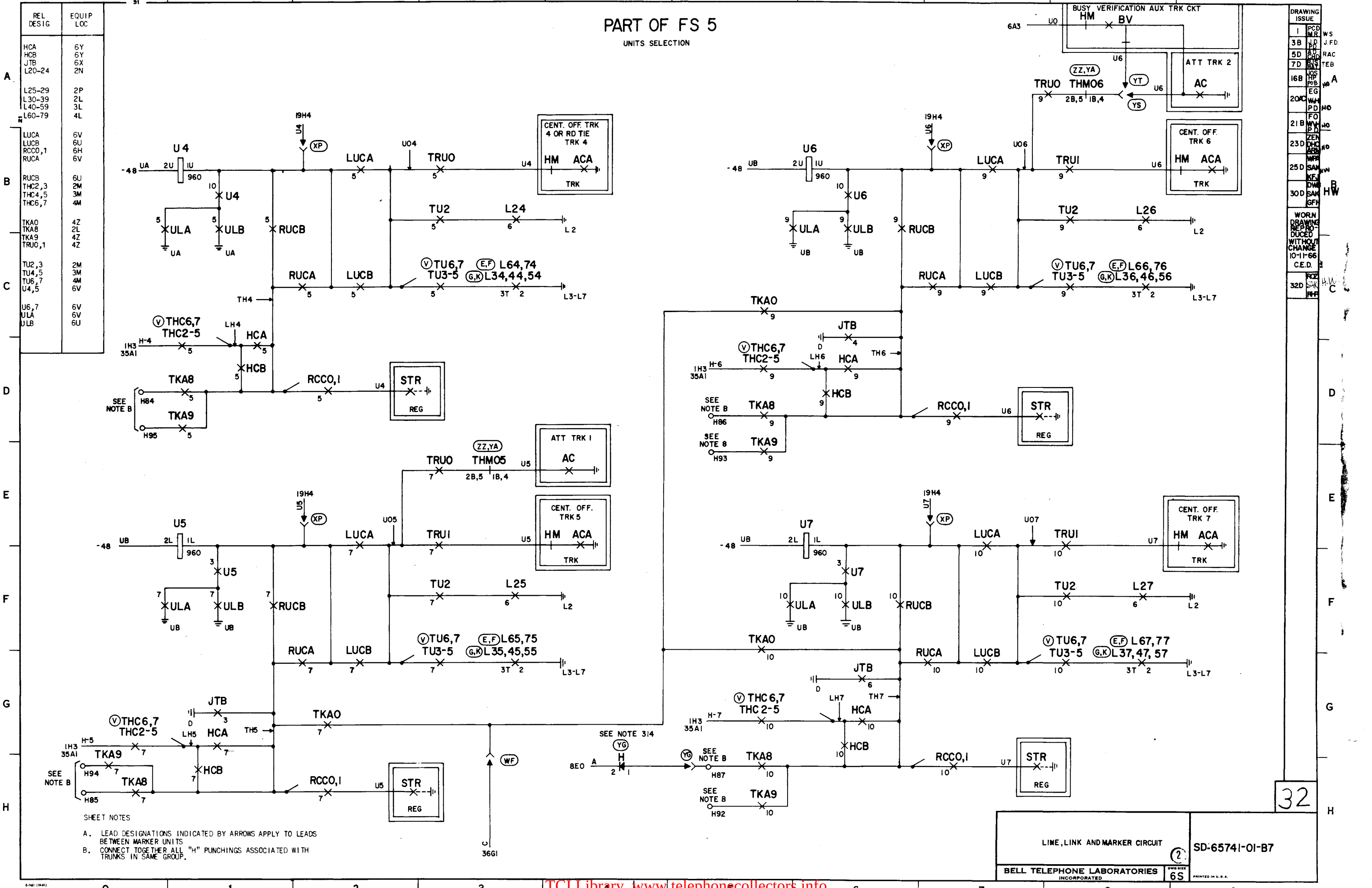
LINE, LINK AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

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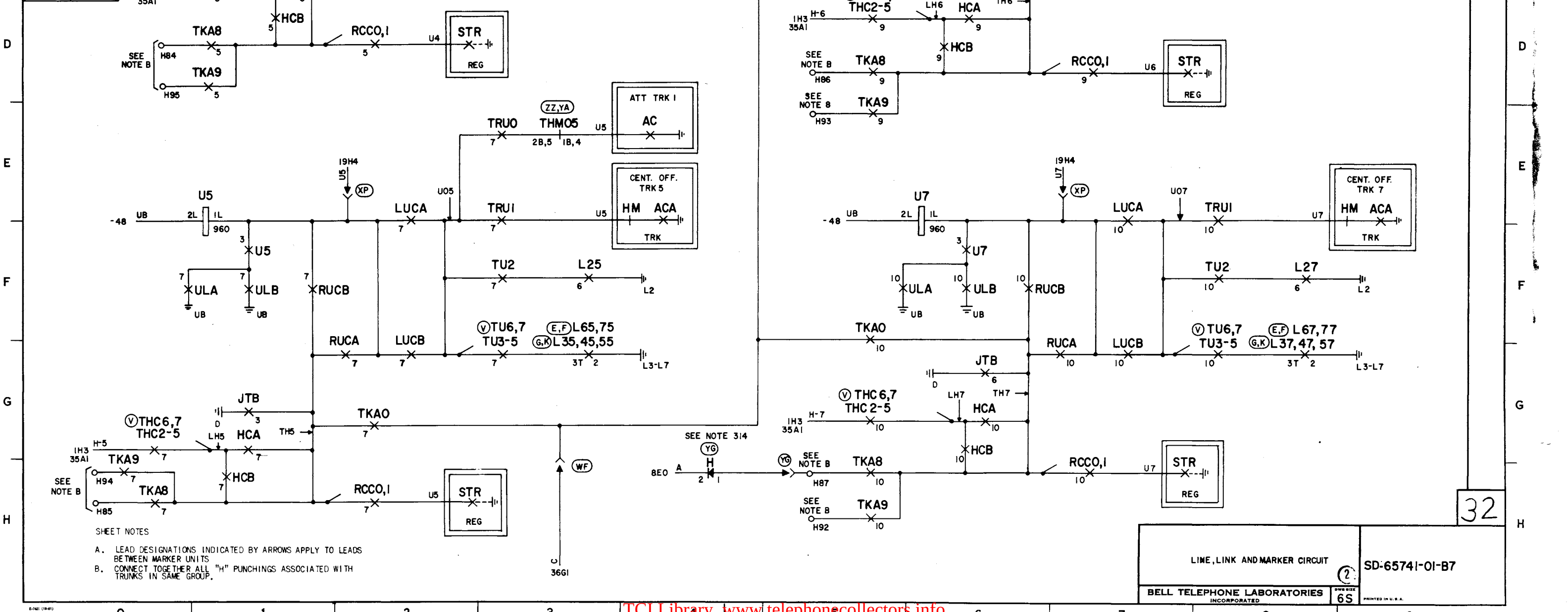


PART OF FS 5

UNITS SELECTION

REL DESIG	EQUIP LOC
HCA	6Y
HCB	6Y
JTB	6X
L20-24	2N
L25-29	2P
L30-39	2L
L40-59	3L
L60-79	4L
LUCA	6V
LUCB	6U
RCCO,1	6H
RUCA	6V
RUCB	6U
THC2,3	2M
THC4,5	3M
THC6,7	4M
TKA0	4Z
TKA8	2L
TKA9	4Z
TRU0,1	4Z
TU2,3	2M
TU4,5	3M
TU6,7	4M
U4,5	6V
U6,7	6V
ULA	6V
ULB	6U

DRAWING ISSUE	WS
1	J.F.D.
3B	RAC
5D	TEB
7D	NO
16B	NO
20C	NO
21B	NO
23D	NO
25D	NO
30D	NO
32D	NO



- SHEET NOTES
- A. LEAD DESIGNATIONS INDICATED BY ARROWS APPLY TO LEADS BETWEEN MARKER UNITS
 - B. CONNECT TOGETHER ALL "H" PUNCHINGS ASSOCIATED WITH TRUNKS IN SAME GROUP.

LIME, LINK AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

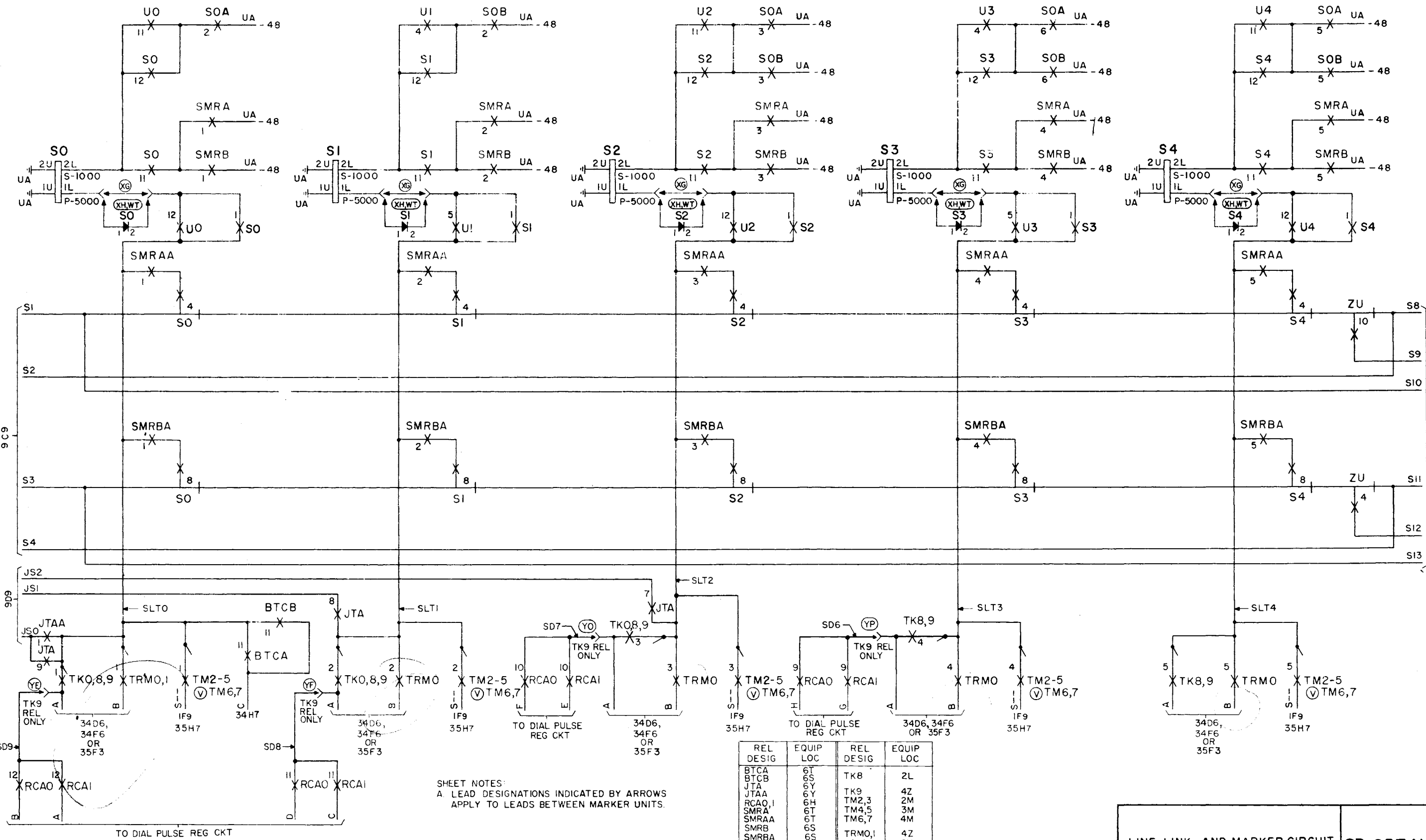
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LINE AND TRUNK HUNTING



PART OF FS 6 LINE AND TRUNK HUNTING



SHEET NOTES:
A LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS.

REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC
BTCA	6T	TK8	2L
BTCA	6S	TK9	4Z
JTA	6Y	TM2,3	2M
JTAA	6Y	TM4,5	3M
RCAO,1	6H	TM6,7	4M
SMRA	6T	TRMO,1	4Z
SMRAA	6S	UO-4	6V
SMRB	6S	ZU	6L,M
SMRBA	6R		
SOB	6R		
SO-4	6W		
TKO	4Z		

LINE, LINK AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

SD-65741-01-B10

6S

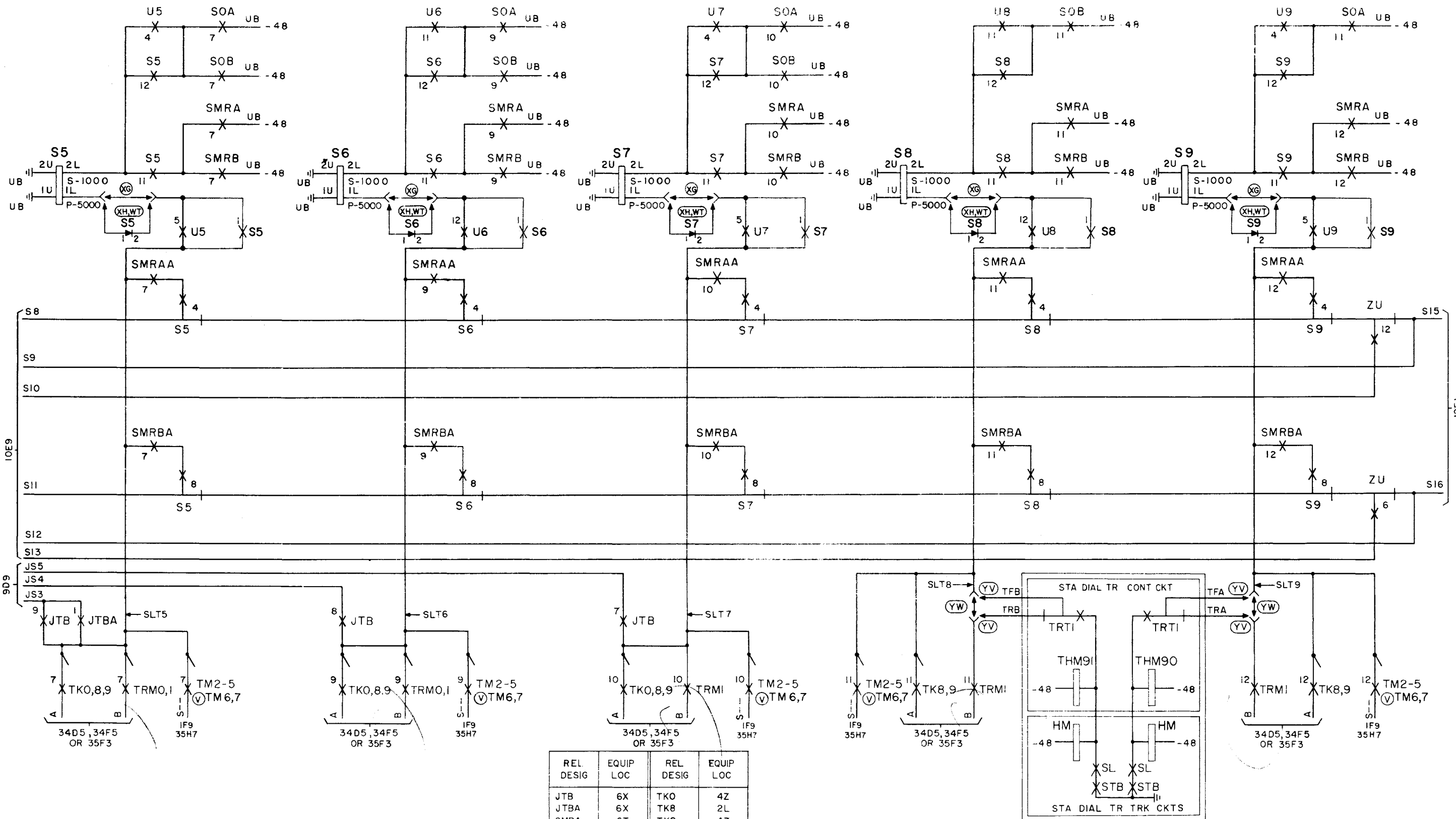
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DRAWING ISSUE	DATE	BY	CHKD	APP'D
1	10/1/51	ME		
2B	10/1/51	ME		
4A	10/1/51	ME		
11B	10/1/51	ME		
16B	10/1/51	ME		
19B	10/1/51	ME		
24D	10/1/51	ME		
33D	10/1/51	ME		

SD-65741-01-B10

PART OF FS 6

LINE AND TRUNK HUNTING



SHEET NOTES
A. LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS

REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC
JTB	6X	TK0	4Z
JTBA	6X	TK8	2L
SMRA	6T	TK9	4Z
SMRAA	6T	TM2,3	2M
SMRB	6S	TM4,5	3M
SMRBA	6S	TM6,7	4M
SOA	6R	TRMO,1	4Z
SOB	6R	U6-9	6U
S5-9	6W	ZU	6L,M

LINE, LINK AND MARKER CIRCUIT SD-65741-01-B11

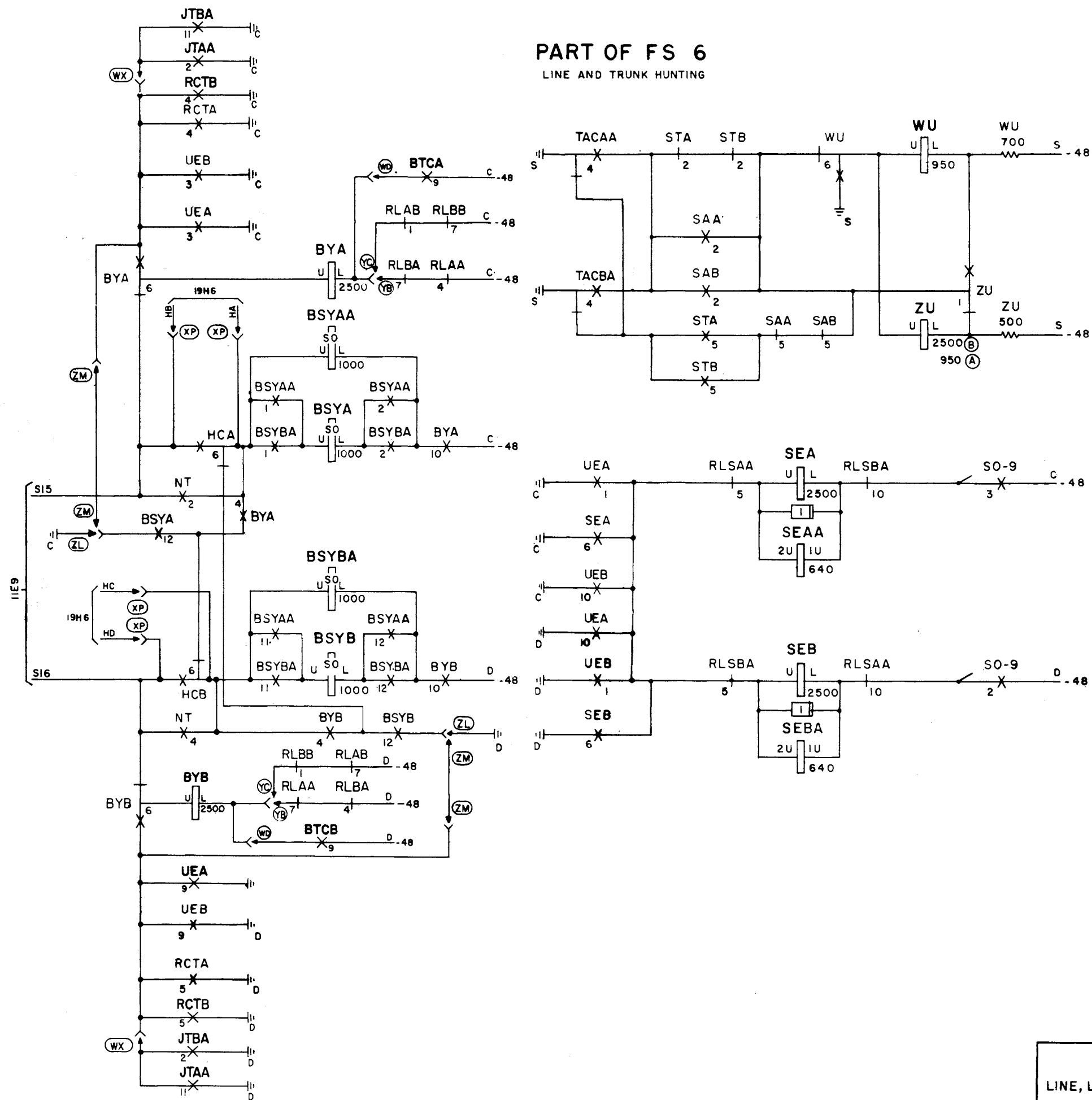
BELL TELEPHONE LABORATORIES
INCORPORATED

6S

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DRAWING ISSUE	DATE	BY	CHKD	APP'D
1	10/1/54	W. J. H.		
2B	10/1/54	W. J. H.		
3B	10/1/54	W. J. H.		
4A	10/1/54	W. J. H.		
11B	10/1/54	W. J. H.		
23D	10/1/54	W. J. H.		
24D	10/1/54	W. J. H.		
32D	10/1/54	W. J. H.		
33D	10/1/54	W. J. H.		

PART OF FS 6 LINE AND TRUNK HUNTING



REL DESIG	EQUIP LOC
BSYA	6V
BSYAA	6V
BSYB	6U
BSYBA	6U
BTCA,B	6TS
BYA	6V
BYB	6U
HCA	6Y
HCB	6Y
JTAA	6Y
JTBA	6X
NT	6L,M
RCTA	6Y
RCTB	6X
RLAA	6T
RLBA	6S
RLSAA	6K
RLSBA	6J
SAA	6K
SAB	6J
SEA	6V
SEAA	6V
SEB	6U
SEBA	6U
STA	6K
STB	6J
SO-9	6W
TEAI	6AB
TEBI	6AA
UEA	6V
UEB	6U
WU	6L,M
ZU	6L,M

LINE, LINK, AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

SD-65741-01-B12

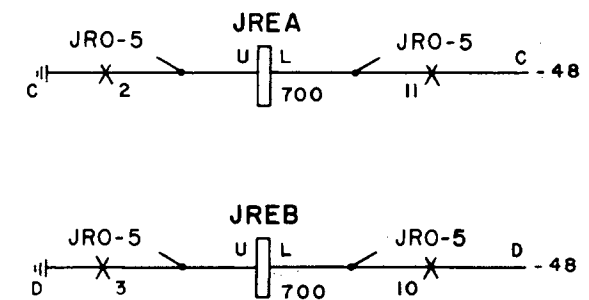
36

6S

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7

DRAWING ISSUE	
1	22 24
2B	25 26
3B	27 28



REL DESIG	EQUIP LOC
BTTA	6T
BTTB	6S
ICTA	6T
ICTB	6S
JRO-5	6X
JREA	6Y
JREB	6X
JTA	6Y
JTB	6X
RPO, I	6Z
SAA	6K
SAB	6J
STA	6K
STB	6J
UEA	6V
UEB	6U

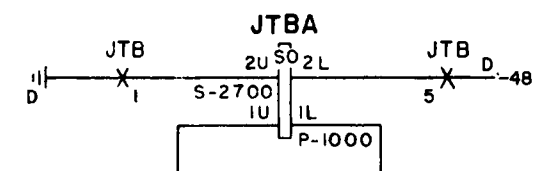
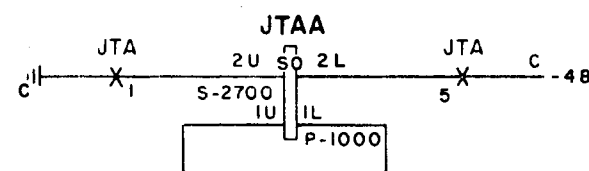
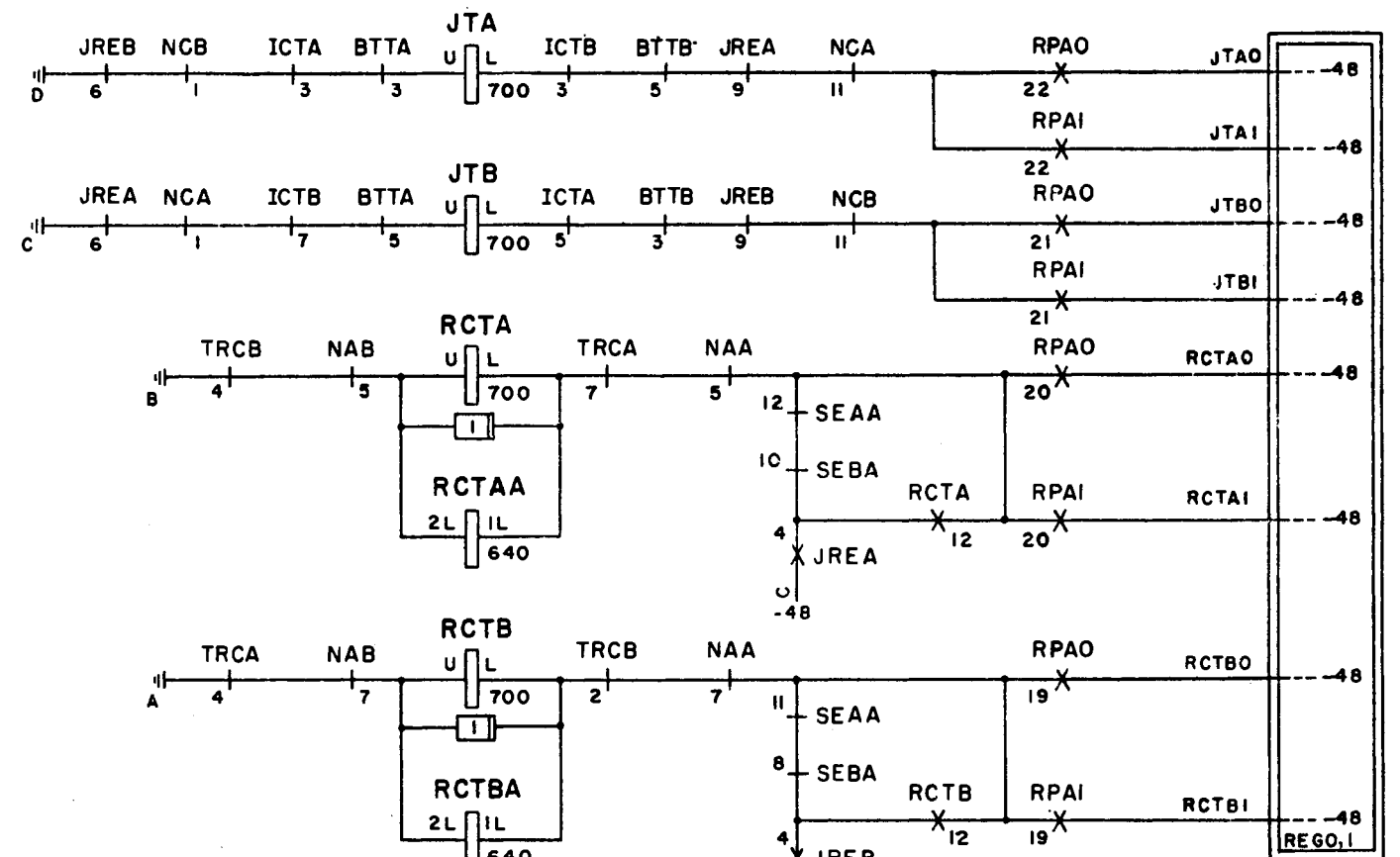
SD-65741-01-B13

BELL TELEPHONE LABORATORIES
INCORPORATED

65

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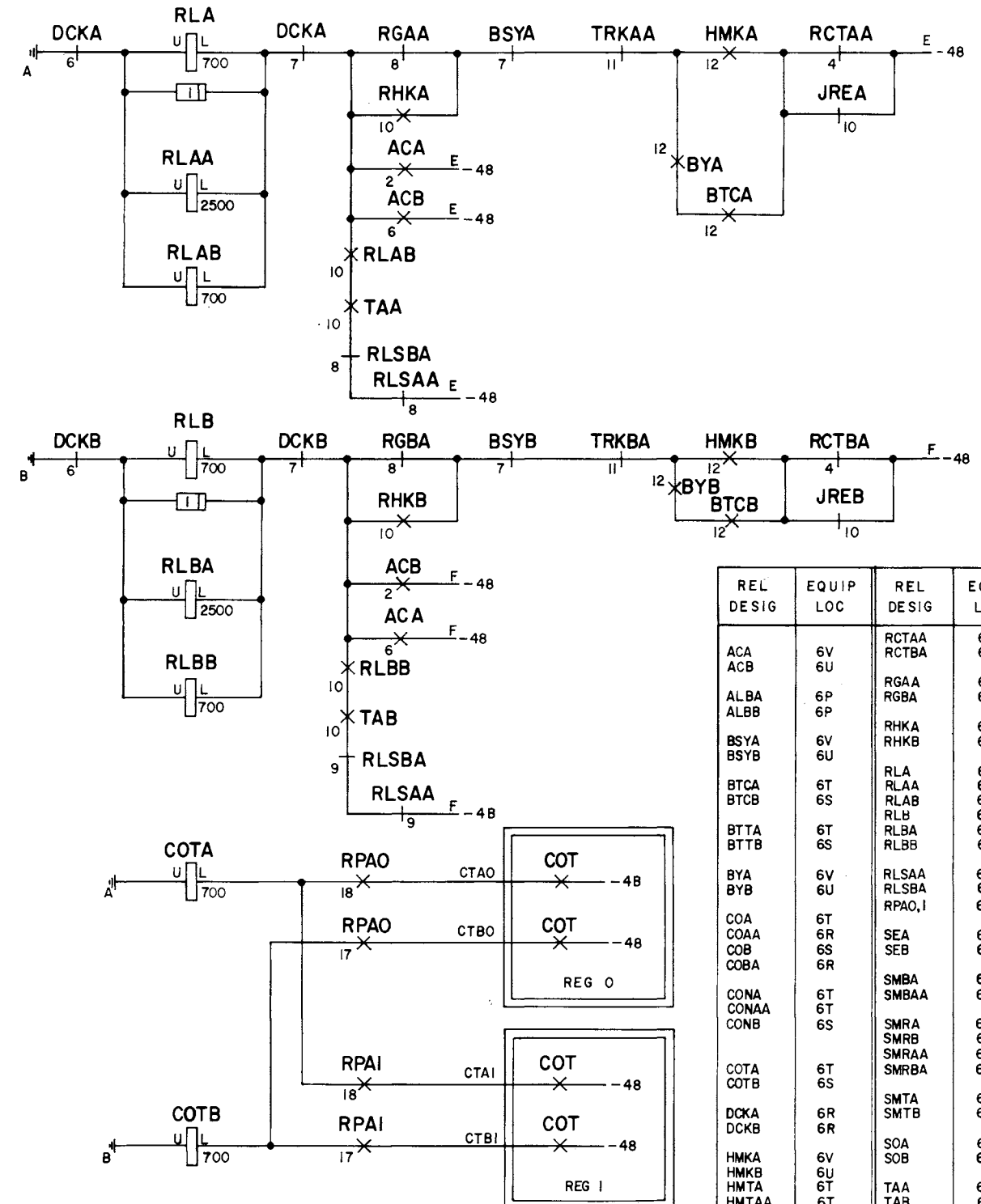
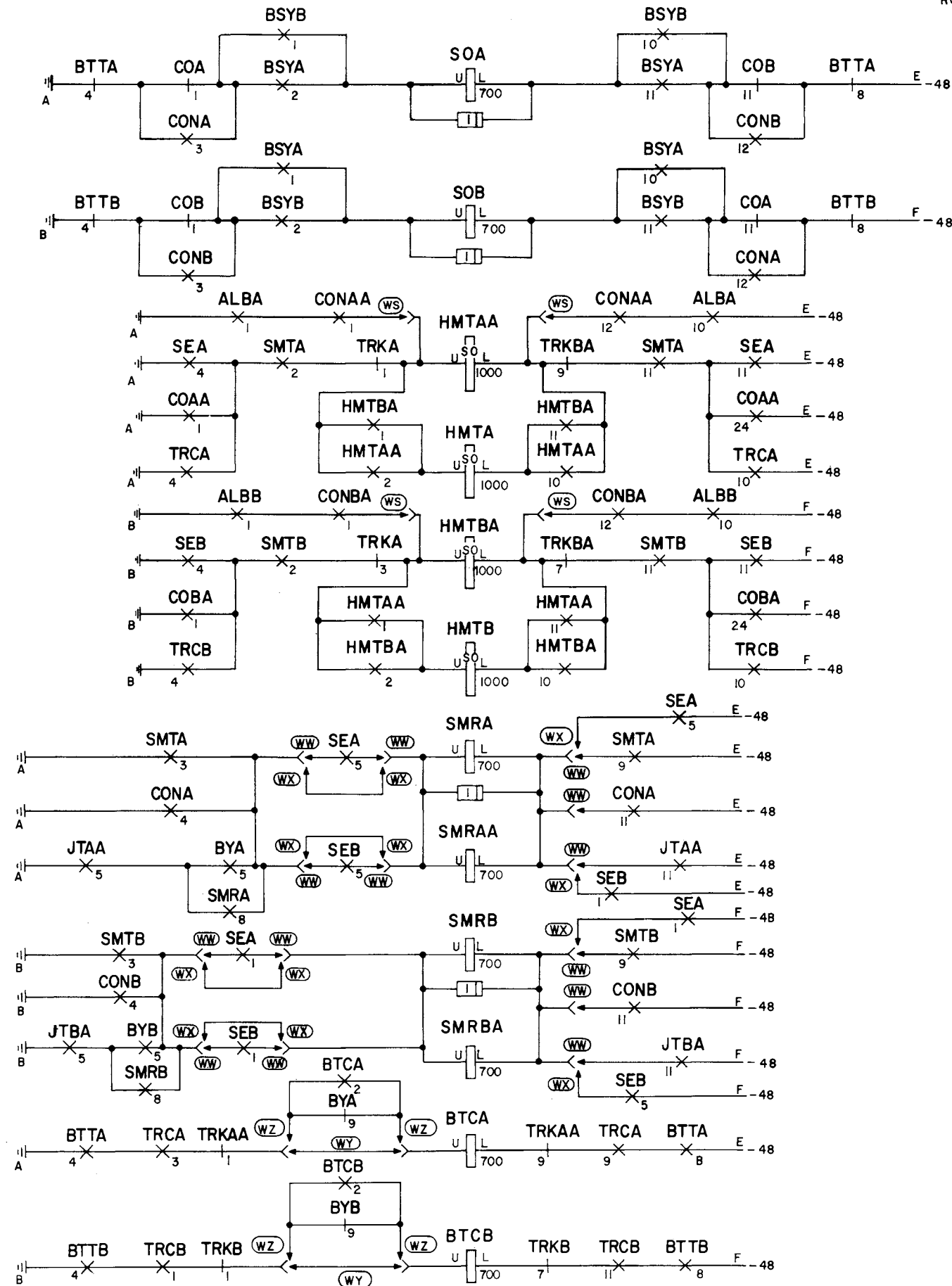
DRAWING ISSUE	
1	22
2B	16.5
3B	22



REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC
BTTA	6T	RPAO.I	6W
BTTB	6S	SEA	6V
COA	6T	SEAA	6V
COB	6S	SEB	6U
CONA	6T		
CONB	6S		
HMKa	6V	SEBA	6U
HMKB	6U	SMTA	6Q
HMTA	6T	SMTB	6Q
HMTB	6S	TRCA	6Y
ICTA	6T	TRCAA	6Y
ICTB	6S	TRCB	6X
JREA	6Y	TRCBA	6X
JREB	6X	TRKA	6Y
JTA	6Y	TRKAA	6Y
JTAA	6Y	TRKB	6X
JTB	6X	TRKBA	6X
JTBA	6X	UEA	6V
NAA	6K	UEB	6U
NAB	6J		
NCA	6K		
NCB	6J		
RCTA	6Y		
RCTAA	6V		
RCTB	6X		
RCTBA	6U		

NO. 756A		SD-65741-01-B14
LINE, LINK AND MARKER CIRCUIT		
BELL TELEPHONE LABORATORIES INCORPORATED	Doc #38 6S	PRINTED IN U. S. A.

PART OF FS 9 ROUTE CONTROL



REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC
ACA	6V	RCTAA	6V
ACB	6U	RCTBA	6U
ALBA	6P	RGAA	6G
ALBB	6P	RGBA	6G
BSYA	6V	RHKA	6G
BSYB	6U	RHKB	6G
BTCA	6T	RLA	6T
BTCB	6S	RLAA	6T
BTTA	6T	RLB	6S
BTTB	6S	RLBA	6S
BYA	6V	RLBB	6S
BYB	6U	TAA	6K
COA	6T	RLSAA	6J
COAA	6R	RLSBA	6W
COB	6S	SEA	6V
COBA	6R	SEB	6U
CONA	6T	SMBA	6T
CONAA	6T	SMBA	6T
CONB	6S	SMRA	6T
		SMRB	6S
		SMRAA	6T
		SMRBA	6S
COTA	6T	SMTA	6Q
COTB	6S	SMTB	6Q
DCKA	6R	SOA	6R
DCKB	6R	SOB	6R
HMKA	6V	TAA	6K
HMKB	6U	TAB	6J
HMTA	6T	TRCA	6Y
HMTB	6S	TRCB	6X
HMTBA	6S	TRKA	6Y
JREA	6Y	TRKAA	6Y
JREB	6X	TRKB	6X
JTAA	6Y	TRKBA	6X
JTBA	6X		

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-B15

BELL TELEPHONE LABORATORIES

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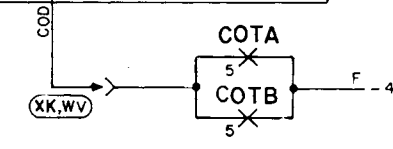
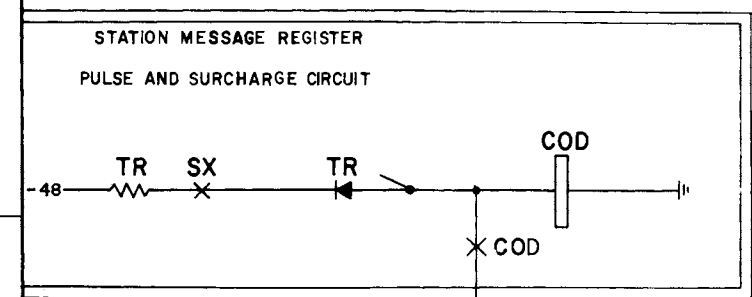
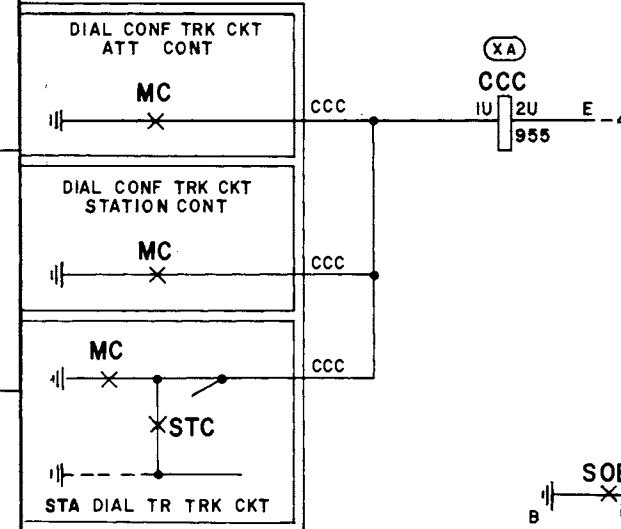
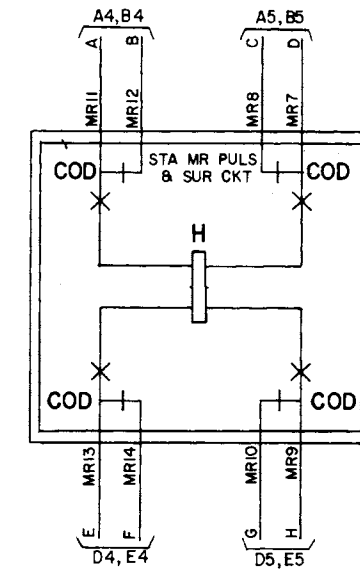
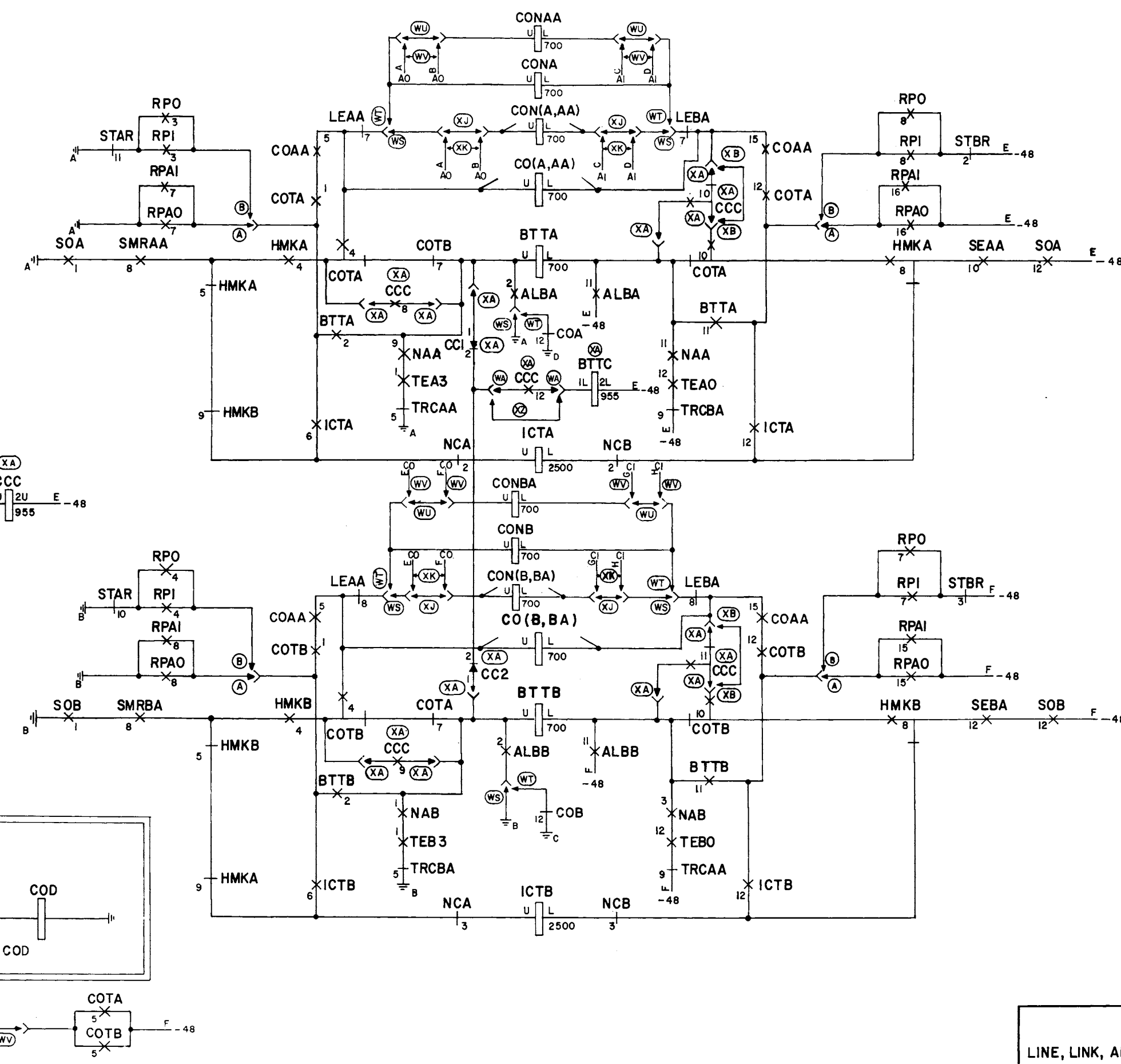
DRAWING
ISSUE
1 PC MR
2 B TCC WS
3 B JFD WS
4 A RAC
6 A TEB
WORN
DRAWING
REPRO-
DUCED
WITHOUT
CHANGE
1-13-67
JUR
FED
330 PJS
RHP
ROZ
368 PJS
LDJ

36

PART OF FS 9 ROUTE CONTROL

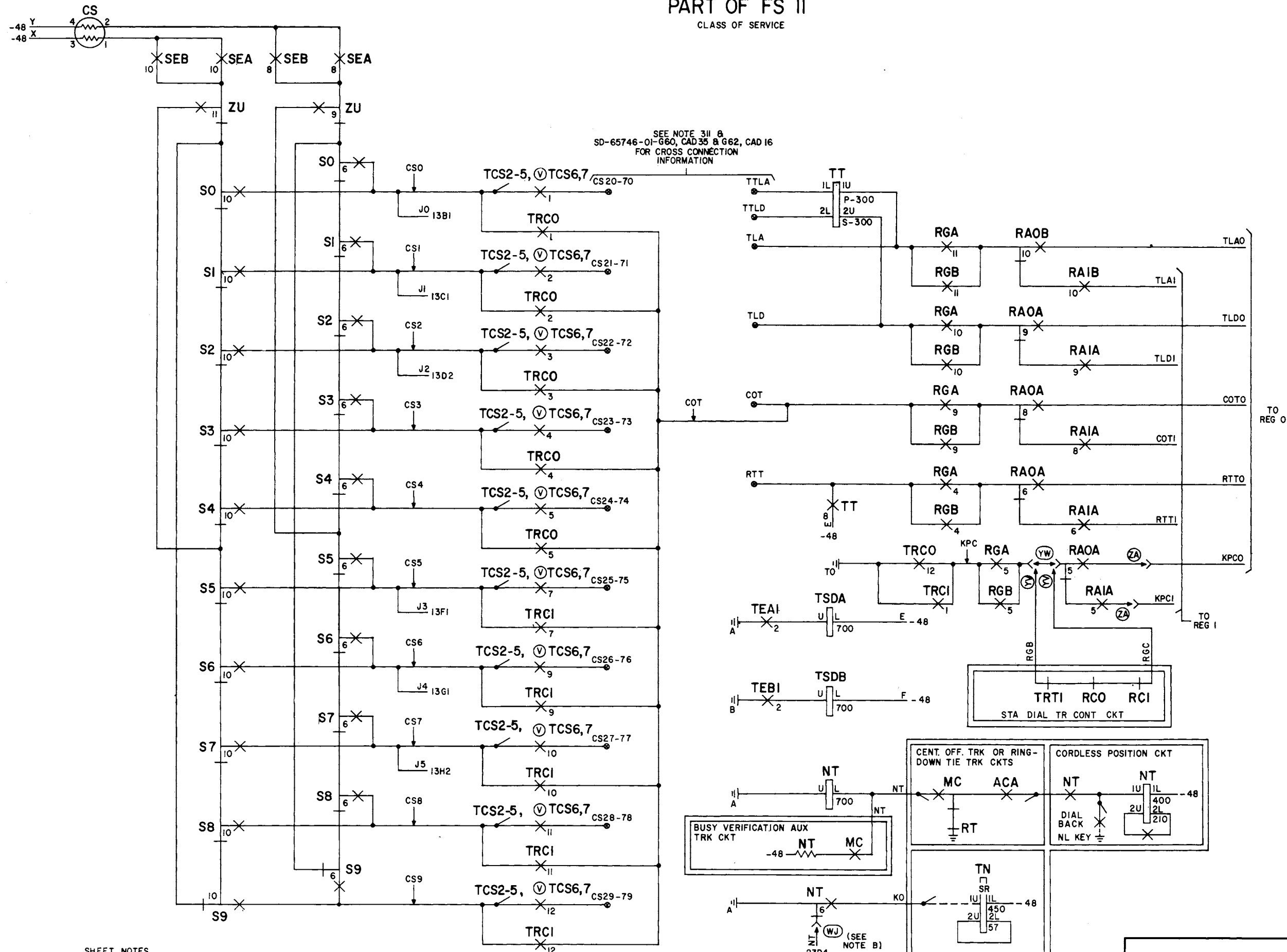
DRAWING	ISSUE
1	PC
38	WS
88	MR
23D	JFD
24D	PD
29B	MG
30D	WS
31D	FGS
33D	ZEN
35D	DHC
37B	ARM
	RWP
	SAK
	YFJ
	WPK
	GFH
	BAK
	RUS
	GFH
	PMC
	PJS
	RHP
	WORN
	DRAWING
	REPRO-
	DUCED
	WITHOUT
	CHANGE
	11-28-6
	JJR
	FED
	25
	RHP
	FED
	25
	RHP
	35D
	RHP
	ROZ
	PJS
	LDJ

REL JESIG	EQUIP LOC
ALBA	6P
ALBB	6P
BTTA	6T
BTTC	6S
BTTC	6R
CCC	6R
COA	6T
COAA	6R
COBA	6R
CON(A,AA)	6T
CON(B,BA)	6S
COTA	6T
COTB	6S
HMKA	6V
HMKB	6U
ICTA	6T
ICTB	6S
LEAA	6Q
LEBA	6Q
NAA	6K
NAB	6J
NCA	6K
NCB	6J
RPO,1	6Z
SEAA	6V
SEBA	6U
SMRAA	6T
SMRBA	6S
SOA	6R
SOB	6R
STAR	6K
STBR	6K
TEAO,3	6AB
TEBO,3	6AA
TRCAA	6Y
TRCBA	6X



SD-65741-01-B16

PART OF FS II CLASS OF SERVICE



SEE NOTE 311 B
SD-65746-01-G60, CAD 35 & G62, CAD 16
FOR CROSS CONNECTION
INFORMATION

REL DESIG	EQUIP LOC
NT	6L,M
RAOA	6G
RAOB	6G
RAIA	6G
RAIB	6G
RGA	6G
RGB	6G
SC-9	6W
SEA	6V
SEB	6U
TCS2,3	2M
TCS 4,5	3M
TEAI	6AB
TEBI	6AA
TRCO	4Z
TRCI	4Z
TSDA	6R
TSDB	6R
TT	6R
ZU	6L,M

SHEET NOTES
A. LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS
B. WHEN OPTION WJ IS REQUIRED THE INSTALLER SHALL ADD A STRAP
BETWEEN 6 BREAK OF RELAY NT AND 4 MAKE OF RELAY COAA (OPTION 22
PROVIDED) OR 2M OF RELAY COS (OPTION 9 PROVIDED).

LINE, LINK, AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

SD-65741-01-B18

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DRAWING
ISSUE
1 RC, B, A, MR
2B EH, RD
5D A.D. RA, S
7D BAT
9B VZ, MS
23D ZEN
29B ARM
30D PUS
31D PUS
WORN
DRAWING
REPRO-
DUCED
WITHOUT
CHANGE
10-11-66
FED #
33D PUS
37B PUS
38D PUS

38

SD-65741-01-B18

PART OF FS II

CLASS OF SERVICE

DRAWING	ISSUE	WS
2B	WS	NY
38	JFD	PD
11B	POB	A
16B	HO	HO
22A	HO	HO
23D	HO	HO
24D	HW9	B
25D	SAK	KFJ
29B	GFH	
31D	PWC	RHF
33D	FIS	RHF
35D	FIS	RHF
38D	ROZ	LDJ

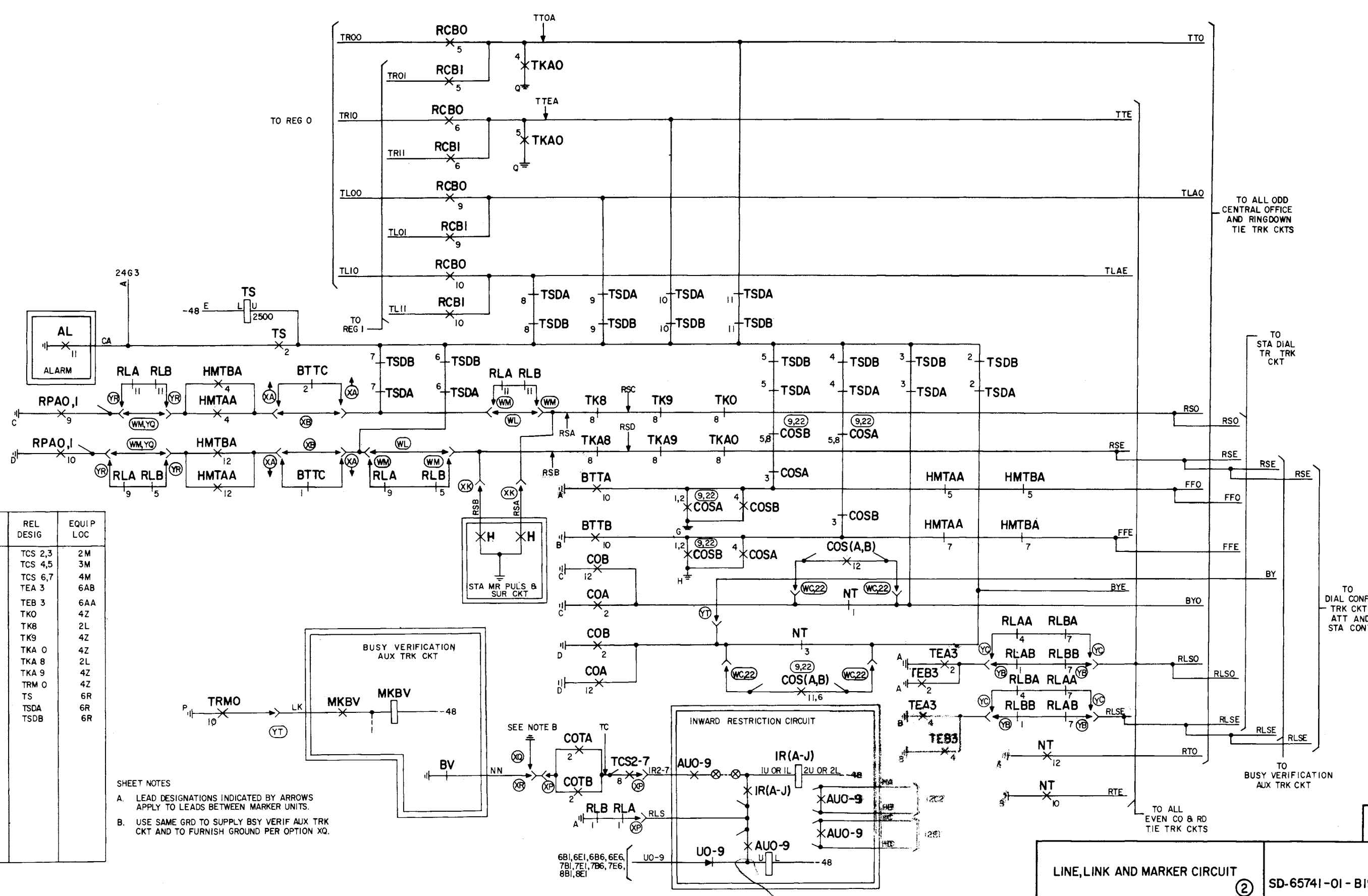
TO ALL ODD CENTRAL OFFICE AND RINGDOWN TIE TRK CKTS

TO STA DIAL TRK CKT

TO DIAL CONF TRK CKT ATT AND STA CONT

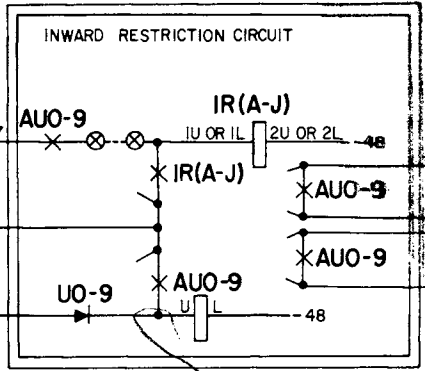
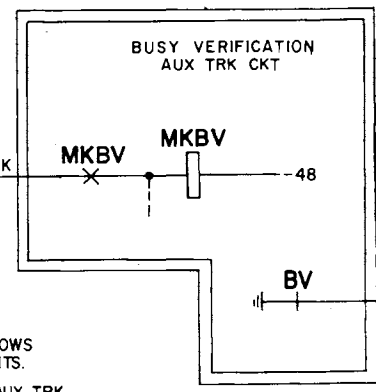
TO ALL EVEN CO & RD TIE TRK CKTS

TO BUSY VERIFICATION AUX TRK CKT



REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC
BTTA	6T	TCS 2,3	2M
BTTB	6S	TCS 4,5	3M
BTTTC	6R	TCS 6,7	4M
COA	6T	TEA 3	6AB
COB	6S	TEB 3	6AA
COSA	6P	TKO	4Z
COSB	6P	TK8	2L
COTA	6T	TK9	4Z
COTB	6S	TKA 0	4Z
H	EXT	TKA 8	2L
HMTAA	6T	TKA 9	4Z
HMTBA	6S	TRM 0	4Z
NT	6L,M	TS	6R
		TSDA	6R
		TSDB	6R
RCBO	6H		
RCBI	6H		
RLA	6T		
RLAA	6T		
RLAB	6T		
RLB	6S		
RLBA	6S		
RLBB	6S		
RPAO, I	6W		

- SHEET NOTES
- LEAD DESIGNATIONS INDICATED BY ARROWS APPLY TO LEADS BETWEEN MARKER UNITS.
 - USE SAME GRD TO SUPPLY BSY VERIF AUX TRK CKT AND TO FURNISH GROUND PER OPTION XQ.



LINE, LINK AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

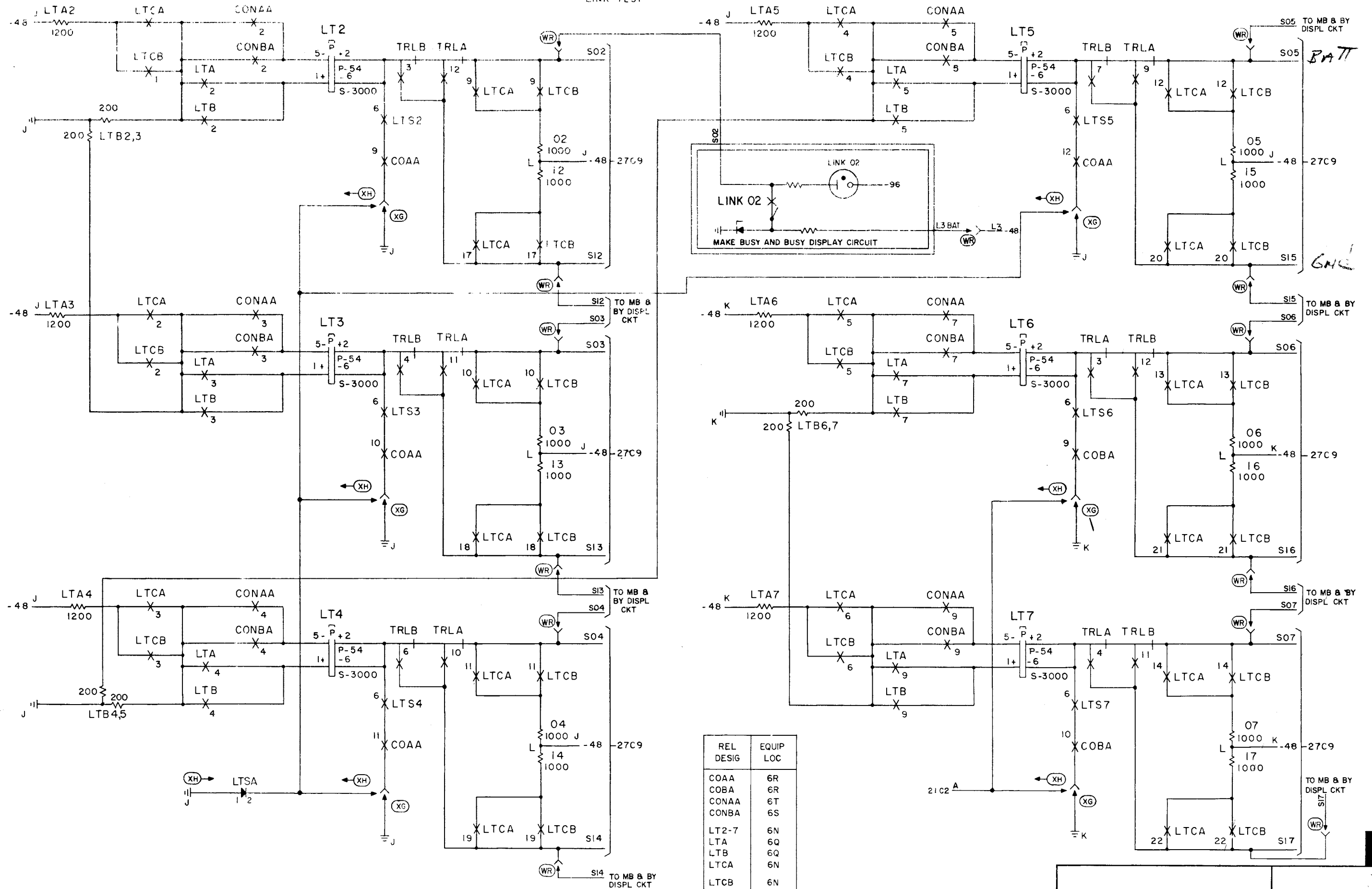
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⑨ PART OF FS 12 (MFR. DISC.)

LINK TEST



REL DESIG	EQUIP LOC
COAA	6R
COBA	6R
CONAA	6T
CONBA	6S
LT2-7	6N
LTA	6Q
LTB	6Q
LTCA	6N
LTCB	6N
LTS2-7	6P
TRLA	6Q
TRLB	6Q

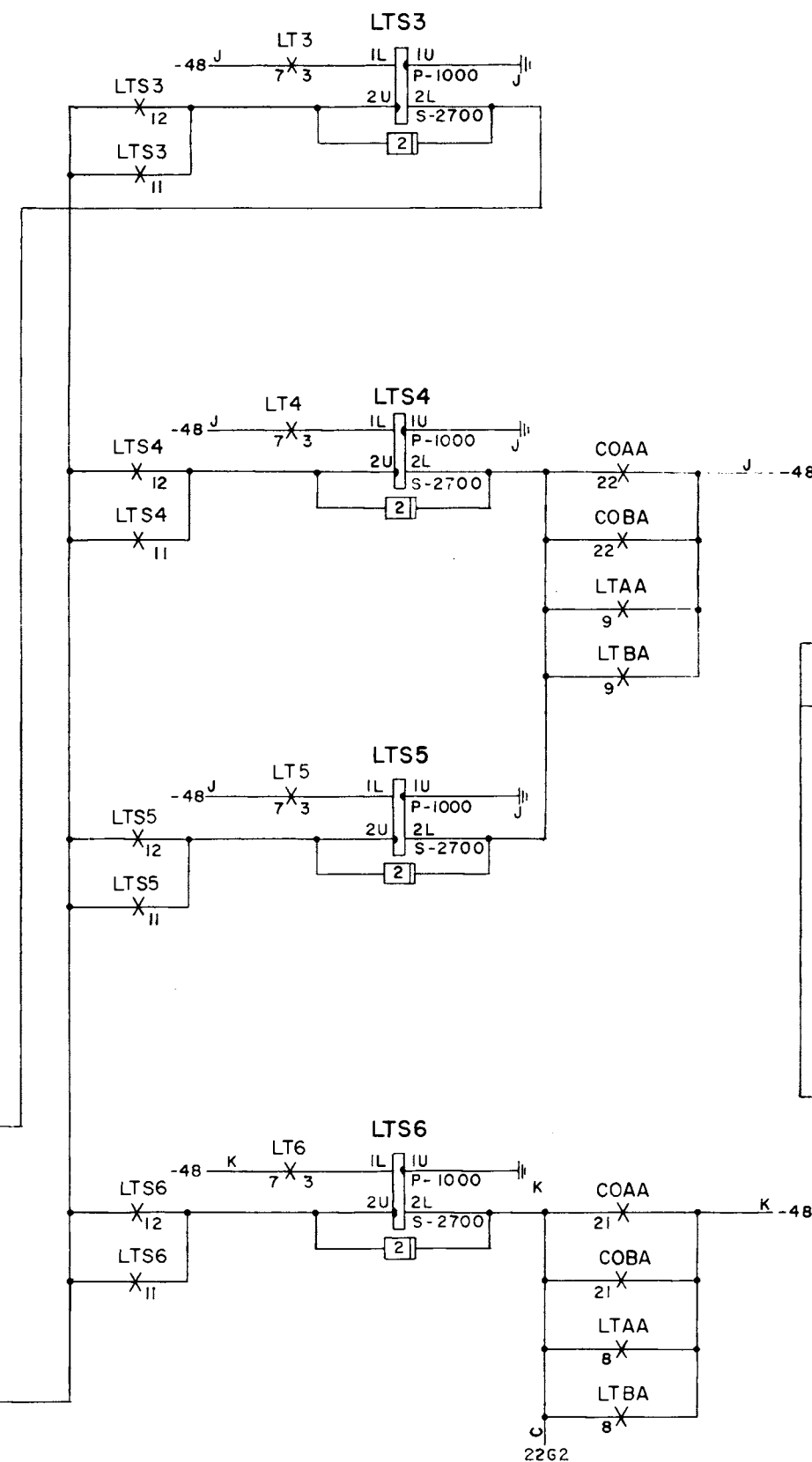
LINE, LINK AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

SD-65741-01-B20

SD-65741-01-B20

LINK TEST



REL DESIG	EQUIP LOC
COAA	6R
COBA	6R
CONAA	6T
CONBA	6S
LEA	6Q
LEB	6Q
LT2-9	6N
LTA	6Q
LTAA	6Q
LTB	6Q
LTBA	6Q
LTCA	6N
LTCB	6N
LTS2-8	6P
TKB0	4Z
TKB8	2L
TKB9	4Z
TRI, A	6Q
TRLB	6Q

NOTE:

1. LEAD DESIGNATIONS INDICATED BY ARROWS APPLY TO LEADS BETWEEN MARKER UNITS.

LINE, LINK, AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

SD-65741-01-B21

LINK TEST



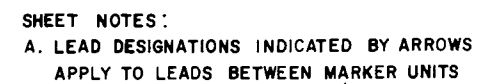
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LINK TEST



SELECT MAGNET CONTROL

DRAWING ISSUE	1	PC BA MR	NY
	2 B	TCC	WS
	3 B	FOS	WS
	4 A	JD JFD PD	A
	6 A	AD IRAC CHD	
	12 B	RJS TEB BAT	
	23 D	PTH POB WM	
	30 D	ZEN DHG ARM	B HO
	50 D	EWK SAK SFH	H W
WORK DRAWING REPRODUCED WITHOUT CHANGE	9-6-66 J.R.R.		
	33 D	FED RJS RHP	H W C
	58 D	ROZ PJS LDJ	215.



B. WHEN OPTION WJ IS REQUIRED THE INSTALLER SHALL ADD A STRAP BETWEEN 2M OF RELAY COS AND 6 BREAK OF RELAY NT.

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-B 23

BELL TELEPHONE LABORATORIES
INCORPORATED

2
DWS st
6S

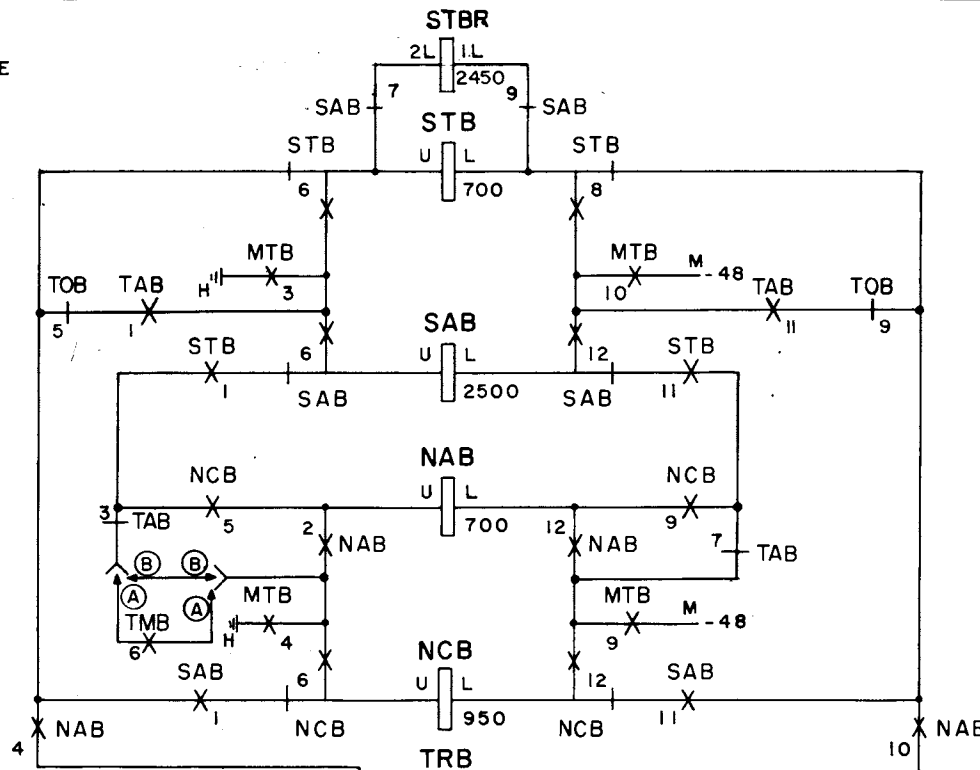
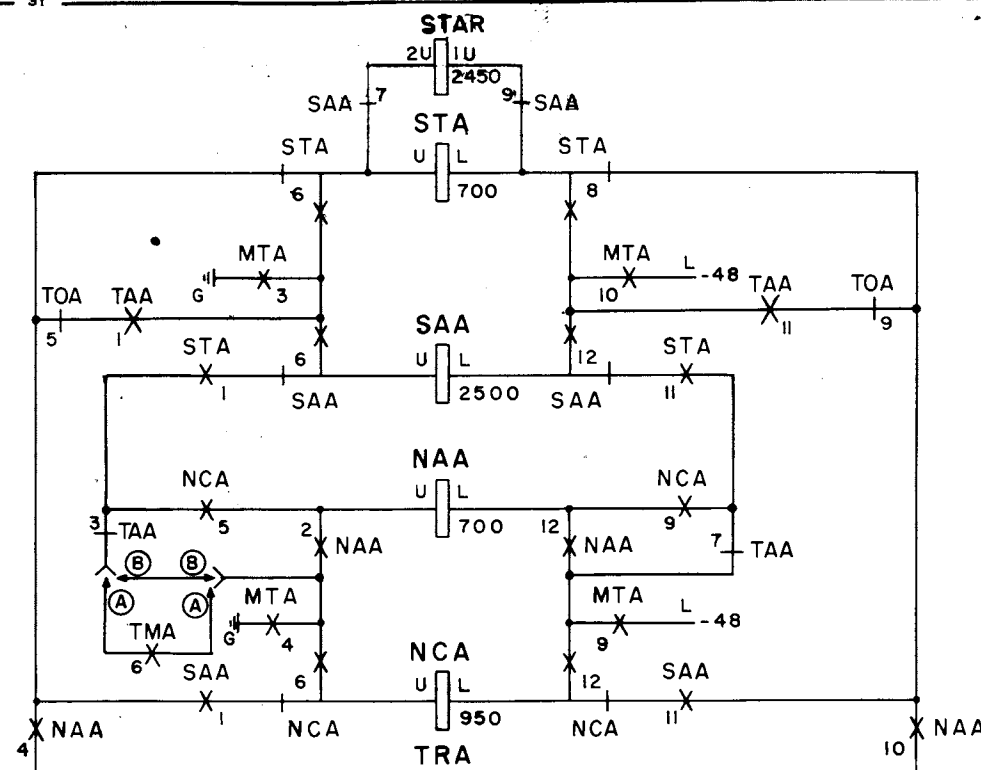
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SELECT MAGNET CONTROL



FS 14

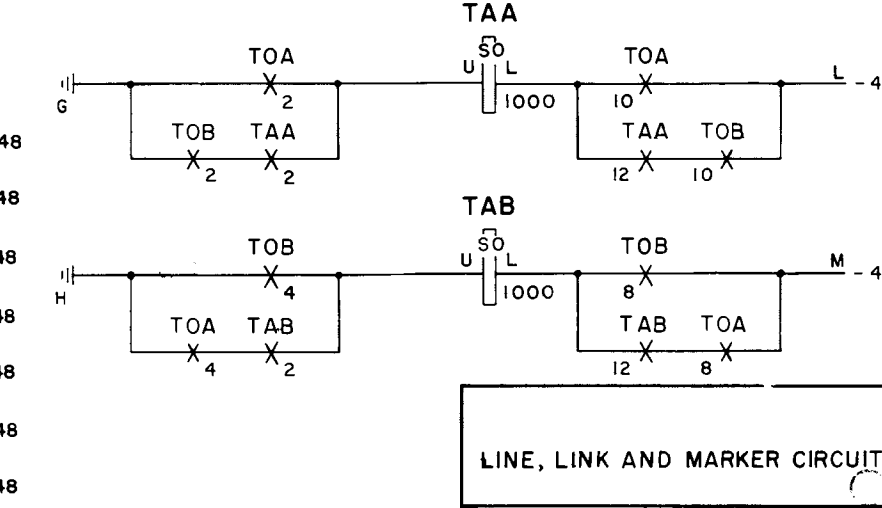
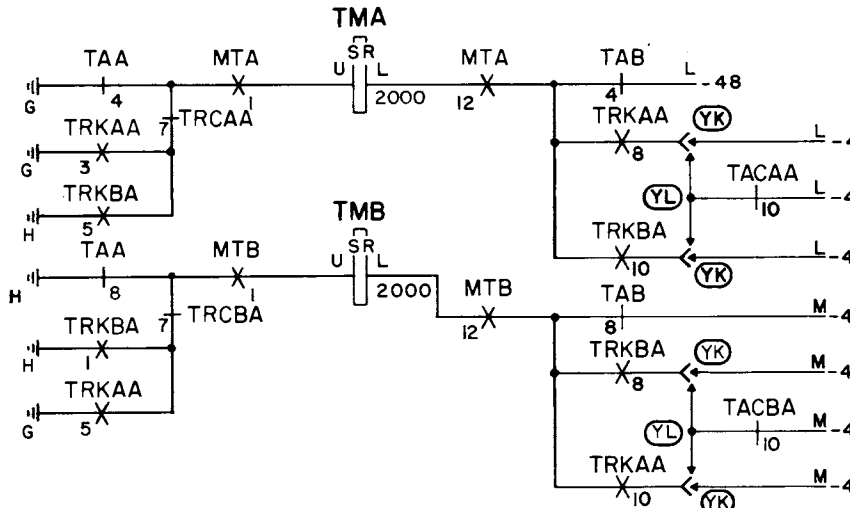
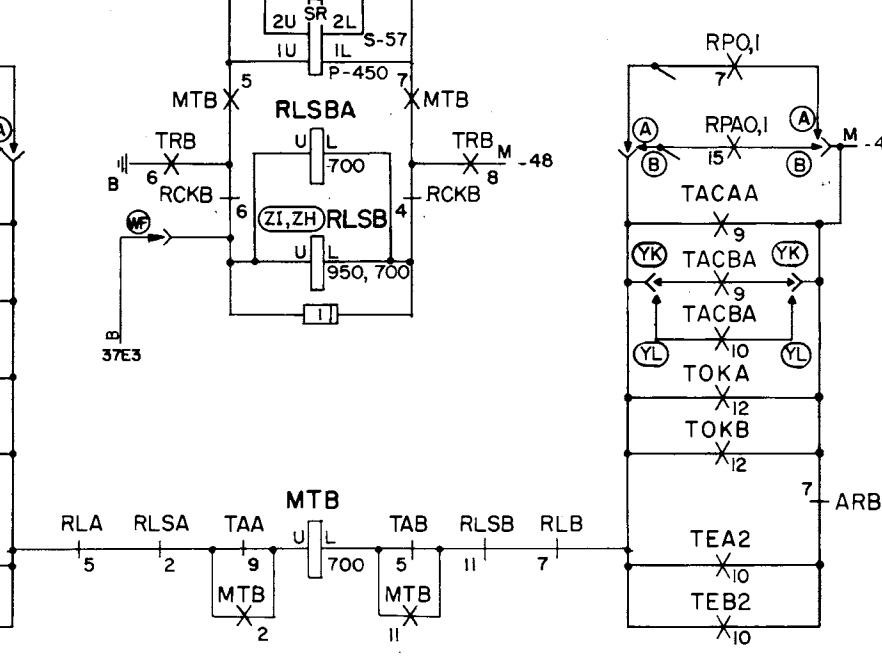
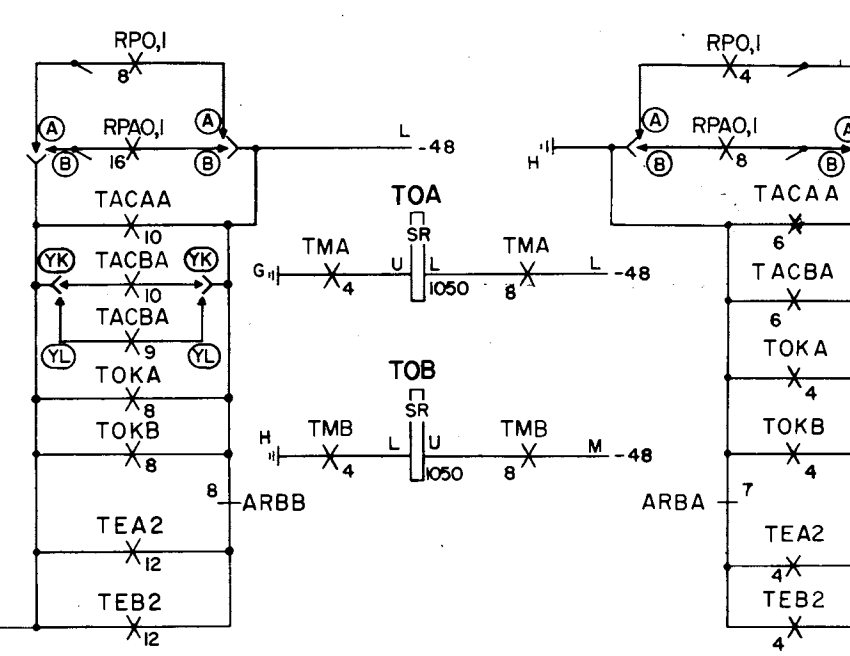
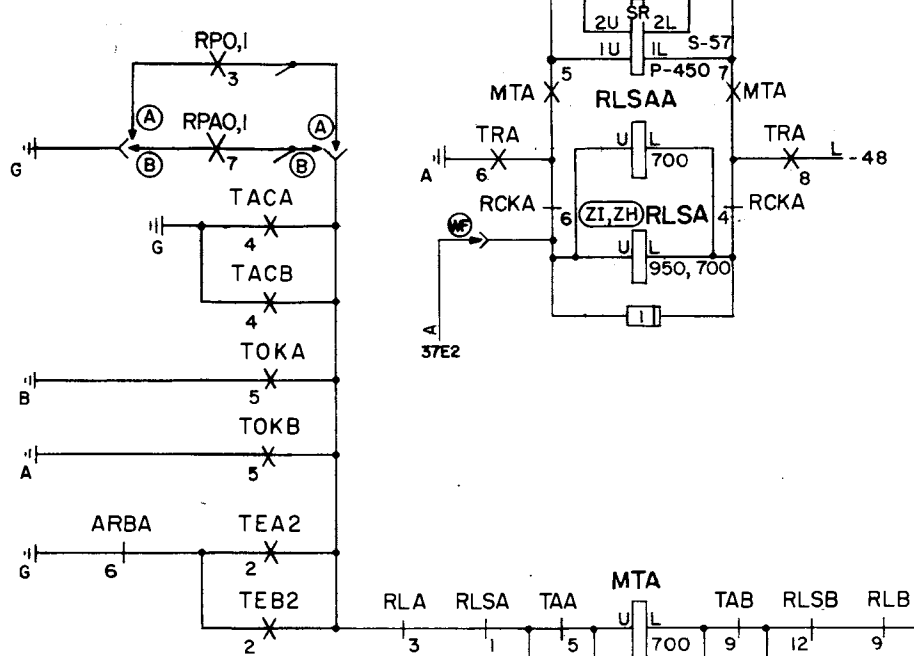
ADVANCE, TIMEOUT AND RELEASE



A
B
C
D
E
F
G
H

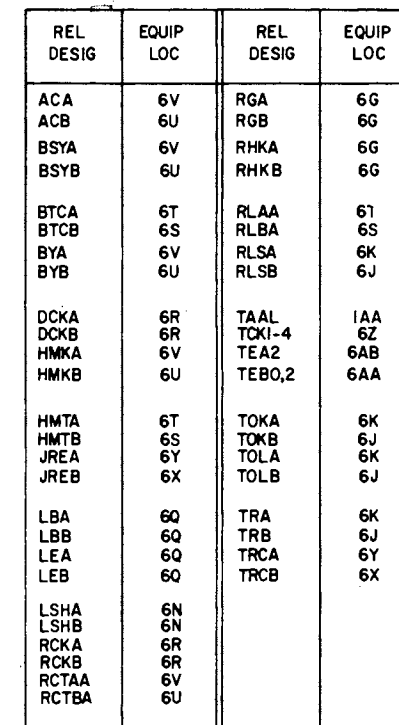
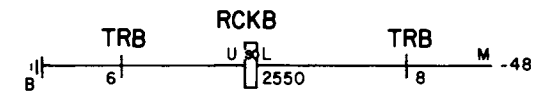
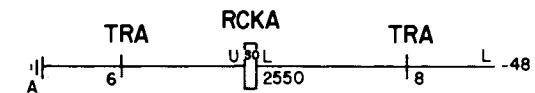
REL DESIG	EQUIP LOC	DRAWING ISSUE
ARBA	6AB	2B
ARBB	6AA	3B
MTA	6J	4A
MTB	6K	6A
NAA	6K	8B
NAB	6J	11B
NCA	6K	19B
NCB	6J	300
RCKA	6R	
RCKB	6R	
RLA	6T	
RLB	6S	
RLSA	6K	
RLSAA	6K	
RLSB	6J	
RLSBA	6J	
RPAO,1	6W	
SAA	6K	
SAB	6J	
STA	6K	
STAR	6K	
STBR	6K	
STB	6J	
TAA	6K	
TAB	6J	
TACA	6Y	
TACB	6Y	
TACAA	6Y	
TACBA	6Y	
TEA2	6AB	
TEB2	6AA	
TMA	6K	
TMB	6J	
TOA	6K	
TOB	6J	
TOKA	6K	
TOKB	6J	
TRA	6K	
TRB	6J	
TRCAA	6Y	
TRCBA	6X	
TRKAA	6Y	
TRKBA	6X	

B
C
D
E
F
G
H

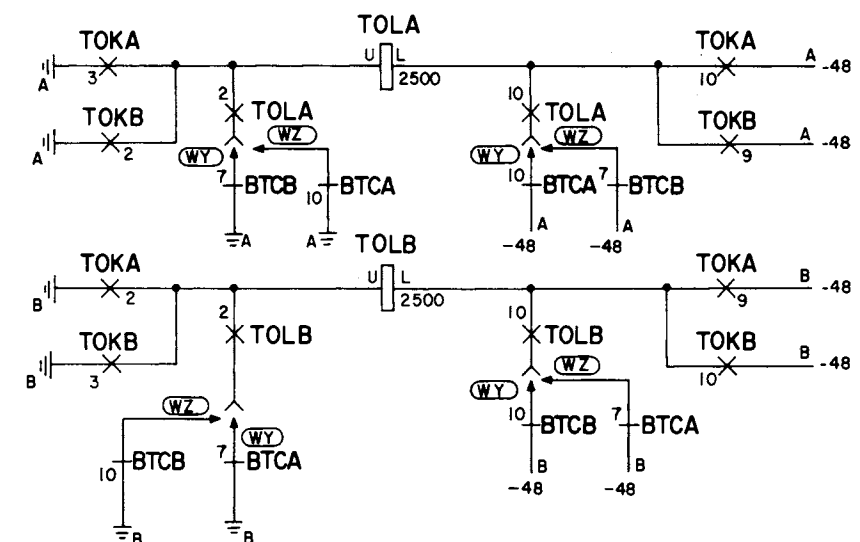


LINE, LINK AND MARKER CIRCUIT
BELL TELEPHONE LABORATORIES
SD-65741-01-B25
65

DOWN CHECK



TIME - OUT CHECK



LINE, LINK, AND MARKER CIRCUIT

②

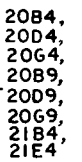
SD-65741-01-B26

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG NO.
69

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LINKS
(SEE NOTE 30I FOR ASSIGNMENT OF VERTICALS)

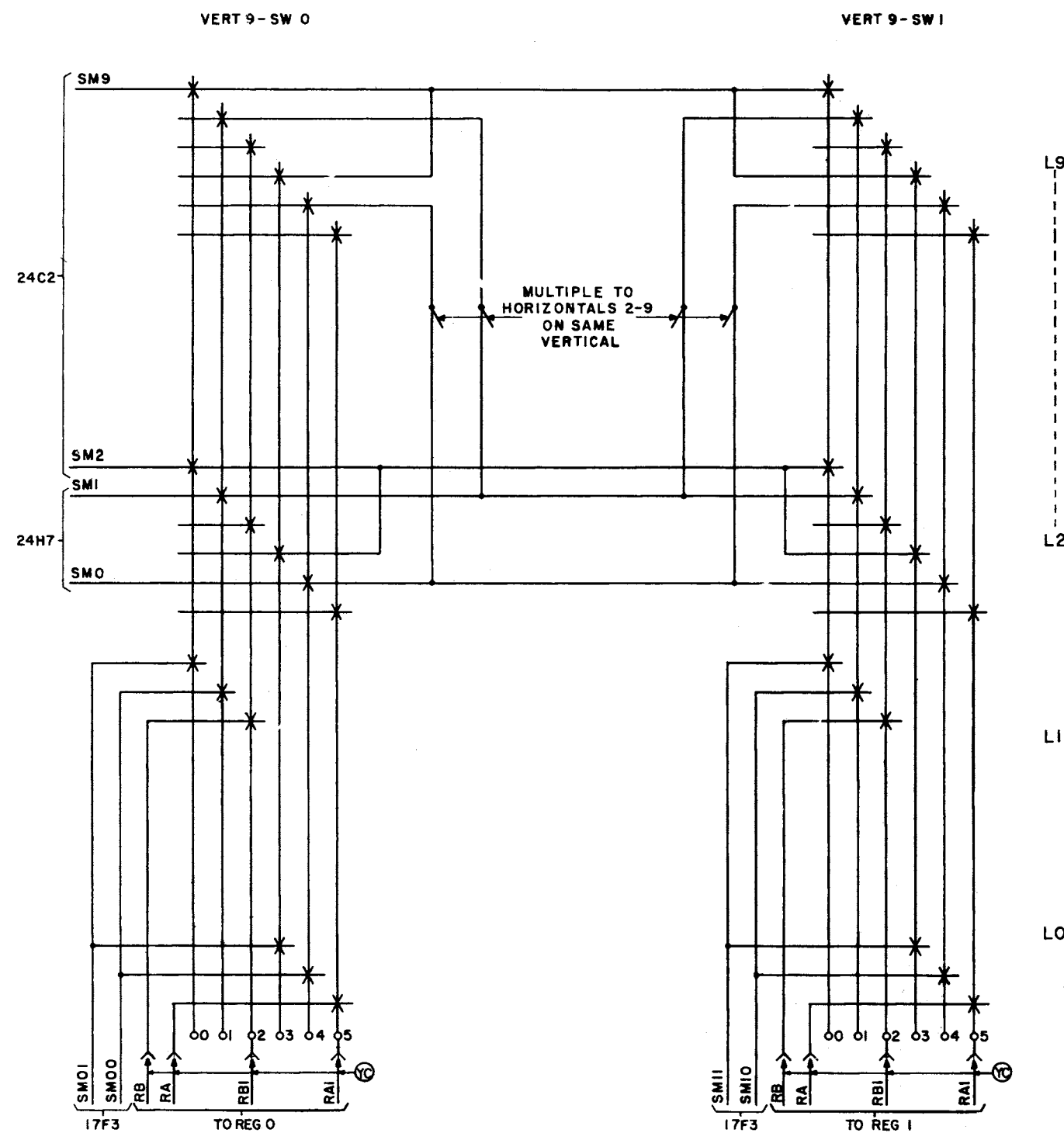


NO. 756A		23	
LINE, LINK AND MARKER CIRCUIT		SD-65741-01-827	
BELL TELEPHONE LABORATORIES INCORPORATED		2	PRINTED IN U. S. A.

PART OF FS 17

LINKS

(SEE NOTE 301 FOR ASSIGNMENT OF VERTICALS)

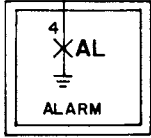


PBX SYSTEMS
NO. 756A
LINE, LINK AND MARKER CIRCUIT
BELL TELEPHONE LABORATORIES
INCORPORATED

SD-65741-01-B28

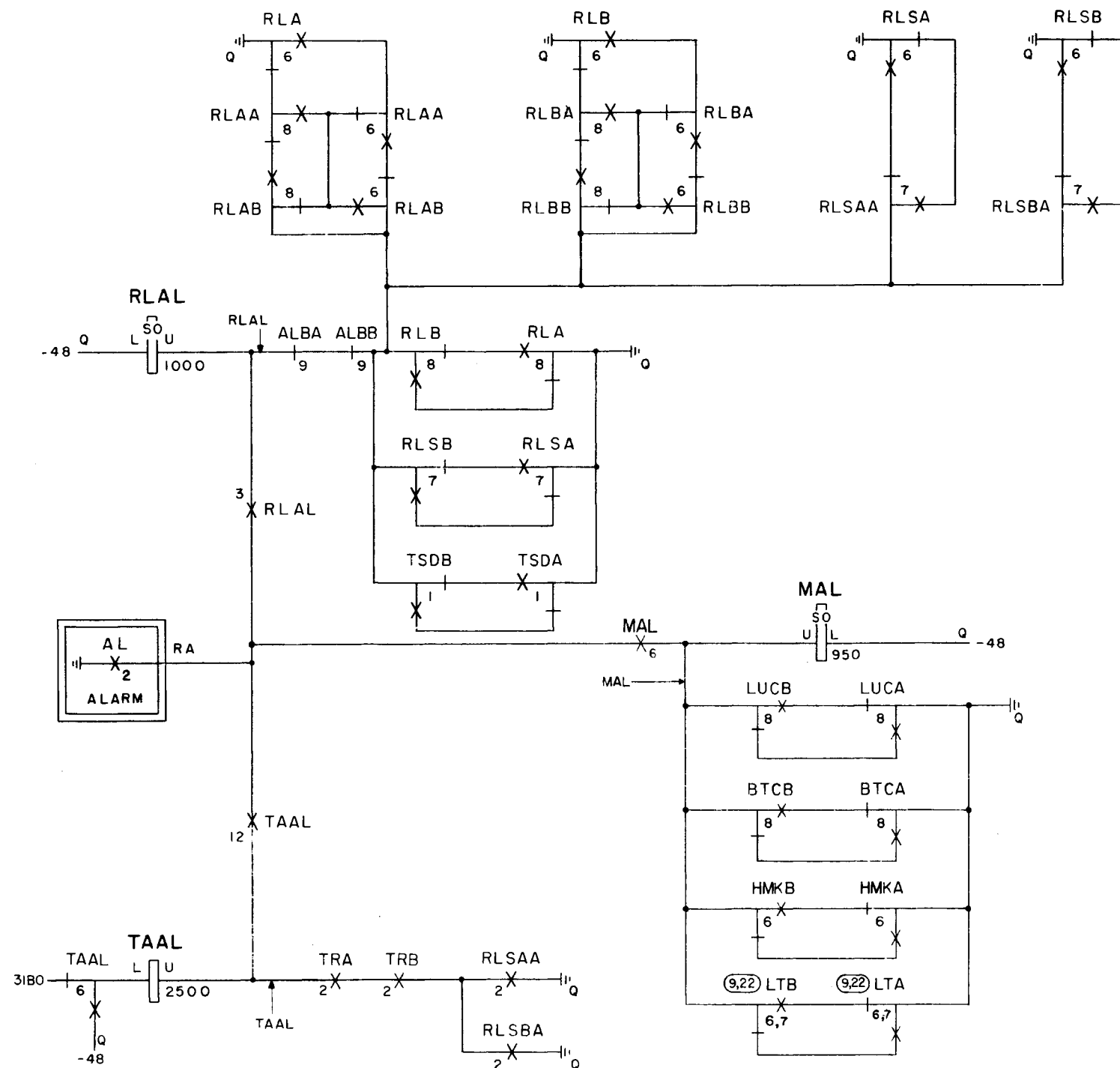
SD-65741-01-B28

UNITS ALARM

33

DWG SIZE
6S
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FS 19 RELEASE ALARM



REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC
ALBA	6P	RLBA	6S
ALBB	6P	RLBB	6S
BTCB	6S	RLSA	6K
DCKA	6R	RLSAA	6K
DCKB	6R	RLSB	6J
HMK A	6V	RLSBA	6J
HMK B	6U	TAAL	IAA
LTA	6Q	TRA	6K
LTB	6Q		
LUCA	6V	TRB	6J
LUCB	6U	TSDA	6R
MAL	IAB	TSDB	6R
RCKA	6R		
RCKB	6R		
RHKA	6G		
RHKB	6G		
RLA	6T		
RLAA	6T		
RLAB	6T		
RLAL	IAA		
RLB	6S		

SHEET NOTES
A. LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS

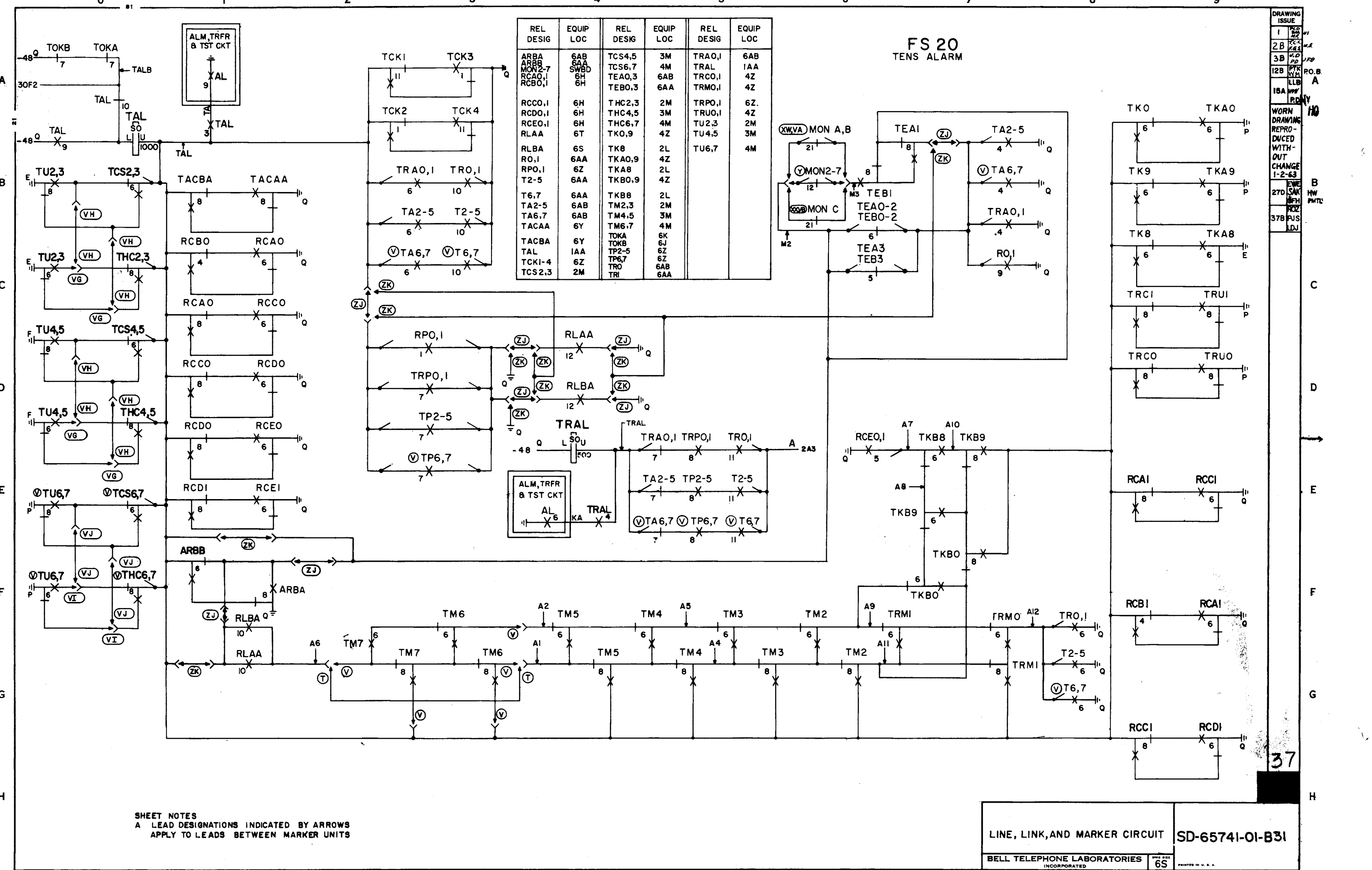
LINE, LINK AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

2
6S

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SD-65741-01-B30



REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC	REL DESIG	EQUIP LOC
ARBA	6AB	TCS4,5	3M	TRA0,1	6AB
ARBB	6AA	TCS6,7	4M	TRAL	1AA
MON2-7	SWBD	TEAO,3	6AB	TRCO,1	4Z
RCA0,1	6H	TEBO,3	6AA	TRMO,1	4Z
RCC0,1	6H				
RCCO,1	6H	THC2,3	2M	TRPO,1	6Z
RLAA	6T	THC4,5	3M	TRU0,1	4Z
RLBA	6S	THC6,7	4M	TU2,3	2M
RO,1	6AA	TK0,9	4Z	TU4,5	3M
RPO,1	6Z	TK8	2L	TU6,7	4M
T2-5	6AA	TKA0,9	4Z		
		TKB0,9	4Z		
T6,7	6AA	TKB8	2L		
TA2-5	6AB	TM2,3	2M		
TA6,7	6AB	TM4,5	3M		
TACAA	6Y	TM6,7	4M		
TACBA	6Y	TOKA	6K		
TAL	1AA	TOKB	6J		
TCK1-4	6Z	TP2-5	6Z		
TCS2,3	2M	TP6,7	6AB		
		TRO	6AA		
		TRI	6AA		

FS 20
TENS ALARM

DRAWING ISSUE	
1	REL
2B	REL
3B	REL
12B	REL
15A	REL
WORN DRAWING REPRODUCED WITH- OUT CHANGE 1-2-63	
27D	REL
37B	REL

SHEET NOTES
A LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS

LINK TEST ALARM

LINE, LINK, AND MARKER CIRCUIT

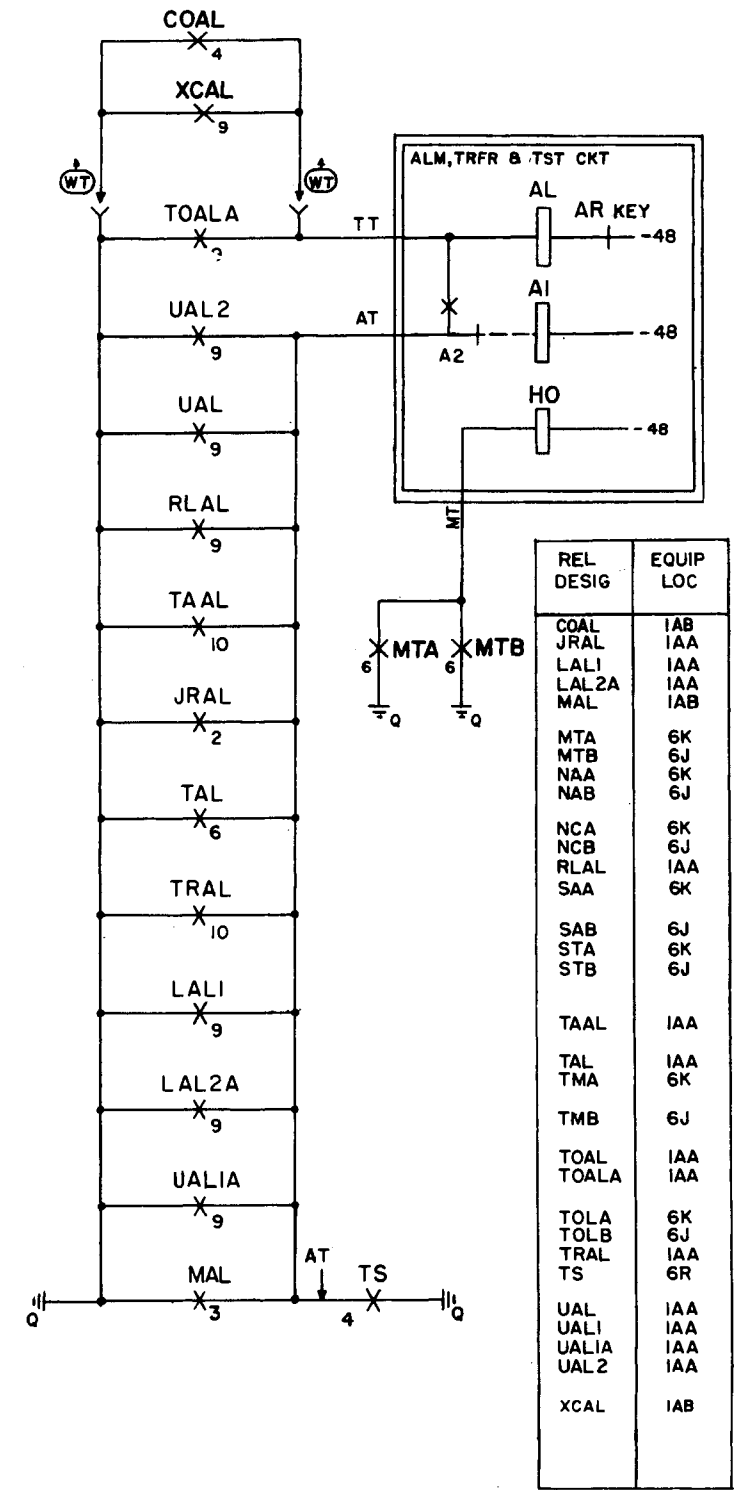
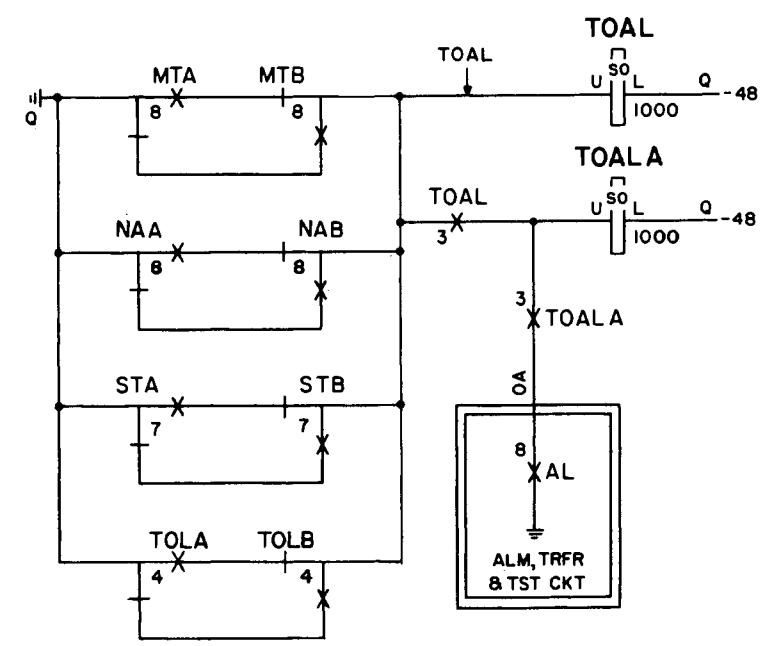
BELL TELEPHONE LABORATORIES
INCORPORATED

65

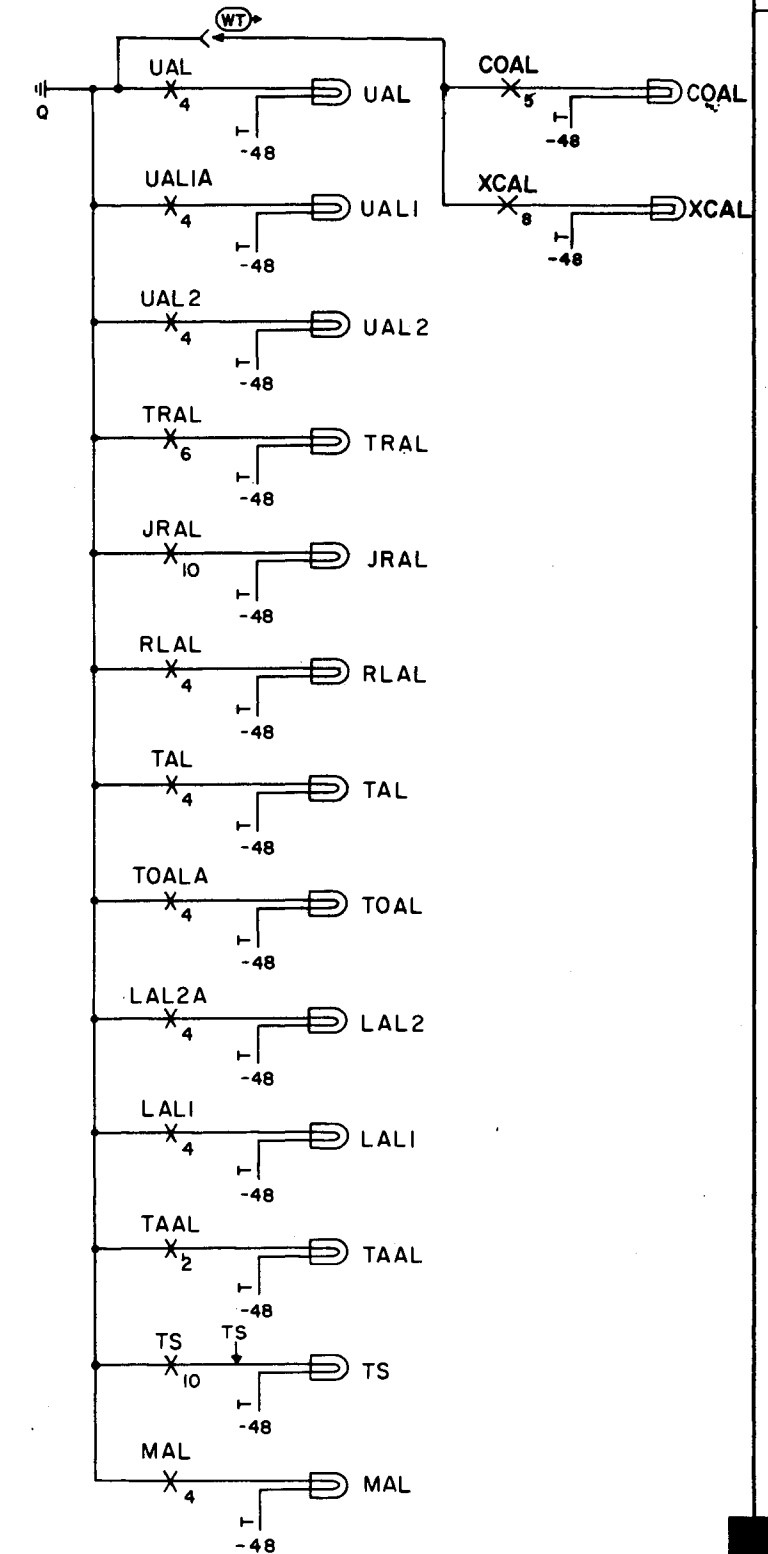
SD-65741-01-B 32

DRAWING
ISSUE
1
2B
3B
12B
33D
38D
P.O.B.
A
HW
RHS
FUS
LDJ

FS 22 TIME OUT ALARM AND ALARM CONTROL



FS 23 ALARM LAMPS



SHEET NOTES:
A. LEAD DESIGNATIONS INDICATED BY ARROWS
APPLY TO LEADS BETWEEN MARKER UNITS

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-B33

BELL TELEPHONE LABORATORIES
INCORPORATED

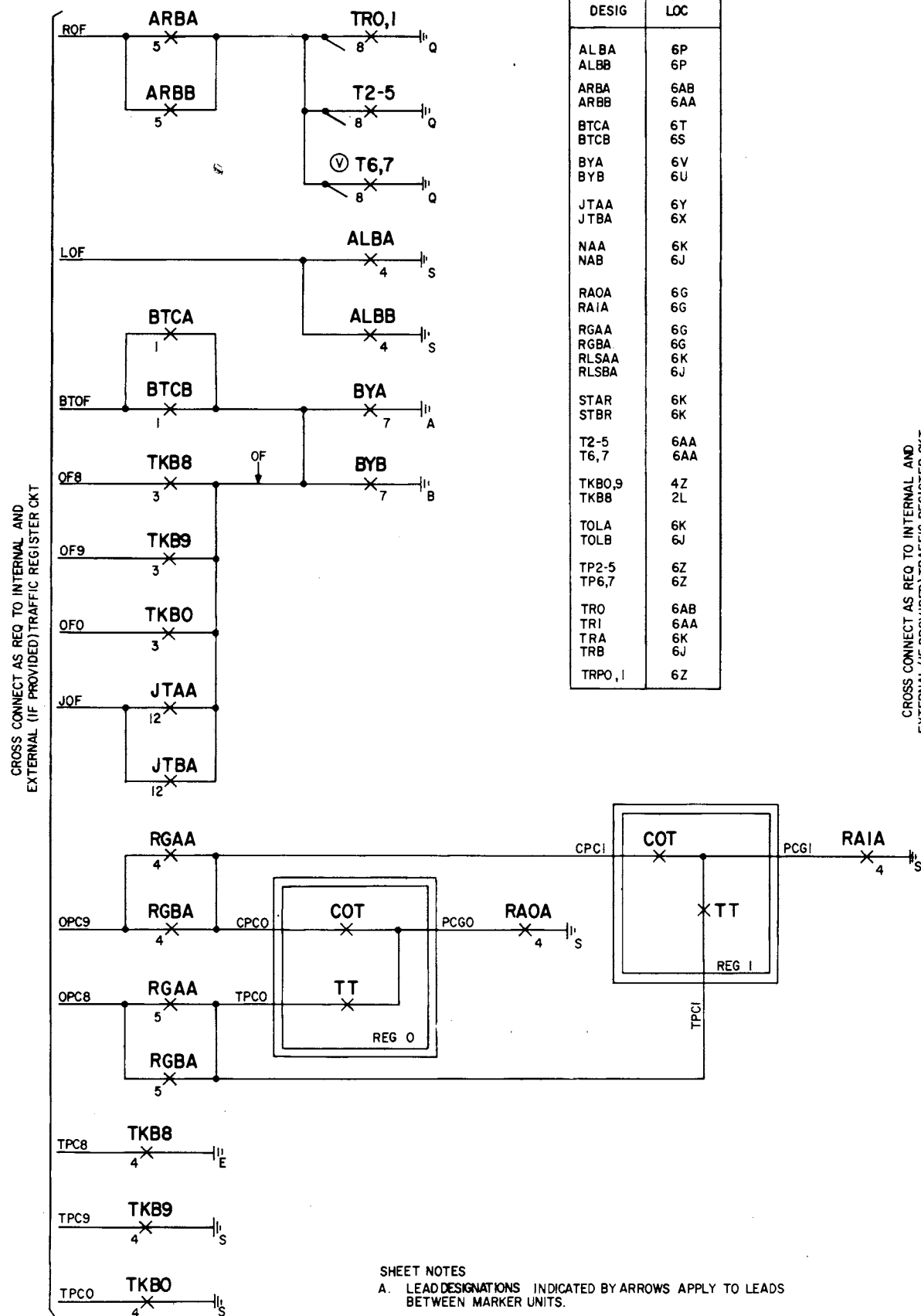
6S

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FS 24

TRAFFIC REGISTER CONTROL

REL DESIG	EQUIP LOC
ALBA	6P
ALBB	6P
ARBA	6AB
ARBB	6AA
BTCA	6T
BTCL	6S
BYA	6V
BYB	6U
JTAA	6Y
JTBA	6X
NAA	6K
NAB	6J
RAOA	6G
RAIA	6G
RGAA	6G
RGBA	6G
RLSAA	6K
RLSBA	6J
STAR	6K
STBR	6K
T2-5	6AA
T6,7	6AA
TKBO,9	4Z
TKB8	2L
TOLA	6K
TOLB	6J
TP2-5	6Z
TP6,7	6Z
TR0	6AB
TRI	6AA
TRA	6K
TRB	6J
TRPO,1	6Z



- SHEET NOTES
- LEAD DESIGNATIONS INDICATED BY ARROWS APPLY TO LEADS BETWEEN MARKER UNITS.
 - OPTIONS "YS" AND "YT" APPLY TO LEAD IT07.

CROSS CONNECT AS REQ TO INTERNAL AND EXTERNAL (IF PROVIDED) TRAFFIC REGISTER CKT

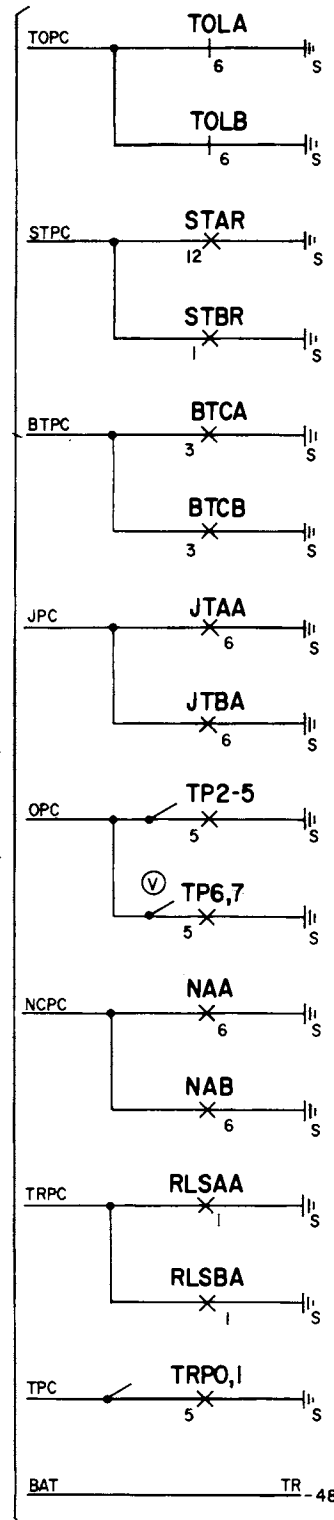
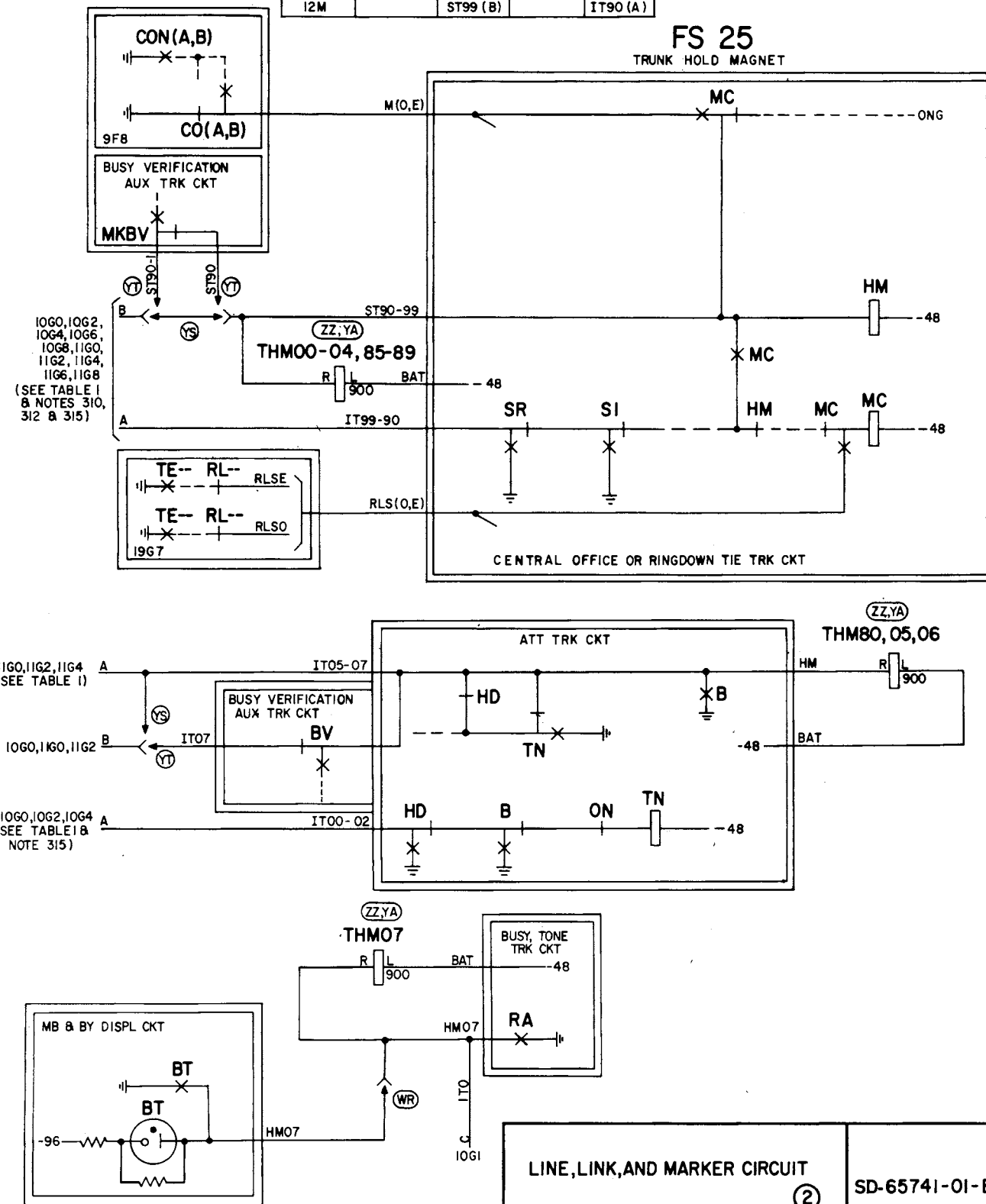


TABLE 1

RELAY CONTACT	ASSOCIATED LEAD DESIGNATION
1M	ST90 (B) IT05 (B) IT00 (A) IT99 (A)
2M	ST91 (B) IT01 (A) IT98 (A)
3M	ST92 (B) IT02 (A) IT97 (A)
4M	ST93 (B) IT96 (A)
5M	ST94 (B) IT95 (A)
7M	IT06 (B) ST95 (B) IT05 (A) IT94 (A)
9M	IT07 (B) ST96 (B) IT06 (A) IT93 (A)
10M	ST97 (B) IT07 (A) IT92 (A)
11M	ST98 (B) IT91 (A)
12M	ST99 (B) IT90 (A)



LINE, LINK, AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES

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3.7

DRAWING
ISSUE
1 BAA WS
2B TCC WS
3B JFD
6A TEB
9B PD
11B POB
12B POB
16B H0
21B HO
23D H0
28D H.W.
32D H0
33D H0
37B LDJ

WORN
DRAWING
REPRO-
DUCED
WITHOUT
CHANGE
6-22-67
J.J.R.

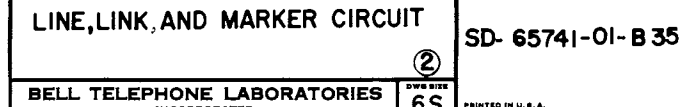
FED
PJS
RHP
FED
PJS
LDJ

SD-65741-01-B34

RELAY CONTACT	ASSOCIATED LEAD DESIGNATION	
	TK8	TM2
1M	IT80	S20
2M	IT81	S21
3M	IT82	S22
4M	IT83	S23
5M	IT84	S24
7M	IT85	S25
9M	IT86	S26
10M	IT87	S27
11M	IT88	S28
12M	IT89	S29

SHEETS NOTES:

1. WHEN USED WITH 3A CODE CALL CKT OR INTERFACE TRUNK CKT (ANSWERING END) THE WINDINGS OF REL (L) ARE DISCONNECTED BY PLACING A 550B TOOL IN THE 1b & 2B OR 4 & 5 AND IT % 2T OR 2 & 3 CONT. OF THE LINE HOLD MAGNET OFF NORMAL SPRINGS.
2. "XC" WIRING AT IT & HM TERMINALS AND STRAPPING OF T1 & R2, R1 & T2 AND S1 & S2 LEADS TO BE INSTALLED ONLY FOR LINE OF 20-29 SERIES ASSOCIATED WITH CONFERENCE PORT 5 OF DIAL CONFERENCE TRUNK CIRCUIT -ATT CONTROLLED.
3. ADDITION OF XD OPTION & REMOVAL OF XE OPTION TO BE INSTALLED ONLY FOR LINE OF 20-29 SERIES ASSOCIATED WITH CONFERENCE PORT 5 OF DIAL CONFERENCE TRUNK CIRCUIT-STATION CONTROLLED.
4. OPTION XY TO BE PROVIDED WHEN DIAL CONFERENCE STATION CONTROLLED IS USED WITH 608A OR 608D CORD SWITCH BOARD.
5. LEAD DESIGNATIONS INDICATED BY ARROWS APPLY TO LEADS BETWEEN MARKER UNITS.
6. OPTION WN IS TO BE PROVIDED WHEN DIAL CONFERENCE, STATION CONTROLLED, IS USED WITH 556A CORD SWBD.



PART OF FS 27

PAD CONTROL CIRCUIT FOR CONTROLLING
THE SWITCH PAD OF CODE 8 TIE TRUNKS
SEE SHEET NOTE 1

SHEET NOTES

1. A SET OF RELAYS CONSISTING OF RELAY A, RELAY B, AND RELAY MS IS TO BE ASSIGNED TO EACH TIE TRUNK FACILITY THAT SPECIFIES PAD CONTROL.
2. SPRINGS 1 TO 5 AND COIL TERMINALS 1L & 2L OF RELAY MS ARE ASSOCIATED WITH THE ONE CIRCUIT OF THE UNIT. SPRINGS 8 TO 12 AND COIL TERMINALS 1U AND 2U ASSOCIATED WITH THE OTHER CIRCUIT OF THE UNIT.
3. LEAD DESIGNATIONS INDICATED BY ARROWS APPLY TO LEADS BETWEEN MARKER UNITS.
4. IF OPTION WK IS NOT REQUIRED, INSTALLER SHALL REMOVE LEAD FROM CONTACT 9 MAKE OF RELAY TKB9.

RELAY DESIG	EQUIP LOC
A	EXT
B	EXT
HMTA	6T
HMTAA	6T
HMTB	6S
HMTBA	6T
MS	EXT
RAOB	6G
RAIB	6G
RCAO	6H
RCAI	6H
RGAA	6G
RGBA	6G
RLO	EXT
RLI	EXT
TKB8	2L
TKB9	4Z

LINE, LINK, AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

②

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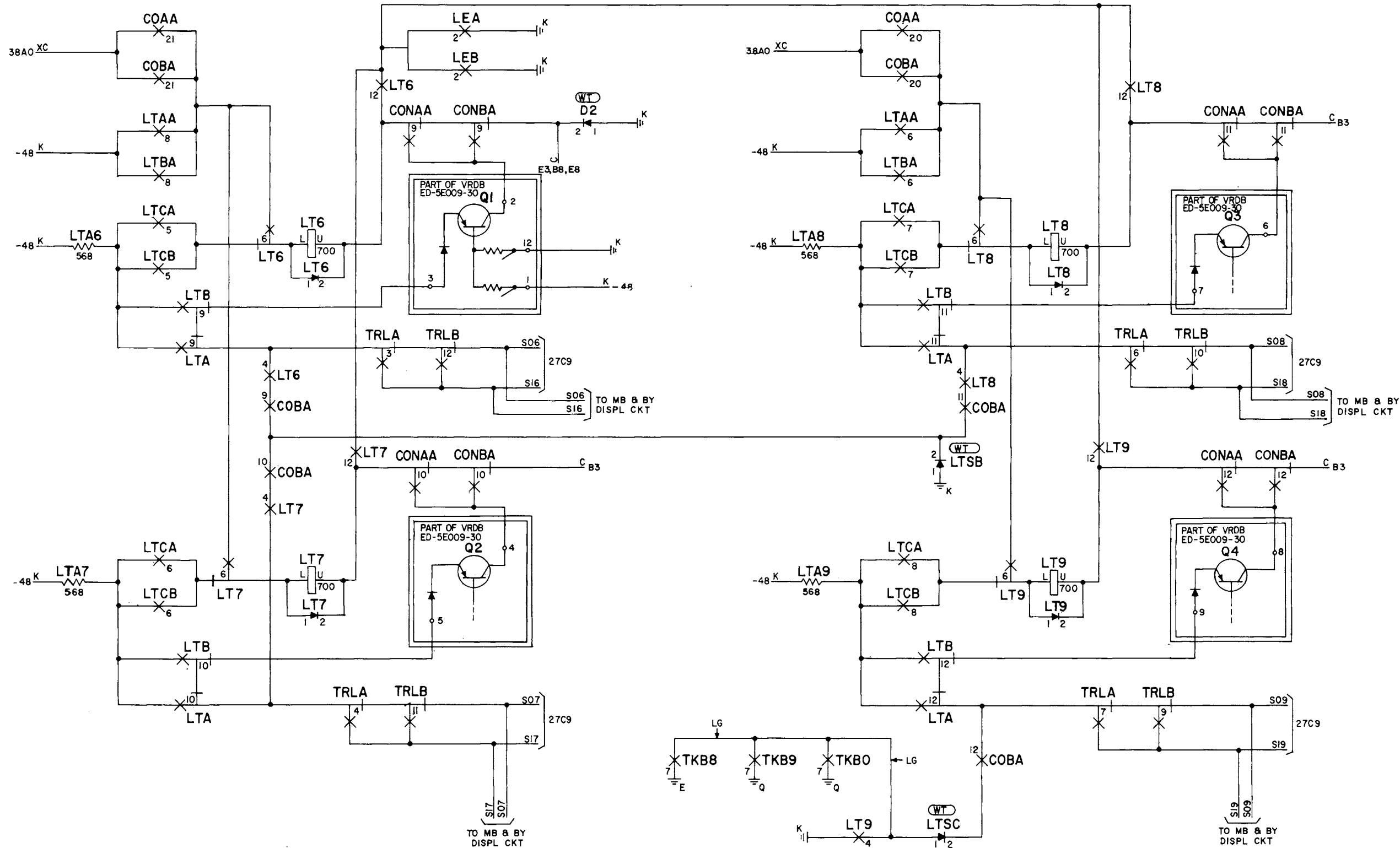
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② PART OF FS 28
LINK TEST

DRAWING
ISSUE
330 FUS HW
380 FUS LDU



REL DESIS	EQUIP LOC
COAA	6R
COBA	6R
CONAA	6T
CONBA	6S
LEA	6Q
LEB	6Q
LTA	6Q
LTAA	6Q
LTB	6Q
LTBA	6Q
LTCA	6N
LTCB	6N
TKB0	4Z
TKB8	2L
TKB9	4Z
TRLA	6Q
TRLB	6Q
LT6-9	6P

38

LINE, LINK, AND MARKER CIRCUIT

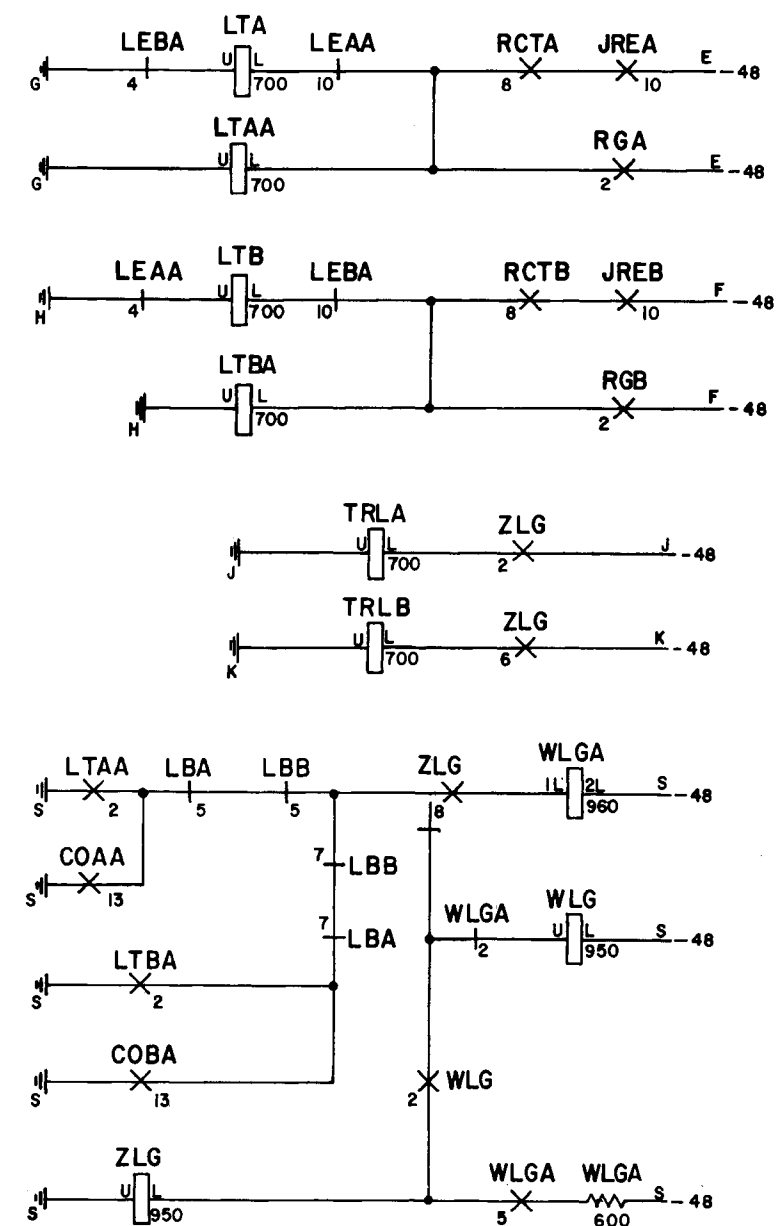
②

SD-65741-01-B39

BELL TELEPHONE LABORATORIES
INCORPORATED

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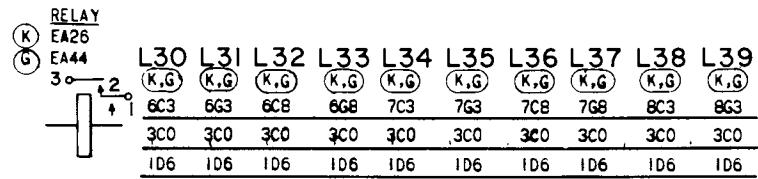
REL DESIG	EQUIP LOC
ALBA	6P
ALBB	6P
COA	6T
COAA	6R
COB	6S
COBA	6R
CONA	6T
CONAA	6T
CONB	6S
CONBA	6S
COSA	6P
COSB	6P
COTA	6T
COTB	6S
JREA	6Y
JREB	6X
LBA	6Q
LBB	6Q
LEA	6Q
LEAA	6Q
LEB	6Q
LEBA	6Q
LSHA	6N
LSHB	6N
L72-9	6P
LTA	6Q
LTAA	6Q
L7B	6Q
L7BA	6Q
RCTA	6Y
RCTB	6X
RGA	6G
RGB	6G
TKB0	4Z
TKB8	2L
TKB9	4Z
TRLA	6Q
TRLB	6Q
WLG	6M
WLGA	6M
ZLG	6M

LINE, LINK, AND MARKER CIRCUIT

2
PWS 51
65

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APP FIG. 1

[illegible]

DESIG	SMC2		SMC3		TCS2		TCS3		THC2		THC3		TK8		TKA8		TKB8		TM2		TM3			DESIG
CODE	AF24		AF24		AFI32		AFI32		AFI32		AFI32		AFI32		AFI32		AFI32		AFI32		AFI32			CODE
OPTION																								OPTION
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC		
12	M	23F7	M	23F7	M	18H3	M	18H3	M	8G0	M	8G0	M	11G7	M	8G0	M	C	M	11G8	M	11G8		12
11	M	23G7	M	23G7	M	18G3	M	18G3	M	8D0	M	8D0	M	11G6	M	8D1	M	b	M	11G6	M	11G6		11
10	M	24H6	M	24H6	M	18F3	M	18F3	M	7G5	M	7G5	M	11G4	M	7H5	M	5D2	M	11G4	M	11G4		10
9	M	24F4	M	24F4	M	18F3	M	18F3	M	7D5	M	7D5	M	11G2	M	7D5	M	5H2	M	11G3	M	11G3		9
8	M	24E4	M	24E4	BM	19G4	BM	19G4	BM	31C0	BM	31C0	BM	19D4	BM	19E4	BM	48E	BM	31G6	BM	31G5		8
7	M	24D4	M	24D4	M	18E3	M	18E3	M	7G0	M	7G0	M	11G1	M	7H0	M	a	M	11G1	M	11G1		7
6	M	24D4	M	24D4	BM	31B0	BM	31B0	BM	24D1	BM	24E1	BM	31C8	BM	31C9	BM	31E7	BM	31F6	BM	31F5		6
5	M	24C4	M	24C4	M	18E3	M	18E3	M	7D0	M	7D0	M	10G7	M	7D1	M	36C0	M	10G8	M	10G8		5
4	M	24B4	M	24B4	M	18D3	M	18D3	M	6G5	M	6G5	M	10G6	M	6H5	M	34G0	M	10G6	M	10G6		4
3	M	24B4	M	24B4	M	18C3	M	18C3	M	6D5	M	6D5	M	10G4	M	6D5	M	34D0	M	10G4	M	10G4		3
2	M	24A4	M	24A4	M	18C3	M	18C3	M	6G0	M	6G0	M	10G2	M	6G0	M	24D1	M	10G3	M	10G3		2
1	M	24G6	M	24G6	M	18B3	M	18B3	M	6D0	M	6D0	M	10G0	M	6E1	M	24A1	M	10G1	M	10G1		1
COIL		24D0		24E0		4A0		4D0		4B0		4D0		5D6		5D6		5E6		4C0		4E0		COIL

DIODE		
DESIG	LOC	CODE
(W) H	35A2	KS-15724, L2
(ZR) H	35A2	426A
(YG) H	6F5	426A
(YG) H	7H4	426A
(YJ) L	35C6	426A
(XD) SCC	35H5	446F

NETWORK		
DESIG	LOC	CODE
VG TM2	4C0	186A
VG TM3	4E0	186A
TM8	5D6	186A
VH THC2	4B0	186A
VH THC3	4D0	186A

a	(WC 21E1) (22) 39G4	<u>RESISTOR</u>			
b	(9) 22E6 (22) 40H5	<u>DESIG</u>	<u>LOC</u>	<u>CODE</u>	
		[10] S20-29	35D7	19FG	
c	(9) 22D6 (22) 40F5	(YN) TKB8	5E6	KS-14603, L1A, 1000	

[illegible][illegible]

LINE, LINK, AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES, INC.

② SD-65 741-01-01

APP FIG. 4

RELAY																										DESIG CODE	
DESIG CODE		ARBA		ARBB		RO		RI		RPO		RPI		T2		T3		T4		T5		T6		T7			DESIG CODE
OPTION		AF55		AF55		AJI2		AJI2		AF77		AF77		AJI2		AJI2		AJI2		AJI2		AJI2		AJI2			
OPTION		V		V		V		V		V		V		V		V		V		V		V		V		OPTION	
CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC
12	M 207	M 2F7	EBM 207	EBM 267	M 5A2	M 5E2	EBM 3B2	EBM 3D2	EBM 3B5	EBM 305	EBM 3B8	EBM 308	12														
11	M 2F7	M 2H7	EBM 2E7	EBM 2E7	M 5H6	M 5H6	EBM 3IE5	EBM 3IE5	EBM 3IE5	EBM 3IE5	EBM 3IE5	EBM 3IE5	11														
10	BM 3F2	BM 3G3	EBM 3F1	EBM 3F2	M 13B6	M 13B6	EBM 3IB3	EBM 3IB3	EBM 3IB3	EBM 3IB3	EBM 3IB3	EBM 3IC3	EBM 3IC3	10													
9	M 2B9	M 2C9	EBM 3IC7	EBM 3IC7	M 13E6	M 13F6	EBM 3F4	EBM 3F5	EBM 3F6	EBM 3F7	EBM 3F7	EBM 3F8	9														
8	BM 31F1	BM 25F3	EBM 3G2	EBM 3G2	M d	M d	EBM 34B1	EBM 34B1	EBM 34B1	EBM 34B1	EBM 34B1	EBM 34B1	8														
7	B 25F5	B 25F8	EBM 1G2	EBM 1G2	M c	M c	EBM 3G5	EBM 3G5	EBM 3G6	EBM 3G7	EBM 3G8	EBM 3G8	7														
6	BM 25F0	BM 31F1	EBM 2E0	EBM 2E0	M 17F3	M 17F3	EBM 3IG8	EBM 3IG8	EBM 3IG8	EBM 3IG8	EBM 3IG8	EBM 3IG8	6														
5	M 34A0	BM 34B0	EBM 2G0	EBM 2G0	M 17E3	M 17E3	EBM 3F5	EBM 3F5	EBM 3F6	EBM 3F7	EBM 3F8	EBM 3F8	5														
4	BM 3F3	BM 3H2	EBM 3H1	EBM 3H2	M b	M b	EBM 2F0	EBM 2F0	EBM 2F0	EBM 2F0	EBM 2F0	EBM 2F0	4														
3	M 2B7	M 2C7	EBM 2D7	EBM 2D7	M a	M a	EBM 3H4	EBM 3H5	EBM 3H6	EBM 3H7	EBM 3H8	EBM 3H8	3														
2	M 2F8	M 2H8	EBM 3F1	EBM 3F2	M e	M e	EBM 2H0	EBM 2H0	EBM 2H0	EBM 2H0	EBM 2H0	EBM 2H0	2														
1	M 208	M 2E8	EBM 208	EBM 2G8	M 3ID3	M 3ID3	EBM 3B1	EBM 3D1	EBM 3B4	EBM 3D4	EBM 3B7	EBM 3D7	1														
COIL	2A8	2C8	2E8	2G8	3G1	3G2	3A1	3C1	3A5	3C4	3A8	3C8	COIL														

(A) 25D0	(A) 25D0
(B) 16B2	(B) 16B2
(A) 25D5	(A) 25D5
(B) 16E2	(B) 16E2
(A) 25D8	(A) 25D8
(B) 16E6	(B) 16E6
(A) 25D3	(A) 25D3
(B) 16B6	(B) 16B6
(WE) 5H5	(WE) 5H5
(WF) 37E5	(WF) 37B5

RELAY														DESIG CODE												
CODE	TA2		TA3		TA4		TA5		TA6		TA7		TCK1		TCK2		TCK3		TCK4		TEA0		TEA1		DESIG CODE	
OPTION	AJ31		AJ31		AJ31		AJ31		AJ31		AJ31		AK3		AK3		AK3		AK3		AF55		AF129			
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC		
12																									12	
11																									11	
10	M	2C5	M	2C5	M	2C5	M	2C5	M	2D6	M	2D6							M	3D4	B	3C3			10	
9	B	3A2	B	3C2	B	3A5	B	3C5	B	3A8	B	3C8							M	285	BM				9	
8	M		M		M		M		M		M								BM		BM	31B7			8	
7	B	31E4	B	31E4	B	31E4	B	31E4	B	31E4	B	31E4							B		B	3C0			7	
6	M	31B3	M	31B3	M	31B3	M	31B3	M	31C3	M	31C3							BM	31B6	BM	31B6			6	
5	B	3A1	B	3C1	B	3A4	B	3C4	B	3A7	B	3C7							M	3D1	B	3A0			5	
4	M	31B7	M	31B7	M	31B7	M	31B7	M	31B7	M	31B7							BM	2B4	BM				4	
3																									3	
2	M	2C4	M	2C4	M	2C4	M	2C4	M	2D3	M	2D3							M	2D1	M	1B5			2	
1																			M	2B1	B	2A1			1	
COIL		2D4		2D4		2D4		2D4		2D4		2D4		3F0		3G0		3F0		3H0		2F1		2F1	COIL	

DESIG CODE OPTION	TEA2		TEA3		TEB0		TEB1		TEB2		TEB3		TP2		TP3		TP4		TP5		TP6		TP7		DESIG CODE OPTION
	AF129		AF119		AF55		AF129		AF129		AF119		AF77		AF77		AF77		AF77		AF77		AF77		
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	
12	M	25F3	EM	3D8	M	16G5	M	13F6	B	25F3	EM	3D7	M	4A1	M	4D1	M	4F1	M	4A4	M	4D4	M	4F4	12
11	B	2E7	M	8D8	M	3D4	B	3C5	B	2E8	M	8D8	M	2D5	M	2D5	M	2D5	M	2D5	M	2D5	M	2D5	11
10	BM	25F8	M	8F8	BM	2C5	BM		BM	25F8	M	8G8	M	17E8	M	17E8	M	17E8	M	17E8	M	17F8	M	17F8	10
9	B	2E8	B	3C7	M	3B4	B	3A5	B	2F7	B	3C9	M	17G8	M	17G8	M	17G8	M	17G8	M	17G8	M	17G8	9
8	BM	3F1	M	3G1	BM		BM	31B6	BM	3F1	M	3G1	M	31E5	M	31E5	M	31E5	M	31E5	M	31E5	M	31E5	8
7	B	2G7	B	3A7	B	26F4	B	3C2	B	2G8	B	3A9	M	3ID3	M	3ID3	M	3ID3	M	3ID3	M	3IE3	M	3IE3	7
6	BM	31B6	EM	3B8	BM	31B6	BM	31B6	BM	31B6	EM	3B7	M	1F2	M	1F2	M	1F2	M	1F2	M	1G2	M	1G2	6
5	B	2G8	B	3IC8	M	3D1	B	3A2	B	2G7	B	3IC6	M	34E4	M	34E4	M	34E4	M	34E4	M	34E4	M	34E4	5
4	BM	25F5	M	19G6	BM	2C4	BM		BM	25F5	M	19G6	M	2D4	M	2D4	M	2D4	M	2D4	M	2D3	M	2D3	4
3	B	26G1	M		M	3B1	B	2C2	B		M		M	4C6	M	4C6	M	4C6	M	4C6	M	4C6	M	4C6	3
2	M	25F0	M	19G6	M	2D1	M	18F5	M	25F0	M	19G6	M	4B6	M	4B6	M	4B6	M	4B6	M	4B6	M	4B6	2
1	B	26F1	M	16C3	M	2B1	B	2A2	B	26G3	M	16G3	M	4A0	M	4D0	M	4F0	M	4A3	M	4D3	M	4F3	1
COIL		2F1		2F1		2G1		2H1		2H1		2H1		3G4		3G5		3G6		3G7		3G8		3G8	COIL

DESIG CODE		TRO AJI2		TRI AJI2		TRA0 AJ31		TRA1 AJ31		TRP0 AF77		TRP1 AF77																DESIG CODE	
OPTION																												OPTION	
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	
12	EBM	2B2	EBM	2D2					M	4D8	M	4F8																	12
11	EBM	3IE5	EBM	3IE5					M	2A5	M	2A5																	11
10	EBM	3IB3	EBM	3IB3	M	2B5	M	2B5	M	17F8	M	17F8																	10
9	EBM	3F3	EBM	3F4	B	2A2	B	2C2	M	17H8	M	17H8																	9
8	EBM	34A1	EBM	34A1	M		M		M	3IE5	M	3IE5																	8
7	EBM	3G3	EBM	3G4	B	3IE5	B	3IE5	M	3ID3	M	3ID3																	7
6	EBM	31F8	EBM	31F8	M	3IB3	M	3IB3	M	1F2	M	1F2																	6
5	EBM	3F3	EBM	3F4	B	2B1	B	2C1	M	34G4	M	34G4																	5
4	EBM	2F0	EBM	2F0	M	3IB7	M	3IB7	M	2A4	M	2A4																	4
3	EBM	3H3	EBM	3H4					M	4C6	M	4C6																	3
2	EBM	2H0	EBM	2H0	M	2B4	M	2B4	M	4A6	M	4A6																	2
1	EBM	2B1	EBM	2D1					M	4D7	M	4F7																	1
COIL		2A1		2C1		2A4		2A4		3G3		3G4																	COIL

DIODE			NETWORK		
DESIG	LOC	CODE	DESIG	LOC	CODE
TP2	3F4	YM 420G(VK) 446F	TA2	2D4	185A
TP3	3F5	YM 420G(VK) 446F	TA3	2D4	185A
TP4	3F6	YM 420G(VK) 446F	TA4	2D4	185A
TP5	3F7	YM 420G(VK) 446F	TA5	2D4	185A
TP6	3F7	YM 420G(VK) 446F	TA6	2E4	185A
TP7	3F8	YM 420G(VK) 446F	TA7	2E4	185A
TRP0,1	3F3	YM 420G(VK) 446F	TEA1	2F1	186A
			TEB1	2H1	186A
			TRA0	2B4	185A
			TRA1	2B4	185A

RELAY																											
DESIG CODE	RA0A		RA0B		RA1A		RA1B		RC0A		RC1A		RCB0		RCB1		RCC0		RCC1		RCD0		RCD1		DESIG CODE		
	AJ5		AFI29		AJ5		AFI29		AFI32		AFI32		AFI11		AFI11		AFI32		AFI32		AFI32		AFI32				
OPTION																									OPTION		
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC			
12	EBM	1788	M		EBM	17D8	M	36 D2	M	10H0	M	10H0	EM	982	EM	982	M	8H1	M	8H1	M	4B1	M	4B1	12		
11	EBM	1788	B	2A8	EBM	17A8	B	2A9	M	10H1	M	10H2	M	9D2	M	9C2	M	8D1	M	8D1	M	4D1	M	4E1	11		
10	EBM		BM	18B7	EBM		BM	18C7	M	10G3	M	10G3	M	19C3	M	19D3	M	7H7	M	7H7	M	4G1	M	4G1	10		
9	EBM	18C6	B	2C8	EBM	18C7	B	2C9	M	10G5	M	10G5	M	19C3	M	19C3	M	7D7	M	7D7	M	4B4	M	4B4	9		
8	EBM	18D6	BM	36 B2	EBM	18D7	BM	17A8	BM	31C1	BM	31E8	EBM	4C7	EBM	4C7	BM	31D1	BM	31G8	BM	31A1	BM	31A1	8		
7	EBM		B	29F1	EBM		B	29G1	M	36 H3	M	36 H3	B	4A7	B	4A7	M	7H2	M	7H2	M	4D4	M	4E4	7		
6	EBM	18D6	BM	17B2	EBM	18E7	BM	17D3	BM	31C1	BM	31F9	EWB	19B3	EWB	19B3	BM	31C1	BM	31E9	BM	31D1	BM	31G9	6		
5	EBM	18E7	B		EBM	18E7	B	17A7	M	36 E2	M	36 A2	M	19A3	M	19B3	M	7D2	M	7D2	M	4F3	M	4E3	5		
4	EBM	34F2	BM	17A3	EBM	34F3	BM	17C3	M	36B3	M	36 D3	EBM	31C1	EBM	31F8	M	6H7	M	6H7	M	4C3	M	4B3	4		
3	EBM	29F1	B	2C7	EBM	29F1	B	2C7	M		M		M		M		M	6D7	M	6D7	M	4H0	M	4G0	3		
2	EBM	17B7	M	29F1	EBM	17A7	M	29F1	M	17H0	M	17H2	M	9D1	M	9C1	M	6G2	M	6G2	M	4F0	M	4E0	2		
1	EBM	17B7	B	2A7	EBM	17D6	B	2A7	M	17H0	M	17H2	M	9B1	M	9B1	M	6D2	M	6D2	M	4C0	M	4C0	1		
COIL		17A7		17A7		17D7		17C7		5A1		5F1		5B1		5F1		5C1		5F1		5C1		5G1	COIL		

<u>NETWORK</u>		
<u>DESIG</u>	<u>LOC</u>	<u>CODE</u>
RAQA	17B7	186A
RA1A	17D7	186A
RCAO	5A1	186A
RCA1	5E1	186A
RGA	17F7	186A
RGB	17G7	186A

DESIG	RCE0		RCE1		RGA		RGAA		RGB		RGBA		RHKA		RHKB							DESIG
CODE	AF132		AF132		AF132		AF132		AF132		AF132		AF114		AF114							CODE
OPTION																						OPTION
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC
12	M	4G4	M	4G4	M		M		M		M											12
11	M	506	M	506	M	18B6	M		M	18C6	M											11
10	M	5F6	M	5F6	M	18C6	M		M	18C6	M		M	15B6	M	1506						10
9	M	5A6	M	5A6	M	1806	M	36 B1	M	18D6	M	36 B1										9
8	BM	5B5	BM	5B5	BM	29B1	BM	15A6	BM	29B1	BM	15C6	BM		BM							8
7	M		M		M	17B2	M		M	17C2	M											7
6	BM	31E1	BM	31E1	BM	29C1	BM	29C1	BM	29C1	BM	29C1	BM	26B3	BM	26D3						6
5	M	31E6	M	31E6	M	18E6	M	34G0	M	18E6	M	34G0	M									5
4	M	5A5	M		M	18D6	M	34F0	M	18E6	M	34F0	M		M							4
3	M	5F5	M	5F5	M	17A2	M		M	17B2	M											3
2	M	5D5	M	5D5	M	α	M	24C1	M	α	M	24C1	B	26A2	B	26C2						2
1	M	4H3	M	4G3	M	26B3	M	24B1	M	26D3	M	24B1										1
COIL	501		5G1		17F2		17F7		17G7		17H7		17A1		17B1							COIL

a	⑨ 22B8
	②② 40A8

a	⑨	22B5
	②②	40B8

[illegible][illegible]

APP FIG. 6

RELAY		TKO		TK9		TKAO		TKA9		TKBO		TKB9		TRCO		TRC1		TRMO		TRM1		DESIG	
CODE		AF132		AF132		AF132		AF132		AF132		AF132		AF132		AF132		AF132		AF132		CODE	
OPTION		CONT		LOC		CONT		LOC		CONT		LOC		CONT		LOC		CONT		LOC		OPTION	
12	M	5B2	M	11G8		M		M	8G0	M	a	M	a	M	18E6	M	18H3	M		M	11G8	12	
11	M		M	11G6		M		M	8D1	M	b	M	b	M		M	18G3	M		M	11G6	11	
10	M	11G4	M	11G4		M	7G7	M	7H5	M		M	5C2	M		M	18G3	M	19G2	M	11G4	10	
9	M	11G2	M	11G2		M	7D7	M	7O5	M		M	36C0	M		M	18F3	M	11G2	M	11G2	9	
8	BM	19D5	BM	19D5		BM	19E5	BM	19E5	BM	31F7	BM	31E7	BM	31D8	BM	31C8	BM		BM	31G7	8	
7	M	11G0	M	11G0		M	7G2	M	7H0	M	c	M	c	M		M	18F3	M	11G0	M	11G0	7	
6	BM	31A8	BM	31B8		BM	31A9	BM	31B9	BM	31F7	BM	31E7	BM	24B1	BM	24B1	BM	31F7	BM	31F6	6	
5	M		M	10G7		M	19B4	M	7D1	M	5F2	M	5G2	M	18E3	M		M	10G8	M		5	
4	M		M	10G6		M	19B4	M	6G5	M	34H0	M	34H0	M		M		M	10G6	M		4	
3	M	10G4	M	10G4		M	6E5	M	6D5	M	34E0	M	34D0	M	18D3	M		M	10G4	M		3	
2	M	10G2	M	10G2		M	6H2	M	6G0	M	24H1	M	24H1	M	18C3	M		M	10G2	M		2	
1	M	10G0	M	10G0		M	6E2	M	6E1	M	24A1	M	24A1	M	18B3	M	18E6	M	10G0	M	10G1	1	
COIL		5A6		5F6			5B6		5F6		5B6		5G6		4E8		4H8		4O8		4F8	COIL	

RELAY		TRUO		TRU1		DESIG	
CODE		AF132		AF132		CODE	
OPTION		CONT		LOC		OPTION	
12	M		M	8E3		12	
11	M		M	8B3		11	
10	M		M	7F8		10	
9	M	7A8	M	7B8		9	
8	BM	31D9	BM	31C9		8	
7	M	7E3	M	7F3		7	
6	BM	24H1	BM	24H1		6	
5	M	7B3	M			5	
4	M	6F8	M			4	
3	M	6B8	M			3	
2	M	6F3	M			2	
1	M	6B3	M	6A3		1	
COIL		4D8		4G8		COIL	

NETWORK		
DESIG	LOC	CODE
TKO	5A6	186A
TK9	5F6	186A
TRMO	4D8	186A
TRM1	4F8	186A

a	22D6	a	22D6
(22)	40F5	(22)	40F5
b	22E6	b	22E6
(22)	40H5	(22)	40H5
c	21E1	c	21E1
(22)	39G5	(22)	39G5

RESISTOR		
DESIG	LOC	CODE
TKA9	5G6	KS-14603, LIA, 1000

PART OF APP FIG. 7

RELAY																																																	
DESIG	ACA				ACB				BSYA				BSYAA				BSYB				BSYBA				BYA				BYB				HCA				HCB				HMKA				HMKB				DESIG
CODE	AJ54				AJ54				AJ54				AJ54				AJ54				AF64				AF64				AF132				AF132				AF88				AF88				CODE				
OPTION																																									OPTION								
	CONT	ARR	LOC		CONT	ARR	LOC		CONT	ARR	LOC		CONT	ARR	LOC		CONT	ARR	LOC		CONT	ARR	LOC		CONT	ARR	LOC		CONT	ARR	LOC		CONT	ARR	LOC														
12	EM				EM				EM	12D2			EM	12E3			EM	12F3			EM	12E3			EMB	15D8			EMB	15D8	M	8G1	M	8H1	M	15A8	M	15C8	12										
11	M				M				M	15B3			M	15A3	M	12E2		M	17G4	M	17H4	M	8D1	M	8D1	B	14E3	B	14A3								11												
10	EBM	17A6			EBM	17A8			EBM	15A3	EBM			EBM	15A3	EBM			M	12D3	M	12E3	M	7G6	M	7H6	M	14C3	M	14F3							10												
9	B				B				B	9B2	B			B	9C2	B			BM	15G1	BM	15H1	M	7D6	M	7D6	B	16G2	B	16D2							9												
8	EBM	29D4			EBM	29D4			EBM				EBM	29F5			EBM	29F4	M	9B3	M	9C3	BM	29E7	BM	29E6	BM	16C6	BM	16F6							8												
7	B				B				B	15A7	B			B	15C7	B			BM	a	BM	a	M	7G1	M	7G1	B	26A4	B	26C4							7												
6	EMB	15D6			EMB	15B6			EMB	29D4	EMB			EMB	29D4	EMB			EMB	12B2	EMB	12F2	BM	12D2	BM	12E2	BM	30F6	BM	30F5							6												
5	B	26D5			B	26B5			B	9C0	B			B	9B0	B			BM	15F1	BM	15G0	M	7D1	M	7D1	B	16C2	B	16F2							5												
4	EBM	26B5			EBM	26D5			EBM	26D4	EBM			EBM	26B4	EBM			M	12D2	M	12F3	M	6G6	M	6H6	M	16C3	M	16F3							4												
3	B				B				B	9B0	B			B	9C0	B			BM	29F5	BM	29F4	M	6D6	M	6D6	B	26B5	B	26D5							3												
2	M	15B6			M	15D6			M	15A1	M	12C3	M	15B1	M	12D3	M	9B1	M	9C1	M	6G1	M	6H1	M	14C0	M	14F0								2													
1	M	17D7			M	17D8			M	15B1	M	12C2	M	15A1	M	12D2	M	37C3	M	37C4	M	6D1	M	6D1	B	14A0	B	14E0								1													
COIL		8A7				8B7				12D3			12C3		12E3			12E3		12B3		12F2		9B1		9C1		9B4		9C4							COIL												

LAMP			NETWORK		
DESIG	LOC	CODE	DESIG	LOC	CODE
CS	18A0	11B	ACA	8A7	185A
			ACB	8B7	185A
			RCTA	14C6	186A
			RCTB	14B6	186A
			SEA	12B6	186A
			SEB	12F6	186A
			TACA	4B8	186A
			TACB	4C8	186A
			TRCA	14A2	186A
			TRCB	14E2	186A
			TRKA	14C2	186A
			TRKB	14G2	186A
			ULA	8G5	186A
			ULB	8H5	186A

RELAY																								DESIG	
DESIG	JRO		JRI		JR2		JR3		JR4		JR5		JREA		JREB		JTA		JTAA		JTB		JTBA		DESIG
CODE	AF132		AF132		AF132		AF132		AF132		AF132		AJ12		AJ12		AF132		AJ28		AF132		AJ28		CODE
OPTION																									OPTION
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	
12	M	13B2	M	13C2	M	13D2	M	13E2	M	13F2	M	13G2	EBM	14C2	EBM	14F3	M	13B1	EM	34E0	M	13E1	EM	34E0	12
11	M	13B8	M	13B8	M	13B8	M	13B8	M	13B8	M	13B8	EBM	29A8	EBM	29A8	M	13C1	M	a	M	13G1	M	a	11
10	M	13B8	M	13B8	M	13B8	M	13B8	M	13B8	M	13B8	EBM	b	EBM	b	M	13D2	EBM	9B5	M	13G2	EBM	9D5	10
9	M	24C1	M	24C1	M	24C1	M	24G1	M	24G1	M	24C1	EBM	14A7	EBM	14B7	M	10G0	M	9B2	M	11F0	M	9D2	9
8	BM		BM	29A4	BM	29A5	BM	29A5	BM	29A6	BM	29A6	EBM	29C7	EBM	29C6	BM	10F2	EBM	29D1	BM	11F2	EBM	29D1	8
7	M	9H5	M	9H5	M	9H5	M	9H5	M	9H5	M	9H5	EBM	23F7	EBM	23F6	M	10F4			M	11F4			7
6	BM	29A4	BM	29A4	BM	29A4	BM	29A5	BM	29A6	BM	29A6	EBM	a	EBM	a	BM	6C6	EMB	34D4	BM	7G6	EMB	34D4	6
5	M	9F5	M	9F5	M	9F5	M	9F5	M	9F5	M	9F5	EBM	23G7	EBM	23G6	M	14H5	M	15F0	M	14H8	M	15G0	5
4	M	9E5	M	9E5	M	9E5	M	9E5	M	9E5	M	9E5	EBM	14C7	EBM	14E7	M	6G1	EBM	29A8	M	7D6	EBM	29A8	4
3	M	13B7	M	13B7	M	13B7	M	13B7	M	13B7	M	13B7	EBM	17E1	EBM	17G1	M	6D1	M	9B1	M	7G1	M	9D1	3
2	M	13B7	M	13B7	M	13B7	M	13B7	M	13B7	M	13B7	EBM	17G0	EBM	17E0	M	13B0	EBM	12A2	M	13B0	EBM	12H2	2
1	M	13B1	M	13C1	M	13D1	M	13E1	M	13G1	M	13H1	EBM	14C1	EBM	14F1	M	14H4	M	10G0	M	14H7	M	11F0	1
COIL		13A1		13C1		13D1		13E1		13F1		13G1		13A8		13B8		14A6		14H5		14B6		14G7	COIL
													a	26D3 14B5		a	26B3 14A5			WW	15F3			WW	15G3
														15B8 b ⑨ 22A8 22 40A8			15D8 b ⑨ 22A5 22 40B8			a					
																				WX	12H2			WX	12A2

a	2603 1485	a	2683 14A5		(WW) 15F3		(WW) 15G3
	15B8		15D8		a		a
b	⑨ 22A8	b	⑨ 22A5		(WX) 12H2		(WX) 12A2
	②② 40A8		②② 40B8				

PART OF APP FIG. 7

RELAY

DESIG	LUCA		LUCB		RCTA		RCTB		RCTAA		SEAA		RCTBA		SEBA		RUCA		RUCB		SO		SI		DESIG
CODE	AF132		AF132		AF24		AF24		AK6		AK6		AK6		AF132		AF132		AJ55		AJ55		AJ55		CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	M	8E2	M	8G2	M	14C8	M	14E8			BM	14C7			BM	16F7	M	8G1	M	8F1	M	10B0	M	10B2	12
11	M	8B2	M	8C2	M	14C3	M	14F2			BM	14D7			BM	29A3	M	8C1	M	8C1	M	10C0	M	10C2	11
10	M	7F7	M	7G7	M	5A2	M	5B2			BM	16C7			BM	14C7	M	7G7	M	7F6	BM	18B1	BM	18C1	10
9	M	7B7	M	7C7	M	5F2	M	5E2			BM	29D7			BM	29D6	M	7C7	M	7B6					9
8	BM	30E6	BM	30E5	M	a	M	a			BM	29A3			BM	14D7	BM	29D7	BM	29D6	BM	10E1	BM	10E3	8
7	M	7F2	M	7G2	M	17G1	M	17G1									M	7G2	M	7F1					7
6	BM	8A6	BM	8C6	M	17E1	M	17F1									BM		BM		BM	18B2	BM	18B2	6
5	M	7B2	M	7C2	M	12H2	M	12H2	BM	23F6			BM	23G6			M	7C2	M	7B1					5
4	M	6F7	M	6G7	M	12B2	M	12B2	BM	15A8			BM	15C8			M	6G7	M	6F6	BM	10D1	BM	10D3	4
3	M	6B7	M	6C7	M	5E1	M	5E1	BM				BM				M	6C7	M	6B6	M	12D7	M	12D7	3
2	M	6F2	M	6G2	M	5A1	M	5B1	BM	29E1			BM	29E1			M	6G2	M	6F1	M	12E7	M	12E7	2
1	M	6B1	M	6C2	M	14C0	M	14F0	BM	26D4			BM	26B3			M	6C2	M	6B1	M	10C1	M	10C3	1
COIL	8F5	8H5		14C6		14D6		14C6		12E6		14E6		12F6		8D5		8E5		10C0		10C2		COIL	

a 22A8
22 40A8
a 22A5
22 40B8

DIODE

DESIG LOC CODE
XW, WT [10] S(0-9) 10C- 446F
11C-

RELAY

DESIG	S2		S3		S4		S5		S6		S7		S8		S9		SEA		SEB		TRCA		TRCAA		DESIG
CODE	AJ55		AJ55		AJ55		AJ55		AJ55		AJ55		AJ55		AJ55		AF64		AF64		AJ15		AF64		CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	M	10B4	M	10B6	M	10B8	M	11B0	M	11B2	M	11B4	M	11B6	M	11B8	EMB	14D3	EMB	14D3	EBM	29G7	EMB	14F2	12
11	M	10C4	M	10C6	M	10C8	M	11C0	M	11C2	M	11C4	M	11C6	M	11C8	M	15C3	M	15D3	EBM	14B3	M	17F1	11
10	BM	18C1	BM	18D1	BM	18E1	BM	18F1	BM	18G1	BM	18G1	BM	18G1	BM	18H1	M	18A1	M	18A1	EBM	15D3	M	8A6	10
9																	BM	8E5	BM	8D6	EBM	15H3	BM	16G5	9
8	BM	10E4	BM	10E6	BM	10E8	BM	11E1	BM	11E3	BM	11E4	BM	11E6		11E8	M	18A2	M	18A1	EMB	14A2	M	5C7	8
7																	BM	8D5	BM	8E6	EBM	14C6	BM	25G3	7
6	BM	18C2	BM	18D2	BM	18D2	BM	18E2	BM	18F2	BM	18F2	BM	18G2	BM	18H2	EMB	12D4	EMB	12F4	EMB	9H6	EMB	29G6	6
5																	BM	b	BM	b	EMB	14A1	BM	a	5
4	BM	10D4	BM	10D6	BM	10D8	BM	11D1	BM	11D3	BM	11D4	BM	11D6	BM	11D8	M	15C1	M	15D1	EBM	a	M	23F6	4
3	M	12D7	M	12D7	M	12D7	M	12D7	M	12D7	M	12D7	M	12D7	M	12D7	BM	14D0	BM	14H0	EBM	15H0	BM	14F1	3
2	M	12E7	M	12E7	M	12E7	M	12E7	M	12E7	M	12E7	M	12E7	M	12E7	M	9C8	M	9D8	EBM	26A1	M		2
1	M	10C4	M	10C6	M	10C8	M	11C1	M	11C3	M	11C4	M	11C6	M	11C8	M	a	M	a	EBM	14B0	M	9E6	1
COIL	10C4		10C6		10C8		11C0		11C2		11C4		11C6		11C7		12D6		12E6		14A2		14B2		COIL

WW 15F1
a
WX 15F3
WW 15E1
b
WX 15E3
WW 15G1
a
WX 15F3
WW 15F1
b
WX 15G3
a 15D1
14D5
a 16D3
17E1

RELAY

DESIG	TRCB		TRCBA		TRKA		TRKAA		TRKB		TRKBA		U0		U1		U2		U3		U4		U5		DESIG
CODE	AJ15		AF64		AF88		AJ12		AF88		AJ12				AK2		AK2				AK2				CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	EBM	29G6	EBM	14B2	M	14C3	EBM	14C2	M	14G3	EBM	14G2	M	10C0			M	10C4			M	10C8			12
11	EBM	15H3	M	17F1	B	5C6	EBM	15A7	B	5C7	EBM	15C7	M	10B8			M	10B4			M	10B8			11
10	EBM	15E3	M	8C6	M	14A3	EBM	25H5	M	14E3	EBM	25G5	M	6B1			M	6B6			M	7B1			10
9	EBM	14F3	BM	16D5	B	9E6	EBM	15H2	B	9E6	EBM	15C2	M	8D7			M	8D7			M	8D7			9
8	EBM	14E2	M	5C7	BM	29F7	EBM	25G5	BM	29F6	EBM	25H5	M	8F7			M	8F7			M	8F7			8
7	EBM	26C1	BM	25H3	B	9E6	EBM	23G4	B	15H2	EBM	15D2													7
6	EBM	9G6	EBM	29G7	BM	29E7	EBM	29E6	BM	29F7	EBM	29F6													6
5	EBM	14E1	BM	a	B	9B6	EBM	a	B	9D6	EBM	a			M	10C2			M	10C6			M	11C0	5
4	EBM	a	M	23H6	M	14A0	EBM	9G6	M	14E0	EBM	9G6			M	10B2			M	10B6			M	11A0	4
3	EBM	14F0	BM	14B1	B	15D1	EBM	25G3	B	9E6	EBM	23F4			M	6F1			M	6F6			M	7F1	3
2	EBM	14D6	M		M	14C0	EBM	14C1	M	14G0	EBM	14G1			M	8E7			M	8E7			M	8E7	2
1	EBM	15H0	M	9E6	B	15C1	EBM	15H1	B	15H1	EBM	25H3			M	8G7			M	8G7			M	8G7	1
COIL	14E2			14E2		14C2		14B2		14F2		14F2		6B1		6E1		6B6		6E6		7B1		7E1	COIL

a 15E1
14C5
a 17E1
16G3
a 23F0
25H3
a 23G0
25G3

RELAY

DESIG	U6		U7		U8		U9		UEA		UEB		ULA		ULB		TACA		TACAA		TACB		TACBA		DESIG		
CODE	AK2				AK2				AF55				AF55		AF132		AF132		AF24		AF55		AF24		AF55		CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	M	11C2			M	11C6			M	14C3	M	14G3	M	8F0	M	8F1	M	8F6	M	17B8	M	8G6	M	17B8			12
11	M	11A2			M	11A6							M	8C0	M	8C1	M	8H6	M	17D8	M	8H6	M	17D8			11
10	M	7B6				8B1			BM	12E4	BM	12E4	M	7F5	M	7F6	M	8D9	BM	a	M	8D9	BM	b			10
9	M	8D7			M	8D7				12G2	M	12G2	M	7B5		7B6	M	8G9	M	25E8	M	8F9	M	a			9
8	M	8F7			M	8F7			BM	8F5	BM	8F6	BM	29C7	BM	29C6	M	8A8	BM	31B1	M	8A8	BM	31B1			8
7									B	13B0	B	13B0	M	7F0	M	7F1	M	8C7	B	29E2	M	8C7	B	29F2			7
6									BM	8H5	BM	8H6	BM		BM		M	8C6	BM	25E5	M	8C6	BM	25E5			6
5			M	11C4			M	11C8	M	14C0	M	14G0	M	7B0	M	7B1	M	8A5	M	17G7	M	8A5	M	17H7			5
4			M	11A4			M	11A8	BM	29B7	BM	29B6	M	6F5	M	6F6	M	25E0	BM	12B4	M	25E0	BM	12C4			4
3			M	7F6			M	8F1	M	12C2	M	12B2	M	6B5	M	6B6	M	29E2	M	17E7	M	29F2	M	17F7			3
2			M	8E7			M	8E7	M	9B9	M	9D8	M	6F0	M	6F1	M	8H4	M	17D7	M	8H4	M	17D6			2
1			M	8G7			M	8G7	M	12D4	M	12E4	M	6B0	M	6B1	M	8F4	M	17B7	M	8G4	M	17B6			1
COIL		7B6		7F6		8B0		8E0		8D8		8F8		8G5		8H5		4A8		4B8		4C8		4C8		COIL	

DESIG	RPA0	RPA1
CODE	AJ202	AJ202
OPTION		
24	8E9	8E9
23	8G9	8G9
22	14A8	14B8
21	14B8	14B8
20	14C8	14C8
19	14D8	14E8
18	15F6	15G6
17	15F6	15G6
16	d	d
15	c	c
14	8D6	8D6
13	8E6	8E6
12	8F4	8F4
11	8D4	8D4
10	19E0	19E0
9	19D0	19D0
8	b	b
7	a	a
6	17H5	17F5
5	17G5	17E5
4	17G5	17E5
3	17F5	17E5
2	14F0	14F0
1	14B0	14B0
COIL	5H6	5H6

a 16B2
b 25D0
c 16E2
d 25D5
e 16E6
f 25D8
g 16B6
h 25D3

25E3
YL 25G5
YK 25E8
YL 25E3
YK 25E3
YL 25E8
YL 25H5

LINE, LINK, AND MARKER CIRCUIT

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APP FIG. 8

RELAY

DESIG	BTCA	BTCL	BTDA	BTDB	COA	COB	CONA	CONAA	CONB	CONBA	COTA	COTB	DESIG
CODE	AF55	AF55	AJ12	AJ12	AJ12	AJ12	AF132	AJ15	AF132	AJ15	AF55	AF55	CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	M	1588	M	1508	EBM	14A3	EBM	14E3	EBM	b	EBM	b	12
11	M	10G1	M	10G1	EBM	16C5	EBM	16F5	EBM	15B3	EBM	15A3	11
10	BM	d	BM	d	EBM	19E4	EBM	19F4	EBM	23F5	EBM	23G5	10
9	M	12B3	M	12G3	EBM	13B2	EBM	13B3	EBM	a	EBM	a	9
8	BM	30F6	BM	30F5	EBM	b	EBM	b	EBM	32E2	EBM	32E2	8
7	B	c	B	c	EBM	13E2	EBM	13E3	EBM	9F8	EBM	9E8	7
6	BM	a	BM	a	EBM	29E1	EBM	29E1	EBM	9E8	EBM	9E8	6
5	M	37E3	M	37E4	EBM	14B5	EBM	14A6	EBM	17F2	EBM	17F2	5
4	BM	17G4	BM	17H4	EBM	a	EBM	a	EBM	32C5	EBM	32C5	4
3	M	34C4	M	34C4	EBM	14A5	EBM	14B6	EBM	17E2	EBM	17E2	3
2	M	b	M	b	EBM	16C3	EBM	16F3	EBM	19F4	EBM	19G4	2
1	M	34C0	M	34C0	EBM	14A0	EBM	14E0	EBM	15A1	EBM	15B1	1
COIL	15H2	15H2	15H2	15H2	16F4	16F4	16B4	16E4	16E4	16A4	16E4	16E4	COIL

a	26C5	a	26E5	a	15A0	a	15B0	a	22A0	a	22C0	a	22H1
b	24B0	b	24C0	b	15A4	b	15H3	b	22A0	b	22C0	b	22H1
c	15G1	c	15H1	c	15A4	c	15H3	c	22A0	c	22C0	c	22H1
d	26F7	d	26H6	d	15A4	d	15H3	d	22A0	d	22C0	d	22H1

WY	6C1	WY	26F7
WZ	15G1	WZ	15H1
WY	26H7	WY	26F7
WZ	26G8	WZ	26F8
WY	26F8	WY	26G8
WZ	26F7	WZ	26H6

NETWORK

DESIG	LOC	CODE
RLA	15A6	186A
RLB	15D6	186A
SMRA	15E2	186A
SMRB	15G2	186A
SOA	15A2	186A
SOB	15B2	186A

DIODES

DESIG	LOC	CODE
XA	CC1	16C4
XA	CC2	16F4
WT	CO1	9C7
WT	CO2	9C8
WT	CO3	9D7
WT	CO4	9D8
WT	D1	38B3
WT	D2	39B3
XV	HE	2C7
XV	HO	2B7
XV	HA	2B7
XV	HB	2C7

DIODES (CONT)

DESIG	LOC	CODE
LTSA	20G1, 38D0	446F
LTSB	21F0, 39E5	446F
LTSC	21E2, 39G5	446F

RELAY

DESIG	RLAA	RLAB	RLB	RLBA	RLBB	SMRA	SMRAA	SMRB	SMRBA	SOA	SOB	TS	DESIG
CODE	AJ5	AF88	AF88	AJ5	AF88	AF132	AF132	AF132	AF132	AF82	AF82	AF10	CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	EBM	31D4	M	2A6	M	2B9	EBM	31D4	M	2B6	M	11B9	12
11	EBM	3F1	B	d	B	d	EBM	3F1	B	d	M	11B7	11
10	EBM	31G1	M	15B6	M	2C9	EBM	31F1	M	15D6	M	11B5	10
9	EBM	3G1	B	23G3	B	25F2	EBM	3G1	B	23F3	M	11B3	9
8	EBM	30B3	BM	30B3	BM	30C3	EBM	30B4	BM	30B4	BM	15F1	8
7	EBM	b	B	b	B	b	EBM	b	B	b	M	11B1	7
6	EBM	30B3	BM	30B3	BM	30A4	EBM	30B5	BM	30B5	BM	29A1	6
5	EBM	26D0	B	23F1	B	b	EBM	26A0	B	23G1	M	10B9	5
4	EBM	a	M	17F4	M	2C7	EBM	a	M	17G4	M	10B7	4
3	EBM	3H1	B	c	B	c	EBM	3H1	B	c	M	10B5	3
2	EBM	26A0	M	2A3	M	2B7	EBM	26C0	M	2B3	M	10B3	2
1	EBM	3F1	B	a	B	a	EBM	3F1	B	a	M	10B1	1
COIL	15B6	15B6	15C6	15C6	15D6	15E6	15E2	15F2	15F2	15A2	15B2	19D2	COIL

a	YB12B3	a	YB19F7	a	YR19D1	a	YB12F3	a	YB19G7
b	YB12F3	b	YB19G7	b	YR19E1	b	YB12B3	b	YB19F7
c	YB12B3	c	YB19F7	c	YR19E3	c	YB12B3	c	YB19F7
d	YB12B3	d	YB19F7	d	YR19E3	d	YB12B3	d	YB19F7

RELAY

DESIG	DCKA		DCKB		HMTA		HMTAA		HMTB		HMTBA		ICTA		ICTB		RCKA		RCKB		RLA		DESIG		
CODE	AF10		AF10		AJ62		AJ54		AJ62		AJ54		AF140		AF140		AF87		AF87		AF88		CODE		
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION		
12	EM	26A5	EM	26D5	M	14D3	EM	19E2	M	14G3	EM	19E2	EM	16D5	EM	16G5					M	2A9	12		
11					M	9D6	M	15E2	M	9B6			BM	29F1	BM	29F1					B	a	11		
10	M	26F4	M	26G4	EBM	17A1	EBM	15D2	EBM	17B1	EBM	15E2	M	14B3	M	14F3		EBM		EBM		M	2C9	10	
9					EB	26A1	B	17H0	EB	26C1	B	17H2	B	13F3	B	13E3						B	b	9	
8	EBM	37B0	EBM	37C0	EMB		EBM	29E4	EMB		EBM	29E4	M	5C8	M	5C8		EMB	2B4	EMB	2B5	BM	30C4	8	
7	B	15A6	B	15C6	EB	9D5	B	19F6	EB	9B5	B	19F7	B	13B3	B	14B5					B			7	
6	EMB	15A5	EMB	15C5	EMB	29E4	EMB	36C1	EMB	29E4	EMB	36C1	EM	16D3	EM	16G3		EMB	25E1	EMB	25E6	BM	30A3	6	
5					B	36D1	B	19F6	B	36D1	B	19E7	B	14B6	B	13B3		EM		EM		BM	25F6	5	
4	M		M		EBM	9B6	EBM	19D2	EBM	9D6	EBM	19D2	M	6H2	M	6H2					EB	25E2	M	2D7	4
3					EB	17B1	B	17H2	EB	17A1	B	17H0	B	14B5	B	14A6							B	25F1	3
2	M	26F1	M	26G1	M	14D0	M	15Q1	M	14G0	M	15E1	M	5C5	M	5C5							M	2B7	2
1					M	37B2	M	15E1	M	37B2	M	15C1	M	14B0	M	14E0						B	19H4	1	
COIL		26A5		26C5		15D2		15C2		15E2		15D2		16D4		16G4			26A7		26B7		15A6	COIL	

RELAY

DESIG	TSDA		TSDB		TT		BTTC		CCC		CONAA		CONBA		
CODE	AJ12		AJ12		AJ19		AK7				AF132		AF132		
OPTION							XA				WS		WS		
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	
12	EBM		EBM						EBM	16C4		M	15C3	M	15D3
11	EBM	19D5	EBM	19D5					EBM	16F5		M	21D2	M	21B2
10	EBM	19D5	EBM	19D5					EBM	16B5		M	21A2	M	21A2
9	EBM	19D4	EBM	19D4					EM	16F3		M	20F6	M	20E6
8	EBM	19D4	EBM	19D4	M	18E5			EM	16B3		BM	22D5	BM	22E5
7	EBM	19D3	EBM	19D3	B							M	20C6	M	20D6
6	EBM	19D3	EBM	19D3	M							BM	32F5	BM	32G5
5	EBM	19D5	EBM	19D5	B		EM					M	20A6	M	20A5
4	EBM	19D6	EBM	19D5			EM					M	20F1	M	20F1
3	EBM	19D6	EBM	19D6			EBM					M	20C1	M	20D1
2	EBM	19D7	EBM	19D7			EBM	19D2				M	20A1	M	20A1
1	EBM	30F4	EBM	30F3			EBM	19E2				M	15C1	M	15D1
COIL		18E5		18F5		18B5		16C5		16D1			16B4		16E4

DESIG	COAA	COBA
CODE	AJ202	AJ202
OPTION	WS	WT
24	15C3	15C3
23	21G3	38A0
22	21C8	38A5
21	21G8	39A0
20	22F2	39A5
19	23A6	38H3
18	23B6	38H8
17	23D5	32B0
16	22D6	40E4
15	16B6	16B6
14	32F1	32F1
13	22D7	40D6
12	20B7	38F6
11	20G2	38D6
10	20D2	38G1
9	20B2	38D1
8	9B6	9B6
7	24B1	24C1
6	24H1	24H1
5	16B3	16B3
4	23D4	40G1
3	23B3	38H5
2	23A3	38H1
1	15C1	15C1
COIL	16B4	16B4

LINE, LINK, AND MARKER CIRCUIT

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APP FIG. 9 (MFR DISC)

RELAY		ALBA		ALBB		COSA		COSB		LBA		LBB		LCK1		LCK2		LEA		LEAA		LEB		LEBA		DESIG	
CODE		AJ54		AJ54		AG10		AG10		AJ27		AJ27		AK4		AF55		AJ12		AF55		AJ12		CODE		OPTION	
OPTION		CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION	
12	EM	22E5	EM	22F5	M	19F6	M	19F6	EM	22C3	EM	a	M	32B3		M	23F5	EBM		M	23G5	EBM		12			
11	M	16C4	M	16F4	M	19G6	M	19G6						EBM		M	23H5	EBM		M	23H5	EBM		11			
10	EBM	15C3	EBM	15D3	M	22D5			M	e	M	e		EBM		BM	26A4	EBM	22A7	BM	26C4	EBM	22A4	10			
9	B	30C3	B	30C3	B		B		B	23A3	B	23B3	EMB	24G3		M	22D5	EBM	32D5	M	22F5	EBM	32D5	9			
8	EBM	32C6	EBM	32C7	M		M		EBM	b	EBM	b	EMB	24G4		BM	24F4	EBM	16E4	BM	24F3	EBM	16E5	8			
7	B		B		B	32H6	B	32G5	B	22D7	B	22D7				B	EBM	16B4	B			EBM	16B5	7			
6	EMB	8A6	EMB	8C6	M	32G5	M	32H5	EMB	c	EMB	c				BM	32E5	EBM	32E5	BM	32F5	EBM	32F5	6			
5	B	9E7	B	9E7	B	19E6	B	19E5	B	22C7	B	22C7		EMB	24H4	M	24G5	EBM	24E6	M	24G5	EBM	24E5	5			
4	EBM	34C1	EBM	34C1	M	19F5	M	19F5	EBM	d	EBM	d			EMB		BM	EBM	22A4	BM		EBM	22A7	4			
3	B	9E7	B	9E7	B	19E5	B	19E6						EBM		M	24H5	EBM	24D6	M	24H5	EBM	24D5	3			
2	M	16C4	M	16F4	M		M		M	22A1	M	22D1		EBM		M	EBM	24C6	M		EBM	24C5	2				
1	M	15C1	M	15D1	M	19E5	M	19F5						M	32B3	M	21G1	EBM	24B6	M	21G1	EBM	24B5	1			
COIL		22B2		22D2		22D4		22E4		22B2		22E2		24F3	24H3		23A4	23B4	23B4		23C4	COIL					

a	20 22E3
b	20 23C2
c	20 23B2
d	20 23B6
e	20 22G6
f	20 32F2
g	20 22H2
h	20 26A2
i	20 32F2
j	20 22B3

RELAY																											
DESIG	LSHA		LSHB		LTA		LTAA		LTB		LTBA		LTS2		LTS3		LTS4		LTS5		LTS6		LTS7		DESIG		
CODE	AF113		AF113		AF132		AJ12		AF132		AJ12		AF94		AF94		AF94		AF94		AF94		AF94		CODE		
OPTION	Z0		Z0																						OPTION		
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC			
12					M	22H3	EBM	21G3	M	22G7	EBM	21G3	EM	21G1	EM	21B6	EM	21C6	EM	21E6	EM	21G6	EM	22G0	12		
11					M	21D1	EBM	23B6	M	21D1	EBM	23C6	M	21G1	M	21B6	M	21D6	M	21E6	M	21G6	M	22G0	11		
10	EBM	22H2	EBM	22H6	M	21A1	EBM	32E1	M	21B1	EBM	32E1	M	23A2	M	23A2	M	23A2	M	23A2	M	23A2	M	23A2	10		
9	B	26A2	B	26D2	M	20F6	EBM	21D8	M	20G6	EBM	21D8													9		
8	EBM	23B2	EBM	23C2	BM	22A0	EBM	21G8	BM	22C0	EBM	21H8	EBM	22C3	EBM	22C4	EBM	22C4	EBM	22C4	EBM	22C5	EBM	22C5	8		
7	B		B		M	20D6	EBM	32B5	M	20D6	EBM	32B5	B	22A3	B	22A4	B	22A4	B	22A4	B	22A5	B	22A5	7		
6	EBM	32B4	EBM	32B5	BM	30G6	EBM	22F3	BM	30G5	EBM	22F3	EMB	20B2	EMB	20D2	EMB	20G2	EMB	20B7	EMB	20D7	EMB	20G7	6		
5	B		B		M	20A6	EBM	23F5	M	20B6	EBM	23G5													5		
4	EBM	22B3	EBM	22D3	M	20F1	EBM	24A9	M	20G1	EBM	24B9	EBM	24A4	EBM	24B4	EBM	24B4	EBM	24C4	EBM	24D4	EBM	24D4	4		
3	B	32F2	B	32F3	M	20R1	EBM	32C2	M	20D1	EBM	32C3													3		
2					M	20A1	EBM	22C7	M	20B1	EBM	22D7	M	23B2	M	23B2	M	23B2	M	23B2	M	23B2	M	23B2	2		
1					M	22H1	EBM	23B3	M	22G5	EBM	23C3	M	24G4	M	24G4	M	24G4	M	24G4	M	24G4	M	24G4	1		
COIL		22A2		22C2		22A7		22A7		22A4		22B4		21F2		21A7		21C7		21E7		21F7		22F1	COIL		

RELAY		LTS8		LTS9		NT		SMTA		SMTB		TRLA		TRLB		WIL		WILA		WLGA		WL		DESIG	
CODE		AF94		AF94		AF8B		AJ53		AJ53		AJ12		AJ12		AJ3		AK7		AJ3		CODE		OPTION	
OPTION		CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION	
12	EM	22F0	EM	22F0	M	19G7	M	14D3	M	14H3	EBM	20A8	EBM	20D8	EMB	32F6	EBM	32G4		EMB	32E6		12		
11	M	22F0	M	22F0	B	9B3	M	15C3	M	15D3	EBM	20D3	EBM	20F8	BM	32F7	EBM			BM	32D7		11		
10	M	23A2	M	23A2	M	19H7	EBM	14E1	EBM	14A2	EBM	20F3	EBM	21A3	EBM	32G3	EBM			EBM	32D3		10		
9					B	9C3	M	a	M	a	EBM	20A8	EBM	21D3	M		EM						9		
8	EBM	22C5	EBM	22C6	BM		EBM	32C6	EBM	32C7	EBM		EBM		EBM	32E4	EM	32F7		EBM	32H3		8		
7	B	22A5	B	22A6	B	9C0	M	9F6	M	9F6	EBM	21D3	EBM	20A7									7		
6	EMB	21B3	EMB	21E1	BM	18H5	EBM	14A1	EBM	14E2	EBM	21A3	EBM	20G2	EMB	24C7				EMB	24A7		6		
5					B	9B0	M	17B1	M	17C1	EBM	32D5	EBM	32D5	M				EM	22E8	M		5		
4	EBM	24E4	EBM	24F4	M	12F2	EBM	9B5	EBM	9D5	EBM	20F7	EBM	20D2	EBM	32D3				EM	EBM	32D4		4	
3					B	19F6	M	15E0	M	15F0	EBM	20D7	EBM	20A2	BM					EBM	BM		3		
2	M	23B2	M	23B2	M	12D2	M	15C1	M	15D1	EBM	24G5	EBM	24G4	BM	24D5				EBM	22D8	EBM	32C3	2	
1	M	24G4	M	24G4	B	19F6	M	14D0	M	14H0	EBM	24H4	EBM	24H5	BM	24A5				EBM	32G4	BM	24C8	1	
COIL		22E1		22E1		18G5		23F2		23G2		22B7		22C7		24C7			32F7	22C8		24A7		COIL	

WW	15E3	WW	15F3
WX	9D4	WX	9B4

RELAY		WLA		WUA		WLG		WU		Z1L		Z1		Z1G		ZU		ZU		DESIG	
CODE		AK7		AF9B		AF9B		AF110		AF9B		AF9B		AJ5		AJ39				CODE	
OPTION														B		A				OPTION	
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC			
12			EBM	29H6					B	24E5					EBM	11D9	EBM	11D9		12	
11			EBM												EBM	18A1	EBM	18A1		11	
10			EBM		EBM	32E3	EBM	29F3	EBM	32D4	EBM	32C4	EBM		EBM	10D9	EBM	10D9		10	
9			EM		B		B		B		B		B		EBM	18A2	EBM	18A2		9	
8			EM	29H3	EBM	32G4	EBM	29E3	EBM	32F6	EBM	32D6	EBM	22C8	EBM	9B9	EBM	9B9		8	
7					B		B		B		B		B		EBM		EBM			7	
6			EMB		EMB		EMB	12B6	EBM	24B5	EMB	24D6	EMB	22C8	EBM	11E9	EBM	11E9		6	
5	EM	32E7	B		B		B	29H2	B	24B6	B	24B6	B		EBM	29F4	EBM	29F4		5	
4	EM				EBM	32F4	EBM	29H7	EBM	24D8	EBM	24B8	EBM	32E4	EBM	10E9	EBM	10E9		4	
3	EBM		B		B		B		B		B		B		EBM	29G2	EBM	29G2		3	
2	EBM		M		M	22E8	M	29G2			M	24A6	M	22B8	EBM	909	EBM	909		2	
1	EBM	32H4													EBM	12C7	EBM	12C7		1	
coil		32D7		29G3		22D8		12B6		24E7		24B7		22E7		12C6				coil	

APP FIG. 10

RELAY																								DESIG CODE													
DESIG CODE	MTA			MTB			NAA			NAB			NCA			NCB			RLSA			RLSA			RLSAA			RLSB			RLSB			RLSBA			
OPTION	AF132			AF132			AJ12			AJ12			AJ3			AJ3			AJ12			AJ39			AJ12			AJ12			AJ39			AJ12			
	CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC			CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC	OPTION
12	M	25G4	M	25H4	EBM	25C2	EBM	25C7	EMB	25C2	EMB	25C7	EBM	26G5	EBM	26G5	EBM	2B6	EBM	25F2	EBM	25F2	EBM	2B6	EBM	25F2	EBM	25F2	EBM	4A8	EBM	4A8	EBM	12			
11	M	25F2	M	25F7	EBM	16C5	EBM	14A2	BM	14A7	BM	14B7	EBM	23A5	EBM	b	EBM	4C8	EBM	25F7	EBM	25F7	EBM	4A8	EBM	25F7	EBM	25F7	EBM	4A8	EBM	11					
10	M	25A2	M	25A7	EBM	25C3	EBM	25C8	EBM	14E1	EBM	14B2	EBM	23B4	EBM	a	EBM	12E6	EBM	26F5	EBM	26F5	EBM	12D6	EBM	26F5	EBM	26F5	EBM	12D6	EBM	10					
9	M	25C2	M	25C7	EBM	16C3	EBM	14E2	M	25C3	M	25C7	EBM	23G2	EBM	23G2	EBM	15E6	EBM	23F2	EBM	23F2	EBM	15E6	EBM	23F2	EBM	23F2	EBM	15E6	EBM	9					
8	BM	33B1	BM	33B1	EBM	33B1	EBM	33B1	EBM	33B1	EBM		EBM		EBM	2E1	EBM	2E1	EBM	15C6	EBM	2G1	EBM	2G1	EBM	15C6	EBM	2G1	EBM	15C6	EBM	8					
7	M	25D2	M	25D7	EBM	14C7	EBM	14D5					EBM	30D4	EBM	30D4	EBM	30B6	EBM	30D3	EBM	30D3	EBM	30B6	EBM	30D3	EBM	30D3	EBM	30B6	EBM	7					
6	BM	33D5	BM	33D5	EBM	34E4	EBM	34F4	EBM	25C1	EBM	25C6	EBM	30A6	EBM	30A6	EBM	17F4	EBM	30A6	EBM	30A6	EBM	17G4	EBM	30A6	EBM	30A6	EBM	17G4	EBM	6					
5	M	25D1	M	25D6	EBM	14C7	EBM	14C5	M	25B1	M	25C6	EBM	2G2	EBM	2G2	EBM	12D5	EBM	2E2	EBM	2E2	EBM	12E5	EBM	2E2	EBM	2E2	EBM	12E5	EBM	5					
4	M	25C1	M	25C6	EBM	25C0	EBM	25C5	EBM	14B1	EBM	14E2	EBM	23F1	EBM	23F1	EBM	4A7	EBM	23G1	EBM	23G1	EBM	4C7	EBM	23G1	EBM	23G1	EBM	4C7	EBM	4					
3	M	25A1	M	25A6	EBM	14A1	EBM	16G5	BM	16G4	BM	16G5	EBM	26F1	EBM	26F1	EBM	2B3	EBM	23B5	EBM	23B5	EBM	2B3	EBM	23B5	EBM	23B5	EBM	2B3	EBM	3					
2	M	25F1	M	25F6	EBM	25C1	EBM	25C6	EBM	16D4	EBM	16D5	EBM	25F6	EBM	25F6	EBM	30G4	EBM	23A4	EBM	23A4	EBM	30G4	EBM	23A4	EBM	23A4	EBM	30G4	EBM	2					
1	M	25G3	M	25H3	EBM	14E1	EBM	16G3	BM	14B5	BM	14A5	EBM	25F1	EBM	25F1	EBM	34G4	EBM	26G1	EBM	26G1	EBM	34G4	EBM	26G1	EBM	26G1	EBM	34G4	EBM	1					
COIL		25F2		25B7		25B2		25B7		25C2		25C7		25E2		25E2		25C2		25E7		25E7		25C2		25E7		25E7		25C2		25E7		COIL			

NETWORK		
DESIG	LCC	CODE
RLSA	25E2	186A
RLS3	25E7	186A

DIODE			
DESIG	LOC	CODE	
WF	RLSA	37D2	446F
WF	RLSB	37D3	446F

a	23B4
b	38H6
a	23A5
b	38H3
a	23A4
b	38H2
a	23B5
b	38H7

RELAY																									
DESIG			SAA		SAB		STA		STAR		STBR		ST3		TAA			TAB		TMA			TMB		DESIG
CODE			AF64		AF64		AJ15		AK4		AJ15		AJ54			AJ54		AG8			AGE		CODE		
OPTION																							OPTION		
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC			
	ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR				
12	EMB	2532	EM3	2537	EM3	17D7	!	34B4			EM3	17D8			EM	25G8	EM	25H8					12		
11	M	25C2	M	25C8	EM3	25B3	EM3	b			EM3	25B8			M	2533	M	25B8					11		
10	M	13B5	M	13B5	EM3	13B5	EM3	a			EM3	13B5			EM3	15C6	EM3	15E8					10		
9	BM		BM	25A7	EM3	13E5	EM3	23F3			EM3	13E5			3	25F6	3	25F2					9		
8	M	13F5	M	13F5	EM3	25A2	EM3	23G3			EM3	25A7			EM3	25H3	EM3	25G5		M	25E4	M	25F4	8	
7	BM	25A1	BM	25A6	EM3	33C1					EM3	33C1			3	25C3	3	25C8		3		3	25F4	7	
6	EM3	25B1	EM3	25B6	EM3	25A1					EM3	25A6			EM3		EM3			3M	25C1	BM	25C6	6	
5	BM	12C5	BM	12C5	EM3	12C5					EM3	12C5			B	25F1	B	25F7						5	
4	M	24A8	M	24B6	EM3	32C2					EM3	23F4	EM3	29E2	EM3	25G3	EM3	25G5		M	25E4	M	25F4	4	
3	BM	32C1	BM	29F2	EM3	24A8					EM3	b	EM3	24A8	B	25C0	B	25C5						3	
2	M	12C5	M	12C6	EM3	12B5					EM3	a	EM3	12B5	B	25G7	M	25H7						2	
1	M	25C1	M	25C6	EM3	25B1					M	34C4	EM3	25B6	M	25B1	M	25B6						1	
COIL		25B2		25B7		25A2		25A2				25A7		25A7		25G7		25H7			25G4		25H4	COIL	

a	5H5
b	16E2
a	5H6
b	16B7
a	5H5
b	16B2
a	5H6
b	16E7

RELAY																									
DESIG CODE	TCA		TCB		TOKA		TCK3		TOLA		TOL3				TRA		TR3								DESIG CODE
	AG2		AG2		AF64		AF64		AF9		AF9				AG21		AG21								
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12					EMB	25E8	EMB	25F8	EM		EM														12
11					M	26F3	M	26G3																	11
10	M	25G8	M	25G8	M	26F9	M	26G9	M	26F8	M	26G8			M	26G5	M	26F5							10
9	B	25B3	B	25B8	BM	c	BM	c	B	26G3															9
8	M	25H8	M	25G8	M	25E3	M	25F3	EBM		EBM				EMB	b	EMB	b							8
7	B		B		BM	31A0	BM	31A0	B	26G2	B	26F3													7
6	M		M		EMB	2E0	EMB	2G0	EMB	34A4	EMB	34B4			EMB	a	EMB	a							6
5	B	25B0	B	25B5	BM	d	BM	d	B	26F2	B														5
4	M	25H6	M	25H7	M	25E5	M	25F5	EBM	33D1	EBM	33D1			M	26F1	M	26G1							4
3					BM	a	BM	a																	3
2	M	25G7	M	25G6	M	26G6	M	26F6	M	26F7	M	26G7			M	30G3	M	30G3							2
1					M	26F2	M	26G2																	1
COIL		25E4		25E4		26F3		26G3		26F7		26G7				25D2		25D7							COIL

a	3H0
b	26F6
c	26G6
a	2G2
b	25E0
c	25F0
a	3G0
b	26G9
c	3F0
d	26F9

a	25D1
b	26A7
a	25D6
b	26B7
a	25D2
b	25D7
a	26A8
b	26B8

DESIG CODE OPTION																										DESIG CODE OPTION	
X	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	X
12																											12
11																											11
10																											10
9																											9
8																											8
7																											7
6																											6
5																											5
4																											4
3																											3
2																											2
1																											1
COIL	X		X		X		X		X		X		X		X		X		X		X		X		X		COIL

APP FIG.11

RELAY

DESIG	JRAL	LAL1	LAL2	LAL2A	MAL	RLAL	TAAL	TAL	TOAL	DESIG
CODE	AF115	AF85	AF85	AF85	AF118	AF85	AF9	AF85	AF85	CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC
12	ARR	LOC	ARR	LOC	ARR	LOC	ARR	LOC	ARR	LOC
11										
10	M	33D7	EBM	33F4	EBM	33F4	EBM	33D4	EBM	33D4
9			PM	33F4	PM	33F4	PM	33D4	PM	33D4
8	EBM									
7										
6	B		EBM		EBM		EBM	30E4	EBM	30E4
5										
4	M	2988	PM	33F7	PM	33F7	PM	33H8	PM	33H8
3			M	32B3	M	32A7	M	33G5	M	33G5
2	EBM	33D4								
1										
COIL	29A9		32B4		32B7		32A7		3005	

LAMPS
DESIG LOC CODE

WT	COAL	33B9	MI
	JRAL	33D8	
	LAL1	33F8	
	LAL2	33F8	
	MAL	33H8	
	RLAL	33D8	
	TAAL	33G8	WS 2Y
	TAL	33E8	WT MI
	TOAL	33E8	
	TRAL	33C8	
	TS	33G8	
	UAL	33B8	
	UAL1	33B8	
	UAL2	33C8	
WT	XCAL	33B9	MI

RELAY

DESIG	TOALA	TRAL	UAL	UAL1	UAL1A	UAL2	XCAL	COAL	DESIG
CODE	AF85	AF28	AF85	AF85	AF85	AF85	AK24	AK24	CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	ARR	LOC	ARR	LOC	ARR	LOC	ARR	LOC	12
11									11
10	EBM	M	33E4	EBM	33C4	EBM	33B4	32D1	10
9	PM	33B4		PM	33C4	PM	33B4	32D1	9
8									8
7		B	8C6						7
6	EBM	EBM	33C7	EBM	33C7	EBM	33B9	32D1	6
5		B	8A6						5
4	PM	33E7	PM	33B7	PM	33B7	PM	33B4	4
3	M	33C2	M	29B4	M	29C4	M	29B2	3
2									2
1									1
COIL	33B2	31E4		29B3	29D3	29C3	29A2	32D1	COIL

APP FIG.12,13,14

DESIG		TRUNK SWITCH 0								TRUNK SWITCH 1								LINE SWITCHES				LINE SWITCHES 6,7				TRUNK SWITCH 8								
APP FIG.NO.		12								13												12				12								
CODE		324AJ				324AL				324AJ				324AL				324AJ		324AK		324AJ		324AK		324AJ			324AL					
OPTION		ZZ				YA				ZZ				YA				ZV		ZX		ZW		ZY		ZZ			YA					
HORIZONTAL LEVEL		WIRE								WIRE								WIRE				WIRE				WIRE								
		0-2				3-5				0-2				3-5				0-2		3-5		0-2		3-5		0-2			3-5					
0	VERT					0-4	5-7	8	9					0,2,4,6	1,3,5,7	8	9					0-2					0-9				1,3	2,4	5-9	
	LOC					27G2	27G3	27G7	28G3					27G5	27G7	27G8	28G6										27G1				27G5	27G7	27G2	
1	VERT	0-4	5-7	8	9					0,2,4,6	1,3,5,7	8	9									0-9					0-9				1,3	2,4	5-9	
	LOC	27E2	27E3	27E8	28E3					27E5	27E6	27E8	28E6									27E0					27E0				27E5	27E6	27E2	
2-9	VERT	0-4	5-7	8	9	0-4	5-7	8	9	0,2,4,6	1,3,5,7	8	9	0,2,4,6	1,3,5,7	8	9					0-9					0-9				1,3	2,4	5-9	
	LOC	27B2-27D2	27B3-27D3	27B8-27D8	28B3-28D3	27B2-27D2	27B3-27D3	27B8-27D8	28B3-28D3	27B5-27D5	27B7-27D7	27B8-27D8	28B6-28D6	27B5-27D5	27B7-27D7	27B8-27D8	28B6-28D6					27B0-27D0					27B0-27D0				27B5-27D5	27B7-27D7	27B2-27D2	
MAGNETS	DESIG				LOC				DESIG				LOC				DESIG		LOC		DESIG		LOC		DESIG			LOC						
	THM00-04				34D6				THM10,12,14,16				9E3				LHM20-29		35H5		LHM60-79		1E6		THM80			34F9						
	THM05,06				34F9				THM11,13,15,17				9F3				LHM30-59		1E6		SM60,61,70,71		24G6,24H6		THM81,83			9E3						
	THM07				34G6				THM18,19				17C3				SM20,30,40,50		24H6		SM62-69, 72-79		24A3-24F3		THM82,84			9F3						
	THM08				17B3				SM10				24H6				SM21,31,41,51		24G6						THM85-89			34D6						
	THM09				17A3				SM11				24G6				SM22-29, 32-39, 42-49, 52-59		24A3-24F3						SM80			24H6						
	SM00				24H6				SM12-19				24A3-24F3												SM81			24G6						
	SM01				24G6																				SM82-89			24A3-24F3						
	SM02-09				24A3-24F3																													
HOLD O.N. CONTACTS	THM00-04				ZZ IT, 2T YA 1,2,3 ZZ IB, 2B YA 4,5				THM10-19				ZZ IT, 2T YA 1,2,3 ZZ IB, 2B YA 4,5				LHM20-29		ZZ IT, 2T ZX 3,4,5 ZZ IB, 2B ZX 1,2		35B5		LHM60-79		ZZ IT, 2T ZY 3,4,5 ZZ IB, 2B ZY 1,2		1A7 1D6		THM80		ZZ IT, 2T YA 1,2,3 ZZ IB, 2B YA 4,5		2D0 6A3	
	THM05				ZZ IT, 2T YA 1,2,3 ZZ IB, 2B YA 4,5												LHM30-59		ZZ IT, 2T ZX 3,4,5 ZZ IB, 2B ZX 1,2		1A7 1D6						THM81-89		ZZ IT, 2T YA 1,2,3 ZZ IB, 2B YA 4,5					
	THM06				ZZ IT, 2T YA 1,2,3 ZZ IB, 2B YA 4,5																2 35B5 35B7													
	THM07-09				ZZ IT, 2T YA 1,2,3 ZZ IB, 2B YA 4,5																													

NETWORK
DESIG LOC CODE
THM08 17B4 186A
THM18 17D4 186A

LINE, LINK, AND MARKER CIRCUIT

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APP FIG. 15

RELAY		SMC1		SMC4		SMC5																				DESIG	
CODE		AF24		AF24		AF24																				CODE	
OPTION																										OPTION	
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	
	ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		12
12	M	23F7	M	23F7	M	23F7																					12
11	M	23G7	M	23G7	M	23G7																					11
10	M	24H6	M	24H6	M	24H6																					10
9	M	24F4	M	24F4	M	24F4																					9
8	M	24E4	M	24E4	M	24E4																					8
7	M	24D4	M	24D4	M	24D4																					7
6	M	24D4	M	24D4	M	24D4																					6
5	M	24C4	M	24C4	M	24C4																					5
4	M	24B4	M	24B4	M	24B4																					4
3	M	24B4	M	24B4	M	24B4																					3
2	M	24A4	M	24A4	M	24A4																					2
1	M	24G6	M	24G6	M	24G6																					1
COIL		24C0				24F0																					COIL

APP FIG. 16

RELAY																											DESIG
CODE		SMC0		SMC6		SMC7		SMC8																			CODE
OPTION		AF24		AF24		AF24		AF24																			OPTION
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	
	ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		
12	M	23F7	M	23F7	M	23F7	M	23F7	M	23F7																	12
11	M	23G7	M	23G7	M	23G7	M	23G7	M	23G7																	11
10	M	24H6	M	24H6	M	24H6	M	24H6	M	24H6																	10
9	M	24F4	M	24F4	M	24F4	M	24F4	M	24F4																	9
8	M	24E4	M	24E4	M	24E4	M	24E4	M	24E4																	8
7	M	24D4	M	24D4	M	24D4	M	24D4	M	24D4																	7
6	M	24D4	M	24D4	M	24D4	M	24D4	M	24D4																	6
5	M	24C4	M	24C4	M	24C4	M	24C4	M	24C4																	5
4	M	24B4	M	24B4	M	24B4	M	24B4	M	24B4																	4
3	M	24B4	M	24B4	M	24B4	M	24B4	M	24B4																	3
2	M	24A4	M	24A4	M	24A4	M	24A4	M	24A4																	2
1	M	24G6	M	24G6	M	24G6	M	24G6	M	24G6																	1
COIL	X	24A0		24F0	X	24G0		24G0		24G0	X		X		X		X		X		X		X		X		COIL

APP FIG. 17

RELAY		SL20-29																								DESIG	
CODE		AFIO																								CODE	
OPTION																										OPTION	
		CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC		
		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR			
12	EM		35F7																							12	
11																										11	
10	M																									10	
9																										9	
8	EBM		a																							8	
7	B																									7	
6	EMB																									6	
5																										5	
4	M		35B5																							4	
3																										3	
2	M		35A6																							2	
1																										1	
COIL			35F8																							COIL	

THERMISTOR		
DESIG	LOC	CODE
T20-29	35F7	8C

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APP FIG.19

RELAY																												DESIG
CODE		RLO		RL1																						CODE		
OPTION		AK 5																								OPTION		
	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC		
	ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR		ARR			
12			M	37B5																							12	
11			B																								11	
10			B																								10	
9			B	36C3																							9	
8																											8	
7																											7	
6																											6	
5																											5	
4	B	36C3																									4	
3	B																										3	
2	B																										2	
1	M	37B6																									1	
COIL		37E6		37B6																							COIL	

APP FIG.20

RELAY		A(0-9)		B(0-9)																								DESIG	
CODE		AF79		AF79																								CODE	
OPTION																												OPTION	
12	EMB			36C4	EMB			36C4																					
11	M			36F6	M			36G6																					
10	EBM				EBM																								
9																													
8	EBM			36G4	EBM			36G4																					
7																													
6	EMB			36B4	EMB			36E4																					
5																													
4	EBM			36H4	EBM			36H4																					
3																													
2	EBM			36E4	EBM			36B4																					
1	M			36B6	M			36D6																					
COIL				36B5				36B5																					

DIODES

DESIG	LOC	CODE
A	36B5	446F
B	36E5	446F

APP FIG.21

RELAY		MS (EVEN)		MS (ODD)																						DESIG		
CODE		AK		23																						CODE		
OPTION																										OPTION		
	CONT	ARR	LOC	CONT	ARR	LOC	CONT	ARR	LOC	CONT	ARR	LOC	CONT	ARR	LOC	CONT	ARR	LOC	CONT	ARR	LOC	CONT	ARR	LOC	CONT	ARR	LOC	
12				BM																								12
11				BM		36E6																						11
10																												10
9																												9
8																												8
7																												7
6																												6
5																												5
4																												4
3																												3
2	BM		36E6																									2
1	BM																											1
COIL		36F5		36F5																								COIL

RESISTORS

DESIG	LOC	CODE
PC-	36G4	19RP

LINE, LINK, AND MARKER CIRCUIT ②

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RELAY																									
DESIG CODE	LEB AF55		LEBA AJ12		LSHA AF113		LSHB AF113		LTA AJ15		LTAA AJ12		LTB AJ15		LTBA AJ12		LTCA AF24		LTCB AF24		LT2 AJ68		LT3 AJ68		DESIG CODE
OPTION																									OPTION
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	
12	M	23G5	EBM						EBM	39F5	EBM	38A0	EBM	39F5	EBM	38A0	M		M		EM	38A1	EM	38D2	12
11	M	23H5	EBM						EBM	39D5	EBM	38H3	EBM	39D5	EBM	38G8	M		M		B		B		11
10	BM	32B1	EBM	40A7	EBM	40D1	EBM	40E1	EBM	39F1	EBM	32E1	EBM	39F1	EBM	32E1	M		M		M	38G0	M	38G0	10
9	M	40H3	EBM	32D5	B	26A2	B	26D2	EBM	39D1	EBM	38A5	EBM	39D1	EBM	38A5	M		M		B	40C2	B	40C2	9
8	BM	24F3	EBM	16E5	EBM	38H0	EBM	38H5	EMB	40C2	EBM	39B0	EMB	40D2	EBM	39B0	M	39E0	M	39F0	EBM	24A5	EBM	24B5	8
7	B	26C4	EBM	16B5	B		B		EBM	30G6	EBM	32B5	EBM	30G5	EBM	32B5	M	39C5	M	39C5	B	40A2	B	40A2	7
6	BM	32F5	EBM	32F5	EBM	32B4	EBM	32B5	EMB	40A0	EBM	39B5	EMB	40B0	EBM	39B5	M	39E0	M	39F0	EMB	38C1	EMB	38E1	6
5	M	24G5	EBM	24E5	B		B		EMB	40C0	EBM	23F5	EMB	40D0	EBM	23G5	M	39B0	M	39B0	B		B		5
4	BM	38H5	EBM	40A6	EBM	40A1	EBM	40B1	EBM	38F5	EBM	24A9	EBM	38F5	EBM	24B9	M	38E5	M	38F5	M	38D1	M	38F1	4
3	M	24H5	EBM	24D5	B	32F2	B	32F3	EBM	38C5	EBM	32C2	EBM	38C5	EBM	32C3	M	38B5	M	38C5	B	32D0	B	32D0	3
2	M	39B2	EBM	24C5					EBM	38F0	EBM	40D7	EBM	38F0	EBM	40E7	M	38E0	M	38E0	M	38G4	M	38G4	2
1	M	38A2	EBM	24B5					EBM	38C0	EBM	38G1	EBM	38C0	EBM	38G5	M	38B0	M	38C0	BM	24G4	BM	24G4	1
COIL		38H7		38H7		40B3		40C3		40A7		40A7		40B7		40B7		40C1		40D1		38C1		38E1	COIL

<u>VOLTAGE REDUCTION DETECTOR CIRCUIT</u>		
<u>DESIG</u>	<u>LOC</u>	<u>CODE</u>
VRDA	38C2,C7,E2, E7,40F2	ED-5E009-()
VRDB	39C2,C7,E2, E7,40G2	ED-5E009-()

RELAY																																																					
DESIG	WILA				WLGA				WL				WLA				WUA				WLG				WU				XC				ZIL				ZL				ZLG				ZU				DESIG				
CODE	AK7								AJ3								AK7								AF98				AF98				AF96				AF110				AF98				AF98				AJ39				CODE
OPTION																																																					OPTION
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC																	
12	EBM	32G4			EMB	32E6			EBM	29H6																							EBM	11D9	12																		
11	EBM				BM	32D7			EBM																								EBM	18A1	11																		
10	EBM				EBM	32D3			EBM				EBM	32E3	EBM	29F3								EBM	32D4	EBM	32C4	EBM				EBM	10D9	10																			
9	EM	32F7			M				EM				B		B										B		B					EBM	18A2	9																			
8	EM				EBM	32H3			EM	29H3			EBM	32G4	EBM	29E3	M	32A0	EBM	32F6	EBM	32D6	EBM	40D7								EBM	9B9	8																			
7													B		B										B	24E6	B					EBM		7																			
6					EMB	24A7							EMB		EMB	12B6	M	40G3	EBM	24B5	EMB	24D6	EMB	40C8								EBM	11E9	6																			
5				EM	40F8	M		EM	32E7				B		B	29H2								B	24B6	B						EBM	29F4	5																			
4				EM		EBM	32D4	EM					EBM	32F4	EBM	29H7	M	40E3	EBM	24D8	EBM	24B8	EBM	32E4								EBM	10E9	4																			
3				EBM		BM		EBM					B		B									B		B							EBM	29G2	3																		
2				EBM	40E8	EBM	32C3	EBM					M	40E7	M	29G2								M	24A6	M	40C8	EBM	9D9				EBM	12C7	2																		
1				EBM	32G4	BM	24C8	EBM	32H4																								EBM	12C7	1																		
COIL		32F7		40D8		24A7		32D7		29G3		40E8		12B6		38A0		24E7		24B7		40F6		12C6										COIL																			

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CIRCUIT NOTES:

DESIG	FUSE AMP	POTENTIAL	ONE PER
A	1-1/3	48V SIG	APP FIG. 4
B	1-1/3	48V SIG	APP FIG. 4
C	1-1/3	48V SIG	APP FIG. 7
D	1-1/3	48V SIG	APP FIG. 7
E	1-1/3	48V SIG	APP FIG. 8
F	1-1/3	48V SIG	APP FIG. 8
G	1-1/3	48V SIG	APP FIG. 9 (MD), 22
H	1-1/3	48V SIG	APP FIG. 9 (MD), 22
J	1-1/3	48V SIG	APP FIG. 9 (MD), 22
K	1-1/3	48V SIG	APP FIG. 9 (MD), 22
L	1-1/3	48V SIG	APP FIG. 10
L2	1-1/3	48V TALK	APP FIG. 1, 3, 4, 17
L3	1-1/3	48V TALK	APP FIG. 1, 3, 4
L4	1-1/3	48V TALK	APP FIG. 2, 3, 4, 15
L5	1-1/3	48V TALK	APP FIG. 2, 3, 4, 15
L6	1-1/3	48V TALK	APP FIG. 2, 3, 4, 16
L7	1-1/3	48V TALK	APP FIG. 2, 3, 4, 16
M	1-1/3	48V SIG	APP FIG. 10
N	1-1/3	48V SIG	APP FIG. 5
P	1-1/3	48V SIG	APP FIG. 5
Q	1-1/3	48V SIG	APP FIG. 11
R	1-1/3	48V SIG	APP FIG. 3, 4
S	1-1/3	48V SIG	APP FIG. 9 (MD), 13, 22
SO	1-1/3	48V SIG	APP FIG. 12
SI	1-1/3	48V SIG	APP FIG. 12
S23	1-1/3	48V SIG	APP FIG. 12
S45	1-1/3	48V SIG	APP FIG. 12
S67	1-1/3	48V SIG	APP FIG. 12
S89	1-1/3	48V SIG	APP FIG. 12
T	1-1/3	48V SIG	APP FIG. 11
TO	1-1/3	48V SIG	APP FIG. 4, 6, 16
TI	1-1/3	48V SIG	APP FIG. 4, 6, 16
TR	1-1/3	48V SIG	TRAFFIC REG CKT
UA	1-1/3	48V SIG	APP FIG. 7
UB	1-1/3	48V SIG	APP FIG. 7
X	1-1/3	48V SIG	APP FIG. 7
Y	1-1/3	48V SIG	APP FIG. 7
Z	1-1/3	48V SIG	APP FIG. 19, 20, 21,
BATTERY SYMBOL		VOLTAGE RANGE	
-48		45-52V	

FEATURE OR OPTION		APP FIG.	APP OR WIRING	QUANTITY
INWARD RESTRICTION CIRCUIT	NOT REQUIRED		XO	
	REQD WITH BUSY VERIF CKT		XP, XR	
	WITHOUT BUSY VERIF CKT		XP, XQ	
TO CONTROL SWITCH PAD OF DIAL REPEATING CODE B TIE TRUNKS (SEE NOTES 123 & 201)		19	SEE NOTE 123	1 PER PBX
		20		1 PER TRK
		21		1 PER 2 TRKS

FEATURE OR OPTION		APP FIG.	APP OR WIRING	QUANTITY
LINE AND MARKER TENS GROUP EQPT FOR LINE GROUPS	20-29 AND 30-39	1, 17		1 PER PBX
	40-49 AND 50-59	2	V, E, VJ	1 PER PBX
MESSAGE REGISTER PULSE CKT	WHEN ARR FOR 60 LINES		60-69 AND 70-79	
	REQUIRED SEE NOTE 125		WV	1 PER PBX
MARKER PREFERENCE AND TENS SELECTION	NOT REQUIRED		WU	1 PER PBX
	WHEN ARR FOR 60 LINES	4	V	1 PER PBX
MARKER REGISTER CONTROL		5		1 PER PBX
MARKER TRUNK CONNECTOR		6		1 PER PBX
MARKER UNITS SELECTION, LINE AND TRUNK HUNTING, JUNCTOR REGISTRATION AND SEQUENCE CONTROL		7		1 PER PBX
MARKER ROUTE CONTROL CLASS OF SERVICE, AND DOWN CHECK		8		1 PER PBX
MARKER LINK TEST CONTROL, SELECT MAGNET CONTROL (INCL SEL MAG CONN RELS ASSOC WITH SWITCHES 2 & 3), AND MISC CONTROL		22	WT	1 PER PBX
MARKER ADVANCE, TIMEOUT, & RELEASE		10		1 PER PBX
MARKER ALARM		11		1 PER PBX
LINE AND TRUNK LINK SWITCHES	TRUNK SWITCHES 0 & 8			
	WHEN ARR FOR 60 LINES	12	ZY	1 PER PBX
	TRUNK SWITCH 1 AND LINE SWITCHES 4 AND 5	13		1 PER PBX
MARKER SELECT MAGNET CONNECTOR RELAYS	LINE SWITCHES 2 AND 3	14		1 PER PBX
	ASSOCIATED WITH SWITCHES 1, 4 AND 5	15		1 PER PBX
	ASSOC WITH SW 0 AND 8			
TO ARRANGE LINES IN LINE GRP 20-29 FOR	WHEN ARR FOR 60 LINES	16	V	1 PER PBX
	ASSOC WITH SW 6 & 7			
STATION LINE	LOUDSPEAKER PAGING TRK		M, ZD, WP, VC, VE	
	RECORDED TEL DICTATION TRK		ZD, ZS, WP, VC, VE	
	3A CODE CALL CKT		ZD, ZF, WP, VC, VE	
	INTER-FACE TRK CKT		ZD, ZG, WP, VC, VE	
	CALLING END		ZD, ZH, WP, VC, VE	
	ANS END		ZD, ZI, WP, VC, VE	
	WITHOUT ANS END		ZD, ZJ, WP, VC, VE	
	TWO-WAY DIAL REPEATING TIE TRK WITH DEL DIAL SIGNAL	SEE NOTE 127 & 202	ZD, ZF, WQ, VD, VE	
	AUXILIARY POSITION CKT FOR REMOTE TRUNK ANS	SEE NOTE 114	ZD, ZF, WP, VC, VE	
	ATND CONTROLLED	SEE NOTE 116	ZD, XC, WP, VC, VE	
	PORT 0		ZD, ZF, WP, VC, VE	
	PORT 1-4		ZD, WP, VC, VE	
DIAL CONFERENCE TRK CKT	PORT 5		ZD, XD, WP, VC, VE	
	556A CORD SWBD		WN	
	608A OR 608D CORD SWBD		XY	
STATION DIAL TRANSFER TRUNK CKT. WITH ADD-ON CONF (SEE NOTE 113)			YX	
STA DL TR CONTROLLER CKT SEE NOTE 113	REQUIRED		YV	
	NOT REQUIRED		YW	
BUSY VERIFICATION AUXILIARY TRUNK CIRCUIT	REQUIRED		YT	
	NOT REQUIRED		YS	

FEATURE OR OPTION		APP FIG.	APP OR WIRING	QUANTITY
LINE HUNTING	TWO DIRECTIONS		X	
	ONE DIRECTION		ZR	
PBX CAPACITY	40 LINES		T	
	60 LINES		V	
STATION LINES	30, 31 AND 32		R	
	SEE NOTE 313		S	
MESSAGE WAITING (SEE SERVICE NOTE 124)	REQUIRED		ZQ	
	NOT REQUIRED		ZP	
CORD SWITCH-BOARD	REQD	556A	Y, ZT	1 PER PBX
	608A OR D	40 LINES	VA	
	60 LINES		VA, VB	
NOT REQUIRED			Z	
WHEN LONG DISTANCE SERVICE USES C.O. TRUNK CIRCUIT	NO. 9		YE	
	NO. 8		YF	
	NO. 7		YO	
	NO. 6		YP	
STATION SINGLE DIGIT DIALING-MAKE BUSY KEY AND LAMP FOR LINES 20, 30, 40, 50, 60, 70			YD	AS REQUIRED
WHEN FX OR OFF-PREMISE EXTENSION TOUCH-TONE CONVERSION USING AUXILIARY LONG LINE CIRCUIT	SEE NOTE 321	REQUIRED	WI	
	NOT REQUIRED		WH	
WHEN CAMP-ON NOT REQUIRED			WJ	

NETWORK VALUES		
NETWORK NO.	RESISTANCE IN OHMS	CAPACITANCE IN UF
1	120	0.35
2	470	0.13
3	150	0.3

WORKING LIMITS:

MAX EXT CKT LOOP RES 1.5K OHMS
MIN INS RES 10K OHMS

DRAWING

ISSUE

SUPER-

CEDES

ISS 298

RJK

300 PJS

GPH

RMC

310 PJS

RHP

EWE

320 SAK

RHP

FED

330 PJS

RHP

FED

350 PJS

RHP

ROZ

360 PJS

LDJ

ROZ

370 PJS

LDJ

ROZ

380 PJS

LDJ

LOST

DWG RE-

PRODUCED

WITHOUT

CHANGE

5-31-68

ROZ

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LINE, LINK AND MARKER CIRCUIT

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CIRCUIT NOTES: (CONT)

104.

CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT			
				STD	A & M	MD	
5D	G OR K	K		G		K	
	E OR F	F AND V OR NONE	105	E		F	
8B	A OR B	B		A		B	
9B	ZA	NONE	106	ZA			
11B	ZB, ZC, ZD, ZE, ZF OR ZG	ZB, ZD, AND H, M, N, OR Q	102	ZC, ZD, ZE, ZF, ZG, H, M, N		ZB, Q	
			102	FIG. 17			
12B	ZH, ZI	ZH		ZI		ZH	
	ZJ OR ZK	ZJ		ZK		ZJ	
	ZL OR ZM	ZL		ZM		ZL	
	ZN OR ZO	ZN		ZO		ZN	
	ZR	W, X, OR NONE	102	ZR, X		W	
13D	ZP OR ZQ	ZP	102	ZP, ZQ			
	ZT	Y OR NONE	102, 107	Y, ZT			
16B	ZV, ZW, ZX, ZY, ZZ OR YA	ZV AND ZZ OR ZV, ZW, ZZ AND V	108, 109	ZX, ZY, YA		ZV, ZW, ZZ	
	YB OR YC	YB		YC		YB	
	YD	ZE OR M	102	YD			
	YE OR YF	NONE	102	YE, YF			
	YG	NONE	102	YG			
17B	YH, YJ	YH	124	YJ		YH	
19B	YK OR YL	YK		YL		YK	
	YM	NONE		YM			
20AC	YN	NONE	110	YN			
21B			111				
22AC	YR	YQ, YN	112	YR		YQ, YN	
23D	YS OR YT	YS	102	YS, YT			
	YV, YX	YW	113	YV, YX			
	YV, YX	YW		YW			
	XA, XB	XB		XA		XB	
	XC	NONE	116	XC			
	XD, XE	XE	115	XD, XE			
24D	XF	NONE	114	XF			
	YO, YP	NONE	102, 117	YO, YP			
	XG, XH	XG		XH		XG	
	XJ, XK	XJ OR NONE	102	XJ, XK			
	XO, XP	XO	118	XO, XP			
25D	XQ, XR			XQ, XR			
26AC	XU, XV	XU		XV		XU	
27D	Y, ZT	Y, ZT	102, 119, 120	Y, ZT			
	XW, XX			XW, XX			
29B	XY	NONE	102	XY			
	WA, XZ	XZ	121, 122	WA		XZ	
	WB, WC	WB		WC		WB	
30D	WD	NONE		WD			
	WE, WF	WE	123	WF		WE	
	FIG. 19, 20 & 21	NONE	102, 123	FIG. 19 20 & 21			
	WG	NONE		WG			
	WH, WI	WH	102, 321	WH, WI			
31B	WJ	NONE	102	WJ			
	WK	WK	124	YH			
32D	WL, WM	WL, YR	123	WK		YR, WL	
	WN	NONE	102	WN			
	WP, WQ	WP	102	WP, WQ			
32D	WR	NONE		WR			

104. (CONT)

CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT			
				STD	A & M	MD	
33D		WC, XH, ZO				WC, XH ZO	
	FIG. 22, WS, WT	FIG. 9, WS		FIG. 22, WT		FIG. 9, WS	
	WU	XJ	102	WU		XJ	
	WV	XK	102, 125	WV		XK	
36B	WW	WX		WX		WW	
	WZ	WY		WZ		WY	
	VA	XW	102	VA		XW	
	VB	XX	102	VB		XX	
37B	VC, VD	VC	102, 202	VC, VD			
	VE, VF	VE	102, 203	VE, VF			
	YG	YG	126			YG	
	VG OR VH	VG		VH		VG	
	VI OR VJ	VI AND V OR NONE	102, 128	VJ		VI	
	VK	YM		VK		YM	

NOTES:

105. PRIOR TO ISSUE 5D "F" OPTION WAS PART OF "V" OPTION.

106. WHEN THE PBX IS MODIFIED FOR DC KEY PULSING "ZA" OPTION MUST BE PROVIDED.

107. PRIOR TO ISSUE 13D "ZT" OPTION WAS PART OF "Y" OPTION.

108. PRIOR TO ISSUE 16B "ZW" OPTION WAS PART OF "V" OPTION.

109. WHEN THE PBX IS MODIFIED FOR DIRECT STATION SELECTION BY ATTENDANTS, "ZA" AND "ZX" OPTIONS MUST BE PROVIDED IN A 40 LINE CAPACITY. PBX AND "ZA", "ZX" & "ZY" OPTIONS IN A 60 LINE PBX.

110. PROVIDE "YN" OPTION WHEN "YC" OPTION IS PROVIDED. (MD)

111. OPTIONS "YO" AND "YP" WERE ORIGINALLY SHOWN ADDED ON ISSUE 19B & 21B, SEE NOTE 117.

112. PROVIDE "YR" OPTION WHERE "YC" OPTION IS PROVIDED AND REMOVE "YQ" AND "YN" OPTIONS.

113. WHEN THE PBX IS MODIFIED FOR THE STATION DIAL TRANSFER TRUNK CIRCUIT WITH ADD-ON CONFERENCE. OPTIONS "YV" & "YX" MUST BE PROVIDED REPLACING "YW". OPTION "XA" MUST ALSO BE PROVIDED REPLACING "XB".

114. WHEN THE PBX IS MODIFIED TO PROVIDE AN AUXILIARY POSITION CIRCUIT FOR REMOTE TRUNK ANSWERING, OPTION "XF" MUST BE PROVIDED.

115. WHEN THE PBX IS MODIFIED TO PROVIDE FOR STATION CONTROLLED DIAL CONFERENCE TRUNK CIRCUIT, OPTION "XD" MUST BE PROVIDED REPLACING "XE". OPTION "XA" MUST BE PROVIDED REPLACING "XB".

116. WHEN THE PBX IS MODIFIED TO PROVIDE FOR ATTENDANT CONTROLLED DIAL CONFERENCE TRUNK, OPTION "XC" MUST BE PROVIDED. OPTION "XA" MUST BE PROVIDED REPLACING "XB".

117. OPTIONS "YO" AND "YP" WERE ORIGINALLY SHOWN ADDED ON ISSUE 19B. THESE OPTIONS WERE RESCHEDULED FOR ISSUE 21B AND SUBSEQUENTLY FOR 23D.

118. WHEN PBX IS MODIFIED TO PROVIDE AN INWARD RESTRICTION CIRCUIT, OPTION "XP" MUST BE PROVIDED, REPLACING OPTION "XO". OPTION "XQ" ALSO MUST BE PROVIDED. IF THE BUSY VERIFICATION CIRCUIT IS ALSO PROVIDED, OPTION "XR" MUST BE PROVIDED, REPLACING OPTION "XQ".

119. ON ISSUE 27D, "ZU" OPTION BECAME PART OF 552A, 552B, 552D, 552E, 605A, 607A, 607B, OR 608A JACK CIRCUIT AND WAS REMOVED FROM THE DRAWING ON A "D" NO RECORD BASIS.

120. PRIOR TO ISSUE 27D, OPTIONS "XW" & "XX" WERE PART OF OPTION "Y".

121. PRIOR TO ISSUE 29B, OPTION "XZ" WAS A PART OF OPTION "XA".

122. PROVIDE OPTION "WA" WHEN OPTION "XA" IS PROVIDED.

123. FOR CONTROL OF SWITCH PAD IN CODE 8 TIE TRUNKS ON ALL CODE 8 TO CODE 8 CALLS AS WELL AS ALL CODE 8 TO CODE 9 CALLS AND CODE 9 TO CODE 8 CALLS, MARKER OPTIONS 19, 20, 21, WF, AND WK AND DIAL PULSE REGISTER CIRCUIT OPTIONS YQ AND XC MUST BE PROVIDED. FOR CODE 8 TRUNK PAD CONTROL ONLY ON CODE 8 TO CODE 8 CALLS, MARKER OPTIONS 19, 20, 21, AND WF, AND REGISTER OPTIONS YQ AND XD MUST BE PROVIDED.

124. WHEN A LINE IN LINE GROUP 20-29 IS USED AS A STATION LINE AND MESSAGE WAITING SERVICE IS PROVIDED ON THIS STATION LINE, THE INSTALLER SHALL REMOVE OPTION "YJ" AND ADD OPTION "YH" FOR THIS LINE. ON ISSUE 31D OPTION "YH" IS REINSTATED AS STANDARD.

125. WHEN THE MESSAGE REGISTER PULSE CIRCUIT IS TO BE ADDED TO A PBX AND THE MARKER IS EQUIPPED WITH APP FIG. 9 AND WS OPTIONS (PRIOR TO ISSUE 33) THEN OPTION XK MUST BE SPECIFIED INSTEAD OF OPTION WV, THE STATION MESSAGE REGISTER PULSE AND SURCHARGE CKT MUST HAVE OPTION T SPECIFIED INSTEAD OF OPTION S AND SD-65746-01 MUST HAVE OPTION ZF SPECIFIED INSTEAD OF OPTION ZG.

126. USE OF DIAL CONFERENCE CIRCUIT SD-65745-01 IS RATED (MD) AND THE CONFERENCE CIRCUIT IS RATED A & M. WHEN THIS CONFERENCE CIRCUIT IS ADDED TO AN EXISTING PBX, THE FOLLOWING OPTIONS ARE NEEDED: N, ZD, YG, WP, VC, VE. PRIOR TO ISSUE 37B, OPTION YG WAS RATED STANDARD FOR USE WHEN THIS DIAL CONFERENCE WAS PROVIDED.

127. DELAY DIAL SIGNALING MAY ONLY BE PROVIDED WITH SD-65718-02, ISSUE 5B OR LATER.

128. PRIOR TO ISS 37B, "VI" OPTION WAS PART OF "V" OPTION.

DRAWING ISSUE

36B ROZ PUS LDJ

37B ROZ PUS LDJ

HW

37

LINE, LINK AND MARKER CIRCUIT

SD-65741-01-DIB

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INFORMATION NOTES:

301.

	SWITCH	VERTICAL	TENS RELAY	UNITS RELAY	TRUNK GROUP RELAY	CLASS OF SERVICE	DIALED NUMBER (SEE NOTE B)	HUNTING GROUP (SEE NOTE A)	REMARKS
LINE 20	2	0	T2	U0			20		
LINE 21	2	1	T2	U1			21		
LINE 22	2	2	T2	U2			22		
LINE 23	2	3	T2	U3			23		
LINE 24	2	4	T2	U4			24		
LINE 25	2	5	T2	U5			25		
LINE 26	2	6	T2	U6			26		
LINE 27	2	7	T2	U7			27		
LINE 28	2	8	T2	U8			28		
LINE 29	2	9	T2	U9			29		
LINE 30	3	0	T3	U0			30		
LINE 31	3	1	T3	U1			31		
LINE 32	3	2	T3	U2			32		
LINE 33	3	3	T3	U3			33		
LINE 34	3	4	T3	U4			34		
LINE 35	3	5	T3	U5			35		
LINE 36	3	6	T3	U6			36		
LINE 37	3	7	T3	U7			37		
LINE 38	3	8	T3	U8			38		
LINE 39	3	9	T3	U9			39		
LINE 40	4	0	T4	U0			40		
LINE 41	4	1	T4	U1			41		
LINE 42	4	2	T4	U2			42		
LINE 43	4	3	T4	U3			43		
LINE 44	4	4	T4	U4			44		
LINE 45	4	5	T4	U5			45		
LINE 46	4	6	T4	U6			46		
LINE 47	4	7	T4	U7			47		
LINE 48	4	8	T4	U8			48		
LINE 49	4	9	T4	U9			49		
LINE 50	5	0	T5	U0			50		
LINE 51	5	1	T5	U1			51		
LINE 52	5	2	T5	U2			52		
LINE 53	5	3	T5	U3			53		
LINE 54	5	4	T5	U4			54		
LINE 55	5	5	T5	U5			55		
LINE 56	5	6	T5	U6			56		
LINE 57	5	7	T5	U7			57		
LINE 58	5	8	T5	U8			58		
LINE 59	5	9	T5	U9			59		
LINE 60	6	0	T6	U0			60		
LINE 61	6	1	T6	U1			61		
LINE 62	6	2	T6	U2			62		
LINE 63	6	3	T6	U3			63		
LINE 64	6	4	T6	U4			64		
LINE 65	6	5	T6	U5			65		
LINE 66	6	6	T6	U6			66		
LINE 67	6	7	T6	U7			67		
LINE 68	6	8	T6	U8			68		
LINE 69	6	9	T6	U9			69		
LINE 70	7	0	T7	U0			70		
LINE 71	7	1	T7	U1			71		
LINE 72	7	2	T7	U2			72		
LINE 73	7	3	T7	U3			73		
LINE 74	7	4	T7	U4			74		
LINE 75	7	5	T7	U5			75		
LINE 76	7	6	T7	U6			76		
LINE 77	7	7	T7	U7			77		
LINE 78	7	8	T7	U8			78		
LINE 79	7	9	T7	U9			79		

	SWITCH	VERTICAL	TENS RELAY	UNITS RELAY	TRUNK GROUP RELAY	CLASS OF SERVICE	DIALED NUMBER (SEE NOTE B)	HUNTING GROUP (SEE NOTE A)	REMARKS
ATT TRK 0	8	0		U0	TK0		00		INTERCEPT
ATT TRK 0	8	0	TR1	U0U5	TK0		05		ATT
ATT TRK 1	0	5		U1	TK0		01		INTERCEPT
ATT TRK 1	0	5	TR0	U5U6	TK0		06		ATT
ATT TRK 2	0	6		U2	TK0		02		INTERCEPT
ATT TRK 2	0	6	TR0	U6U7	TK0		07		ATT
MISC TRK 0	2	0	T2	U0	TK8		80		
MISC TRK 1	2	1	T2	U1	TK8		81		
MISC TRK 2	2	2	T2	U2	TK8		82		NOTE 314
MISC TRK 3	2	3	T2	U3	TK8		83		NOTE 314
MISC TRK 4	2	4	T2	U4	TK8		84		
MISC TRK 5	2	5	T2	U5	TK8		85		
MISC TRK 6	2	6	T2	U6	TK8		86		NOTE 314
MISC TRK 7	2	7	T2	U7	TK8		87		NOTE 314
MISC TRK 8	2	8	T2	U8	TK8		88		
MISC TRK 9	2	9	T2	U9	TK8		89		
REGISTER 0	0	8	R0		RG				WORK
REGISTER 0	0	9	R0		RG				MEMORY
REGISTER 1	1	8	R1		RG				WORK
REGISTER 1	1	9	R1		RG				MEMORY
JUNCTOR 0	1	0			JT				ORIG
JUNCTOR 0	1	1			JT				TERM
JUNCTOR 1	1	2			JT				ORIG
JUNCTOR 1	1	3			JT				TERM
JUNCTOR 2	1	4			JT				ORIG
JUNCTOR 2	1	5			JT				TERM
JUNCTOR 3	8	1			JT				ORIG
JUNCTOR 3	8	2			JT				TERM
JUNCTOR 4	8	3			JT				ORIG
JUNCTOR 4	8	4			JT				TERM
JUNCTOR 5	1	6			JT				ORIG
JUNCTOR 5	1	7			JT				TERM
CO TRK 0	0	0	TRM1	U9	TK9	COT	99		
CO TRK 1	0	1	TRM1	U8	TK9	COT	98		
CO TRK 2	0	2	TRM1	U7	TK9	COT	97		
CO OR RD T TRK 3	0	3	TRM1	U6	TK9	COT	96		NOTE 312
CO OR RD T TRK 4	0	4	TRM1	U5	TK9	COT	95		NOTE 312
CO TRK 5	8	5	TRM0	U4	TK9	COT	94		
CO TRK 6	8	6	TRM0	U3	TK9	COT	93		
CO TRK 7	8	7	TRM0	U2	TK9	COT	92		
CO OR RD T TRK 8	8	8	TRM0	U1	TK9	COT	91		NOTE 312
CO OR RD T TRK 9	8	9	TRM0	U0	TK9	COT	90		NOTE 312
BUSY TONE TRK	0	7		U0	BTC				

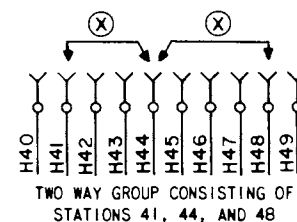
NOTE A: THE HUNTING GROUP COLUMN IS PROVIDED TO RECORD THE HUNTING GROUP ASSIGNMENTS AND THE HUNTING PATTERN WITHIN EACH GROUP. THE FOLLOWING ILLUSTRATES A SUGGESTED METHOD OF RECORDING THE HUNTING INFORMATION FOR SOME OF THE EXAMPLES USED IN NOTE 302.

	HUNTING GROUP
LINE 40	
LINE 41	
LINE 42	
LINE 43	
LINE 44	
LINE 45	
LINE 46	
LINE 47	
LINE 48	
LINE 49	

B. DIALED NUMBERS FOR TRUNKS ARE SHOWN FOR MAINTENANCE INFORMATION. THE ATT TRUNKS ARE REACHED BY DIALING ONLY THE TENS DIGIT ZERO. WHERE RD T TRUNKS ARE NOT PROVIDED AND ONLY ONE GROUP OF CENTRAL OFFICE TRUNKS ARE PROVIDED, THE CENTRAL OFFICE TRUNKS ARE REACHED BY DIALING ONLY THE TENS DIGIT NINE. LINE CIRCUITS IN THE 20-29 GROUP WHICH ARE ASSIGNED TO THE 3A CODE CALL CKT (CALLING END), LOUD SPEAKER PAGING TRUNK, DIAL CONFERENCE CKT, RECORDED TELEPHONE DICTATION TRUNK, OR A TWO WAY TIE TRUNK ARE REACHED BY DIALING THE CORRESPONDING 80-89 NUMBER. LINE CIRCUITS IN THIS GROUP WHICH ARE ASSIGNED TO THE 3A CODE CALL CIRCUIT (ANSWERING END) OR STATIONS ARE REACHED BY DIALING THE 20-29 NUMBER.

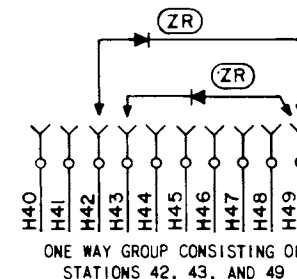
302. TWO WAY, ONE WAY, OR COMBINATIONS OF TWO WAY AND ONE WAY HUNTING GROUPS MAY BE FORMED USING ANY NUMBER OF STATIONS WITHIN A TENS GROUP.

(a) A TWO WAY HUNTING GROUP MAY BE FORMED BY PROVIDING X OPTION BETWEEN THE H TERMINALS OF THE STATIONS INCLUDED IN THE GROUP, FOR EXAMPLE:



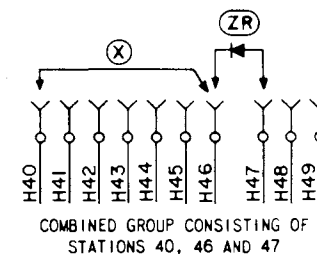
IF EITHER STATION 41, 44, OR 48 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL INDISCRIMINATELY TO WHICHEVER OF THE OTHER TWO STATIONS IS IDLE.

(b) A ONE WAY HUNTING GROUP MAY BE FORMED BY PROVIDING ZR OPTION BETWEEN THE H TERMINALS OF THE STATIONS INCLUDED IN THE GROUP WITH THE ARROW ON EACH DIODE POINTING IN THE HUNTING DIRECTION DESIRED, FOR EXAMPLE:



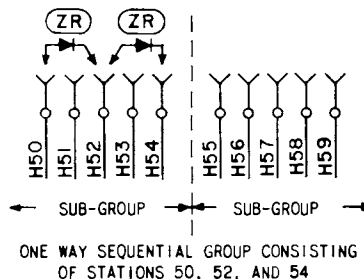
IF STATION 42 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL INDISCRIMINATELY TO EITHER STATION 43 OR 49, WHICHEVER IS IDLE. IF STATION 49 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL TO STATION 43 IF IDLE. IF STATION 43 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL TO BUSY TONE TRUNK.

(c) A COMBINED HUNTING GROUP MAY BE FORMED BY PROVIDING X AND ZR OPTIONS BETWEEN THE H TERMINALS OF THE STATIONS INCLUDED IN THE GROUP IN ANY COMBINATION REQUIRED TO PRODUCE THE HUNTING PATTERN DESIRED, FOR EXAMPLE:



IF STATION 40 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL TO STATION 46 IF IDLE. IF STATION 46 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL TO STATION 40 IF IDLE. IF STATION 47 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL INDISCRIMINATELY TO EITHER STATION 40 OR 46, WHICHEVER IS IDLE.

(d) A ONE WAY SEQUENTIAL HUNTING PATTERN MAY BE PROVIDED IF ALL OF THE STATIONS TO BE INCLUDED IN THE GROUP ARE IN THE SAME SUB-GROUP OF FIVE STATIONS AND THE HUNTING SEQUENCE CONFORMS WITH THE NUMERICAL SEQUENCE OF THE STATION NUMBERS, FOR EXAMPLE:



IF STATION 50 IS DIALED AND FOUND BUSY, MARKER WILL ALWAYS ATTEMPT TO COMPLETE CALL TO STATION 52 FIRST AND ONLY IF STATION 52 IS ALSO BUSY WILL IT TRY TO CONNECT TO STATION 54. IF STATION 52 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL TO STATION 54 IF IDLE. IF STATION 54 IS DIALED AND FOUND BUSY, MARKER WILL COMPLETE CALL TO BUSY TONE TRUNK.

PBX SYSTEMS
NO. 756A
LINE, LINK, AND MARKER CIRCUIT

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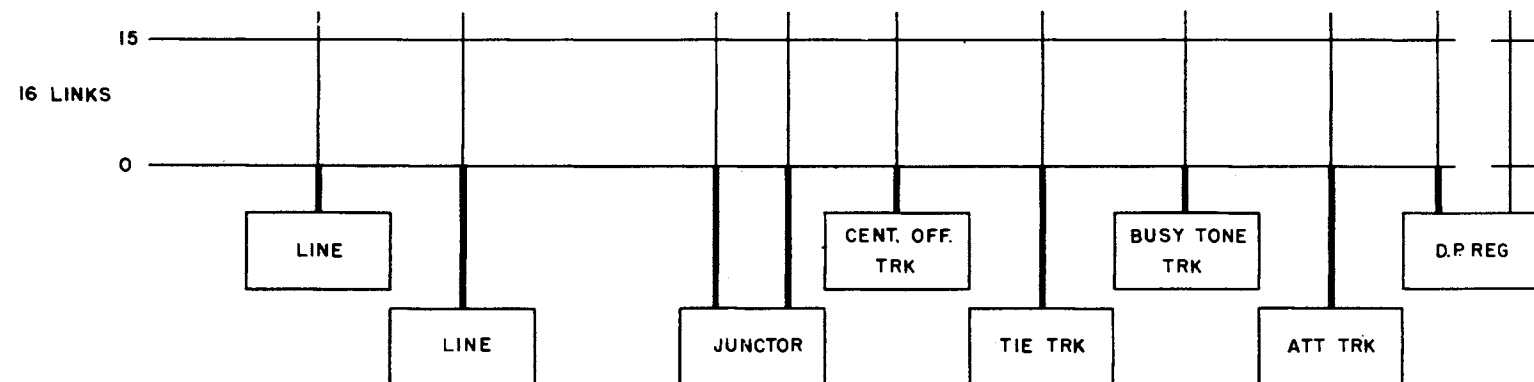
12B

16B

16

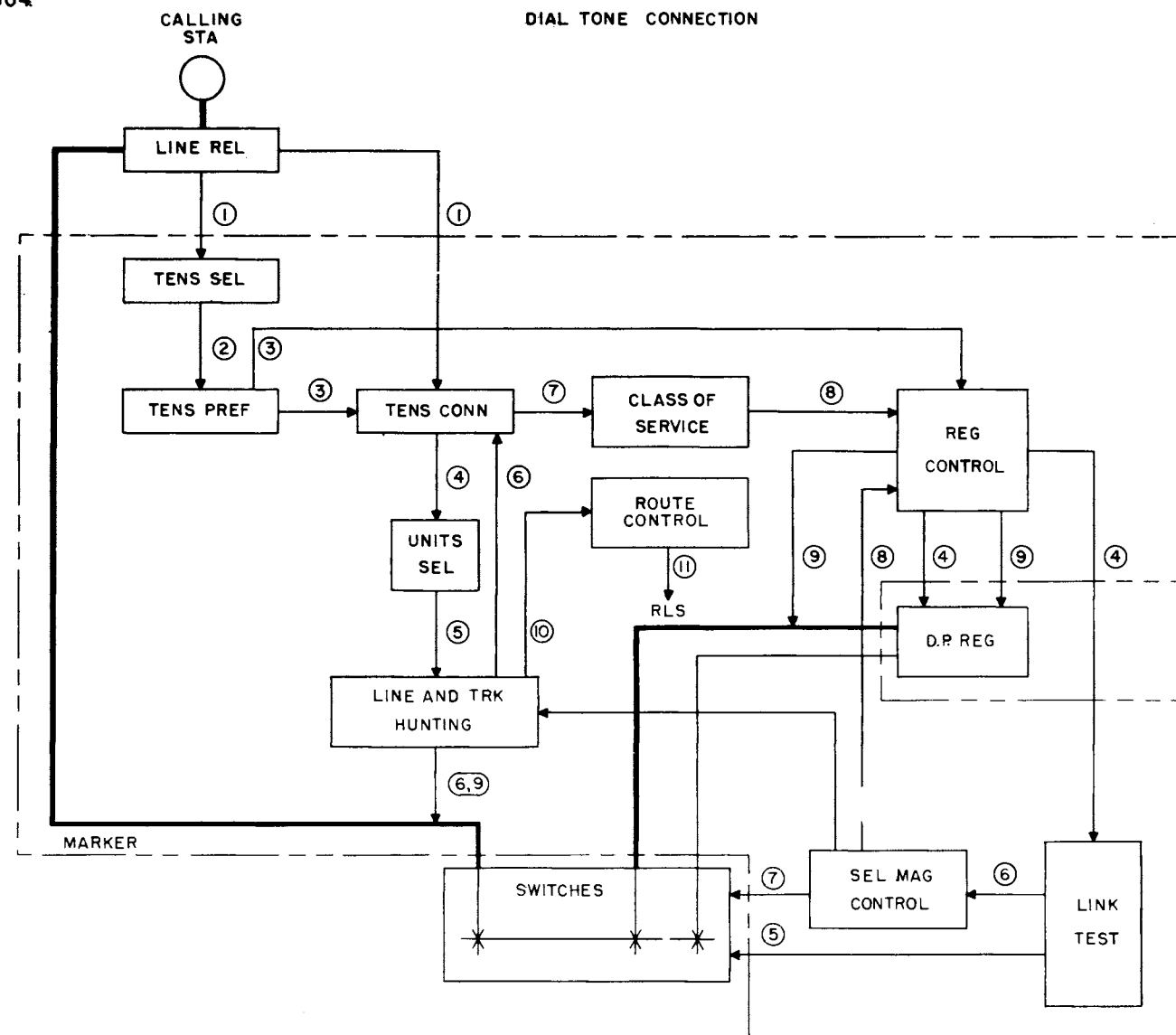
303

SWITCHING PLAN 70 OR 90 VERTICALS



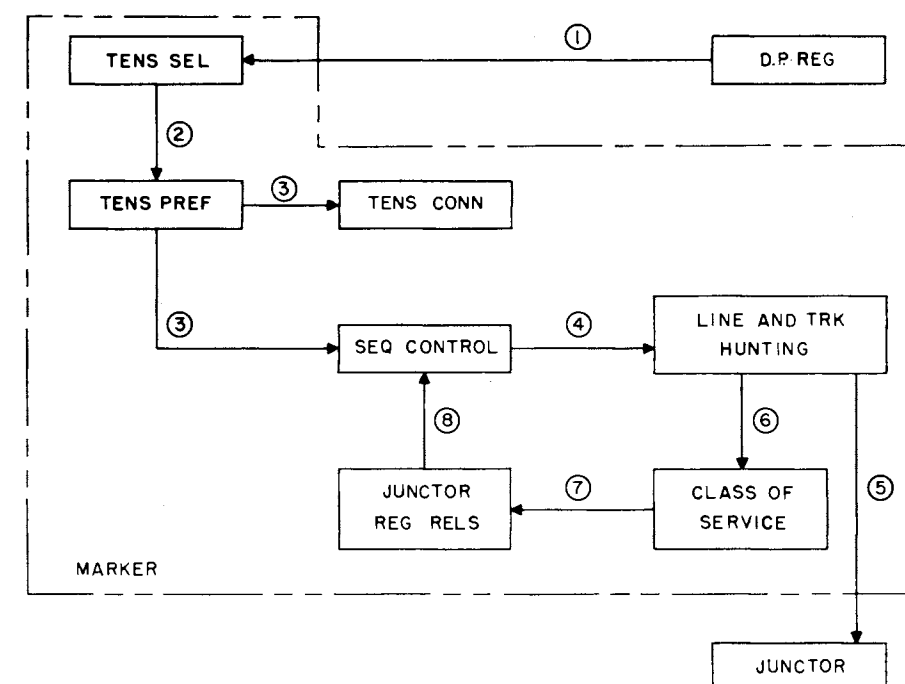
304

DIAL TONE CONNECTION



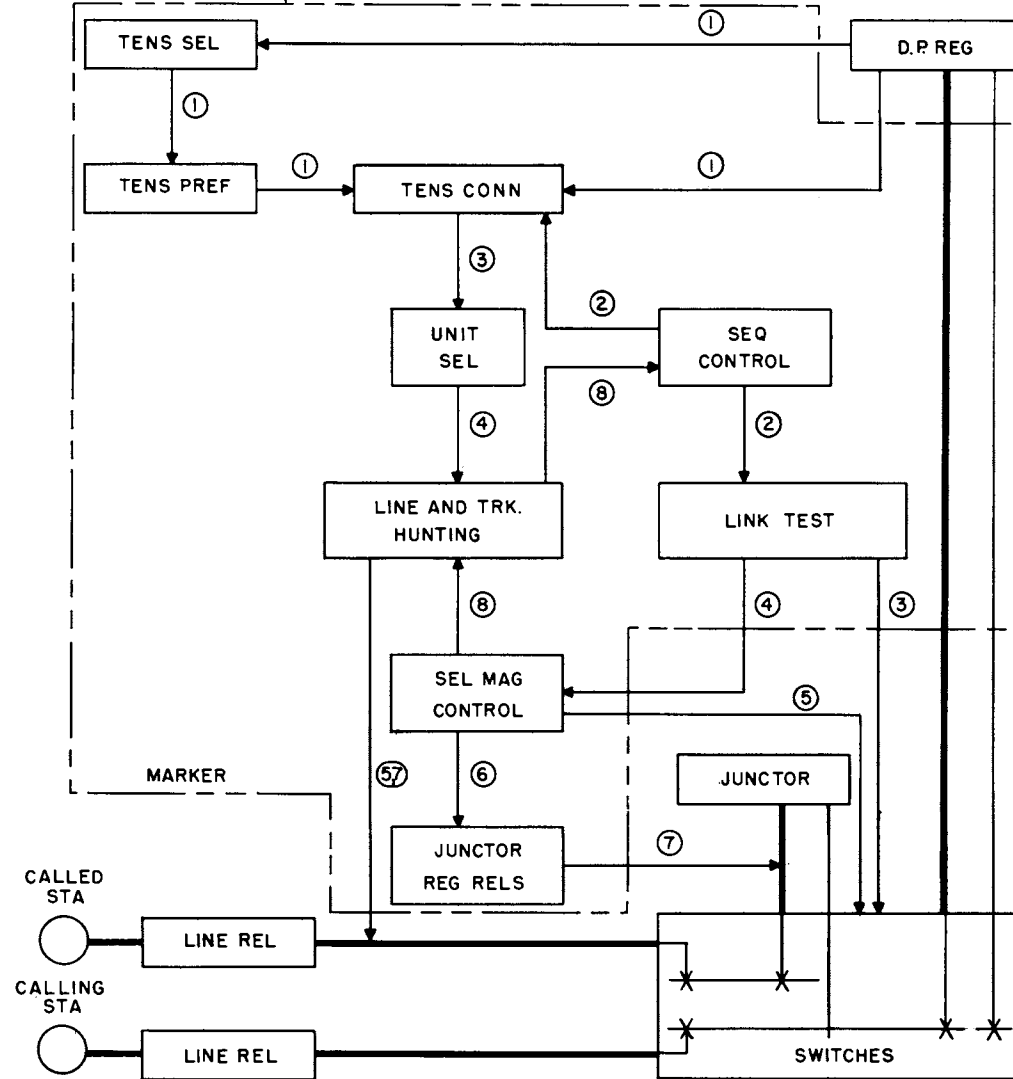
305.

STATION LINE TO STATION LINE JUNCTOR SELECTION



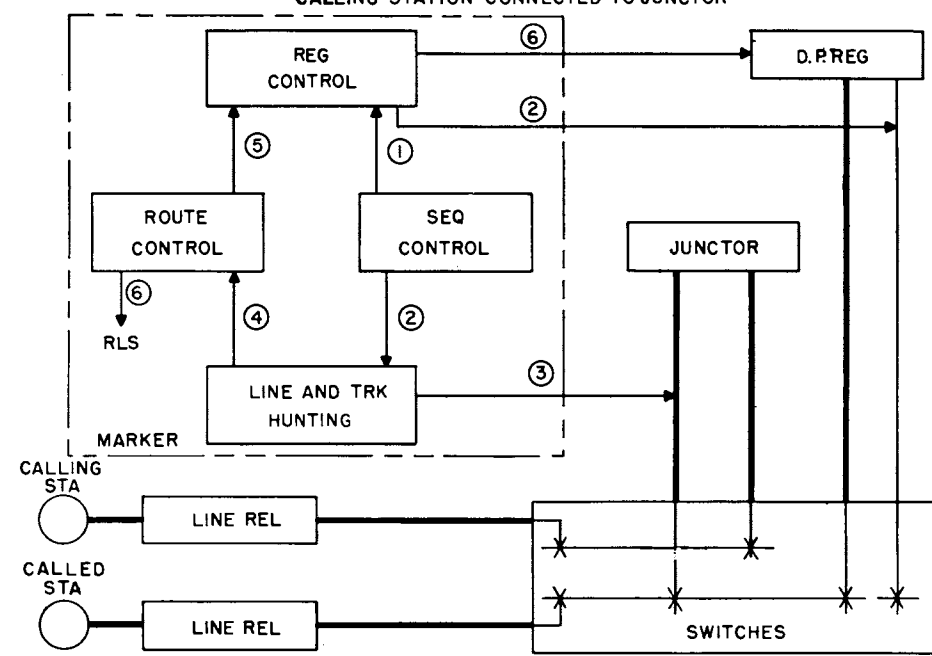
306.

STATION LINE TO STATION LINE
CALLED STATION CONNECTED TO JUNCTOR



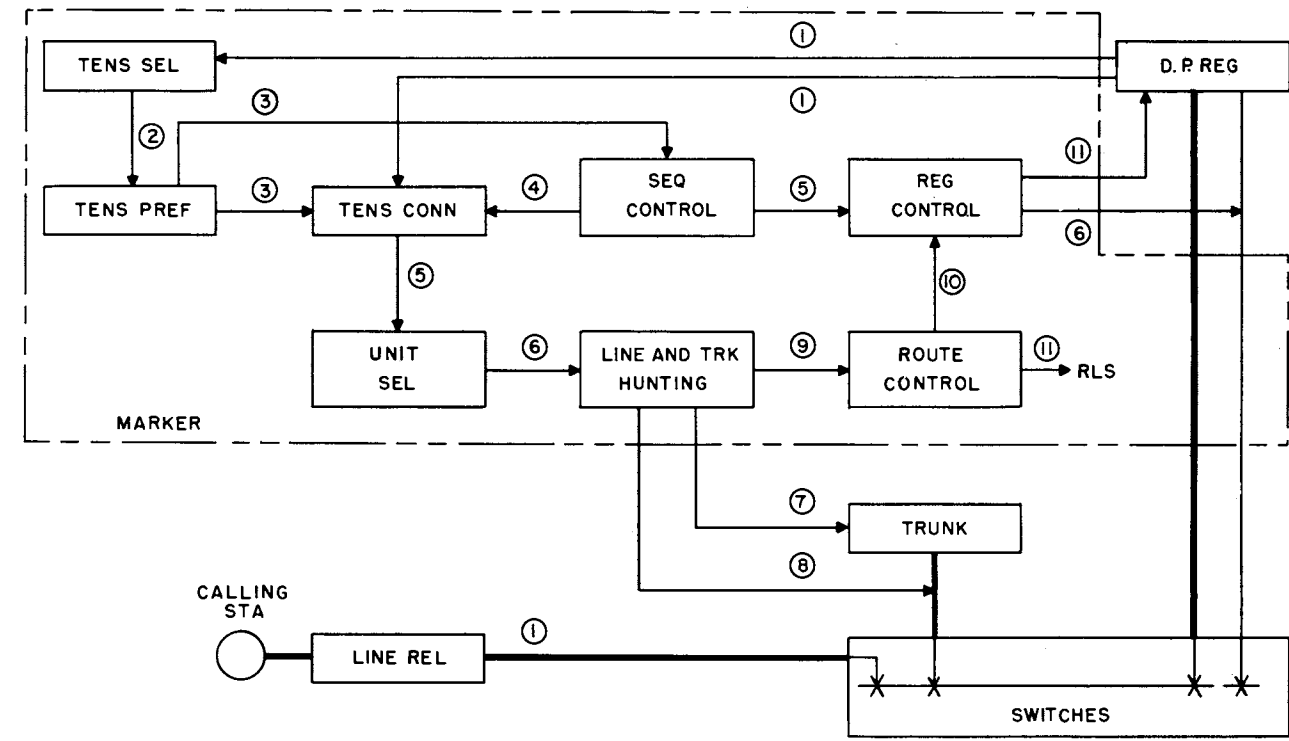
307.

STATION LINE TO STATION LINE
CALLING STATION CONNECTED TO JUNCTOR



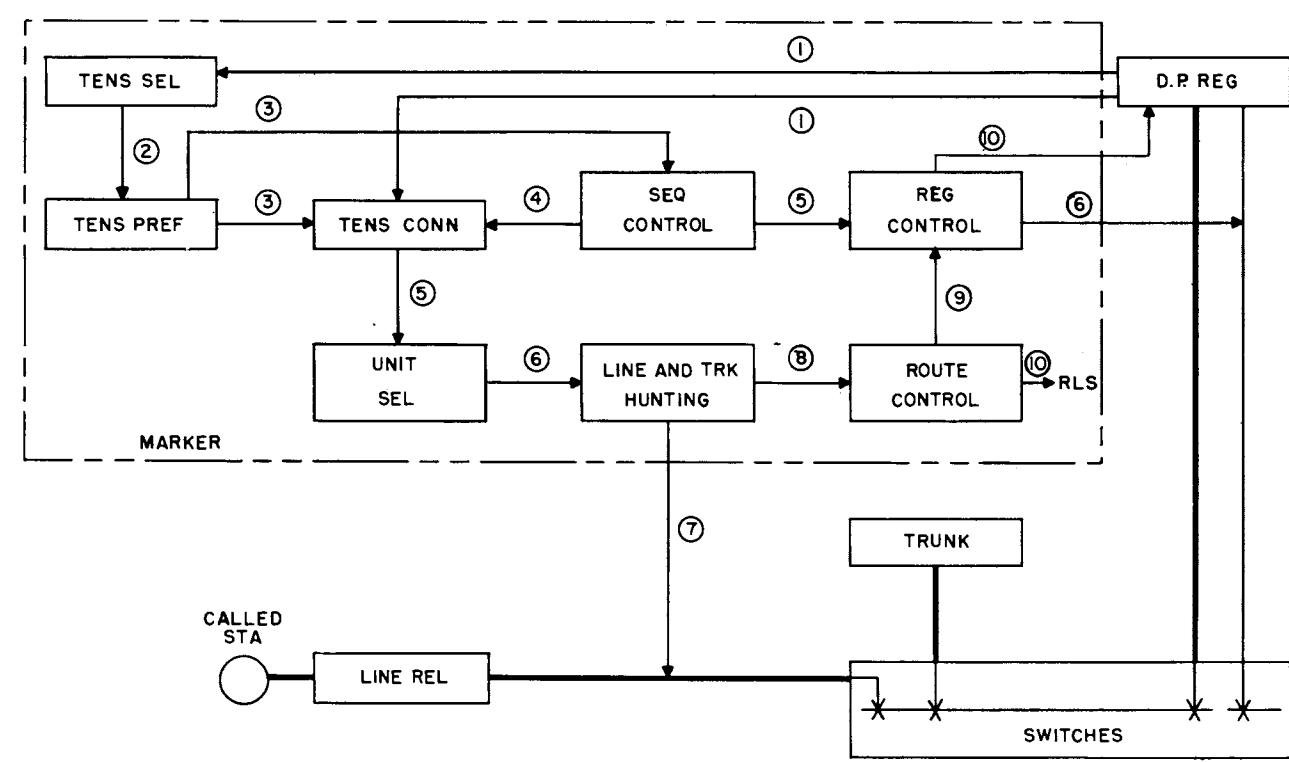
308.

STATION LINE TO TRUNK



309.

TRUNK TO STATION LINE



SD-6574I-OI-D4

INFORMATION NOTES: (CONT)

310. THE IT-- LEADS ARE ASSOCIATED WITH THE CENTRAL OFFICE & RINGDOWN TIE TRUNK CIRCUITS IN DIRECT ORDER SUCH THAT IT90 CONNECTS TO TRUNK 0, IT91 TO TRUNK 1, ETC. HOWEVER, THE IT-- LEADS ARE ASSOCIATED WITH THE(S-) RELAYS THROUGH THE(TK9) RELAY IN REVERSE ORDER SUCH THAT IT99 CONNECTS TO(S0), IT98 TO(S1), ETC. THIS IS DONE TO INSURE THAT THE FIRST CHOICE TRUNKS FROM THE PBX TO THE CENTRAL OFFICE ARE NOT ALSO THE FIRST CHOICE TRUNKS FROM THE CENTRAL OFFICE TO THE PBX.
311. WHEN LINE CIRCUITS 20-29 ARE ASSOCIATED WITH TWO WAY TIE TRUNKS, TERMINAL PUNCHINGS CS80-89 ARE USED IN MAKING CLASS OF SERVICE CROSS CONNECTIONS. THIS IS PROVIDED MERELY AS A CROSS CONNECTION WIRING CONVENIENCE. CIRCUIT WISE, TERMINAL PUNCHINGS CS80-89 ARE WIRED DIRECTLY TO TERMINAL PUNCHINGS CS20-29.
312. WHEN PLUG-IN CENTRAL OFFICE OR RINGDOWN TIE TRUNKS ARE NOT PROVIDED, IN CENTRAL OFFICE TRUNK POSITIONS 3,4,8, OR 9, CONNECT GROUND TO THE IT93, IT94, IT98, OR IT99 LEADS CORRESPONDING TO THE UNEQUIPPED POSITIONS.
313. *R* OPTION IS SPECIFIED FOR LINES 30, 31 AND 32 TO PROVIDE FOR AUTOMATICALLY TRANSFERRING THESE STATION LINES TO TWO WAY CENTRAL OFFICE TRUNKS 0, 1 AND 2 RESPECTIVELY WHEN A POWER FAILURE OCCURS. IF THE TWO WAY CENTRAL OFFICE TRUNKS ARE NOT ARRANGED FOR FLEXIBILITY IN SETTING UP NIGHT CONNECTIONS (I.E., FURNISHED PER SD-65752-01, ISSUE 68 OR PRIOR ISSUES), *R* OPTION SHOULD ALSO BE PROVIDED IN LINE 33 AND STATION LINES 30, 31, 32 AND 33 WILL TRANSFER TO TRUNKS 0, 1, 2 AND 5 RESPECTIVELY WHEN EITHER A POWER FAILURE OCCURS OR WHEN THE PBX ATTENDANT OPERATES THE (NIGHT) KEY IN THE CORDLESS POSITION CIRCUIT.
314. WHEN A DIAL CONFERENCE CIRCUIT IS PROVIDED AND ASSIGNED TO TRUNK TERMINALS 80-84, *YG* OPTION SHOULD BE FURNISHED BETWEEN TERMINALS H82 AND H83. IF THE CIRCUIT IS ASSIGNED TO TRUNK TERMINALS 85-89, *G* OPTION SHOULD BE FURNISHED BETWEEN TERMINALS H87 AND H88. (MANUFACTURED DISCONTINUED)
315. *YTT* OPTION IS ASSOCIATED WITH CENTRAL OFFICE TRUNK 0 AND ATTENDANT TRUNK 2 WHEN BUSY VERIFICATION IS PROVIDED.
316. THE STATION DIAL TRANSFER WITH ADD-ON CONFERENCE FEATURE REQUIRES OPTIONS *YX* AND *YV* REPLACING OPTION *YW*.
317. WHEN A DIAL CONFERENCE TRUNK CIRCUIT-STATION CONTROLLED IS PROVIDED, ANY SIX TIE TRUNK TERMINALS MAY BE USED AS PORTS OF THE CONFERENCE CIRCUIT. ASSIGNMENT OF A CONSECUTIVE SEQUENCE OF TRUNK TERMINALS IS NOT A REQUIREMENT. THE TRUNK TERMINAL ASSIGNED AS ENTRY PORT TO THE CONFERENCE CONTROL CIRCUIT SHOULD BE GIVEN A RINGDOWN TIE TRUNK (RTT) CLASS OF SERVICE AND THE OTHER FIVE TRUNK TERMINALS SHOULD BE GIVEN A CENTRAL OFFICE TRUNK (COT) CLASS OF SERVICE BY SUITABLE STRAPPING AT THE PBX TERMINAL STRIPS. TRUNK TERMINAL ASSIGNED (COT) CLASS ARE ON A "SERVICE DENIED" BASIS WITH THE EXCEPTION THAT THE TRUNK TERMINAL ASSIGNED TO CONFERENCE PORT 5 MAY BE USED FOR A DIAL BACK CONNECTION BY THE ATTENDANT FOR CONNECTION OF A CENTRAL OFFICE TRUNK.
318. WHEN A DIAL CONFERENCE TRUNK CIRCUIT-ATTENDANT CONTROLLED IS PROVIDED, ANY FIVE TIE TRUNK TERMINALS MAY BE USED AS PORTS OF THE CONFERENCE CIRCUIT. ASSIGNMENT OF A CONSECUTIVE SEQUENCE OF TRUNK TERMINALS IS NOT A REQUIREMENT. THE FIVE TRUNK TERMINALS SHOULD BE GIVEN A CENTRAL OFFICE TRUNK (COT) CLASS OF SERVICE BY SUITABLE STRAPPING AT THE PBX TERMINAL STRIPS AND ARE ON A "SERVICE DENIED" BASIS WITH THE EXCEPTION THAT THE TRUNK TERMINAL ASSIGNED TO CONFERENCE PORT 5 MAY BE USED FOR A DIAL BACK CONNECTION BY THE ATTENDANT FOR CONNECTION OF A CENTRAL OFFICE TRUNK.
319. WHEN AN INWARD RESTRICTION CIRCUIT IS PROVIDED, OPTION XP MUST BE PROVIDED REPLACING OPTION XO, OPTION XQ ALSO MUST BE PROVIDED. IF THE BUSY VERIFICATION CIRCUIT IS ALSO PROVIDED OPTION XR MUST BE PROVIDED REPLACING OPTION XQ. TO RESTRICT A STATION LINE SEE (SD-5E003-01 CROSS CONN. INFORMATION NOTE 401).
320. WHEN THE LONG DISTANCE SERVICE FEATURE USES CENTRAL OFFICE TRUNK CIRCUIT NUMBER 6,7,8 OR 9, CONNECT THE "H" PUNCHINGS FOR THE TRUNKS USED TO PUNCHING H99 TO PLACE THE TRUNKS IN THE SAME HUNTING GROUP.
321. WHEN OPTION W1 IS REQUIRED, INSTALLER SHALL CUT STRAP BETWEEN 3 OF THE LINE HOLD MAGNET AND TERMINAL 2 LEVEL 1 OF THE CROSS-BAR SWITCH FOR EACH ASSOCIATED STATION LINE 33 THROUGH 79. STATION LINES 20 THROUGH 32 SHALL BE ENGINEERED LOCALLY.

322. WHEN OFF-PREMISE STATIONS USING REPEATERS ARE SPECIFIED, THESE STATIONS SHOULD BE CONNECTED TO FS26 TO OBTAIN A BALANCED LOOP.

EQUIPMENT NOTE:

201. BECAUSE OF THE LIMITED AVAILABILITY OF MOUNTING SPACE, WHEN PAD CONTROL IS PROVIDED FOR CODE 8 TIE TRUNKS IT MAY BE NECESSARY TO MOUNT APP FIGS 19, 20 & 21 AND THE TRUNK EXTERNAL TO THE PBX CABINET. CONSEQUENTLY, THE CONTROL LEADS (OPTION WF) FOR THE PAD CONTROL CIRCUIT HAVE BEEN TERMINATED IN THE CROWN OF THE PBX.
202. WHEN OPTION VD IS REQUIRED, INSTALLER SHALL
- REMOVE
 - SURFACE WIRE LEAD ON 2B OF RELAY OT 20-29 COMING FROM IL OF RELAY L20-29
 - LOCAL CABLE LEAD ON 3B OF RELAY QT 20-29 COMING FROM I OF LHM 20-29
 - RECONNECT
 - SURFACE WIRE LEAD TO 3B OF RELAY OT 20-29
 - LOCAL CABLE LEAD TO 2B OF RELAY OT 20-29
203. WHEN OPTION VF IS REQUIRED INSTALLER SHALL REMOVE AND INSULATE SURFACE WIRE LEAD ON 1M OF RELAY OT 20-29 AND ADD A LEAD BETWEEN 5M AND 1M OF RELAY OT 20-29.

DRAWING	ISSUE	PO.B.
12B	RO	
16B	W/H	
21B	W/H	HO
23D	W/H	HO
24D	W/H	HO
25D	W/H	HW
29B	W/H	
30D	W/H	
31D	W/H	
37B	W/H	

37

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-D5

BELL TELEPHONE LABORATORIES

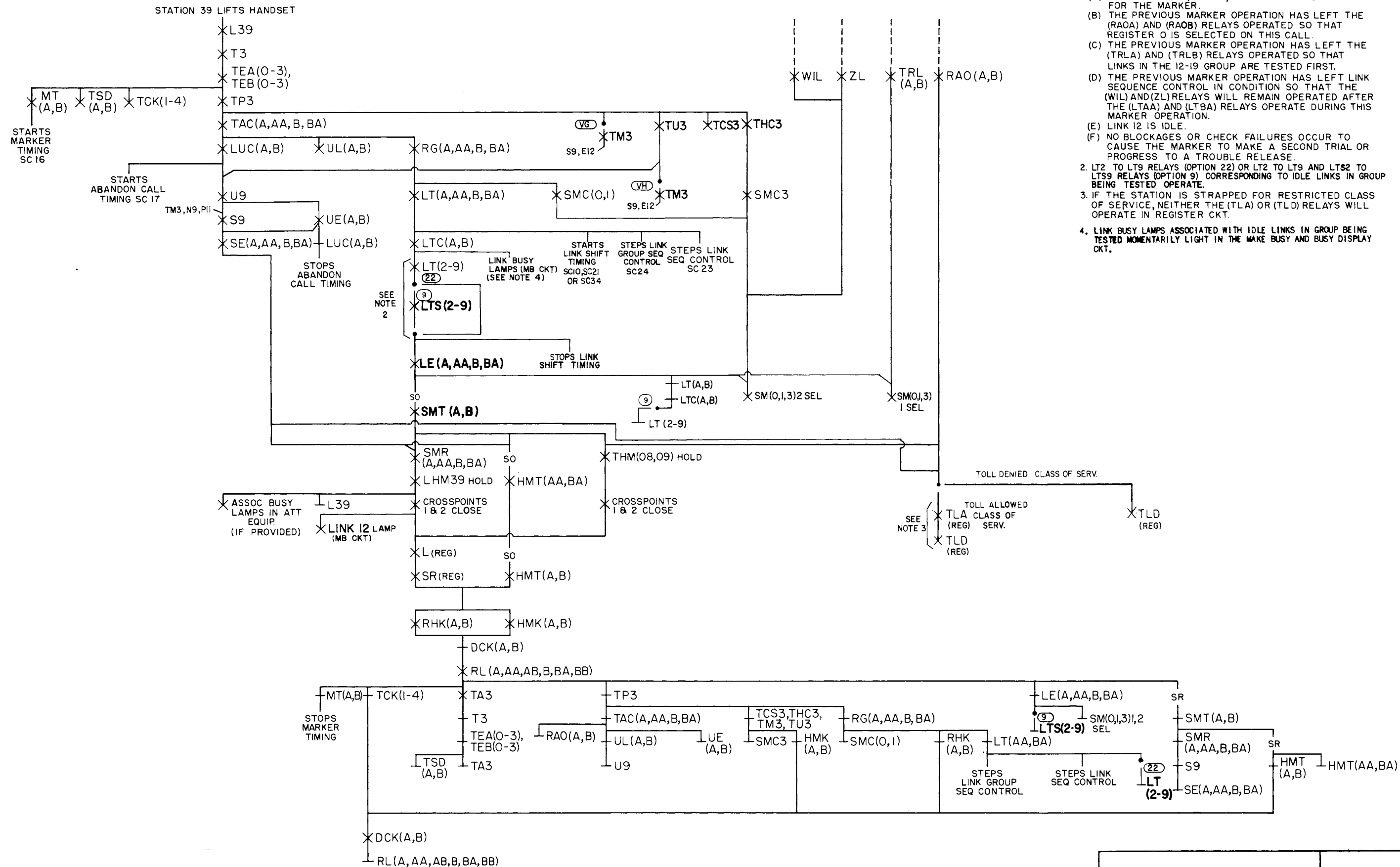
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SC I

STATION DIAL TONE CONNECTION
SEE NOTE 1

- SHEET NOTES:
- SC I ASSUMES THE FOLLOWING:
 - NO OTHER LINE, TRUNK, OR REGISTER IS BIDDING FOR THE MARKER.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE (RAOA) AND (RAOB) RELAYS OPERATED SO THAT REGISTER 0 IS SELECTED ON THIS CALL.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE (TRLA) AND (TRLB) RELAYS OPERATED SO THAT LINKS IN THE 12-19 GROUP ARE TESTED FIRST.
 - THE PREVIOUS MARKER OPERATION HAS LEFT LINK SEQUENCE CONTROL IN CONDITION SO THAT THE (WIL) AND (ZL) RELAYS WILL REMAIN OPERATED AFTER THE (LTAA) AND (LTBA) RELAYS OPERATE DURING THIS MARKER OPERATION.
 - LINK 12 IS IDLE.
 - NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
 - LT2 TO LT9 RELAYS (OPTION 22) OR LT2 TO LT9 AND LTS2 TO LTS9 RELAYS (OPTION 9) CORRESPONDING TO IDLE LINKS IN GROUP BEING TESTED OPERATE.
 - IF THE STATION IS STRAPPED FOR RESTRICTED CLASS OF SERVICE, NEITHER THE (TLA) OR (TLD) RELAYS WILL OPERATE IN REGISTER CKT.
 - LINK BUSY LAMPS ASSOCIATED WITH IDLE LINKS IN GROUP BEING TESTED MOMENTARILY LIGHT IN THE MAKE BUSY AND BUSY DISPLAY CKT.



LINE, LINK, AND MARKER CIRCUIT SD-65741-01-EI

BELL TELEPHONE LABORATORIES
INCORPORATED

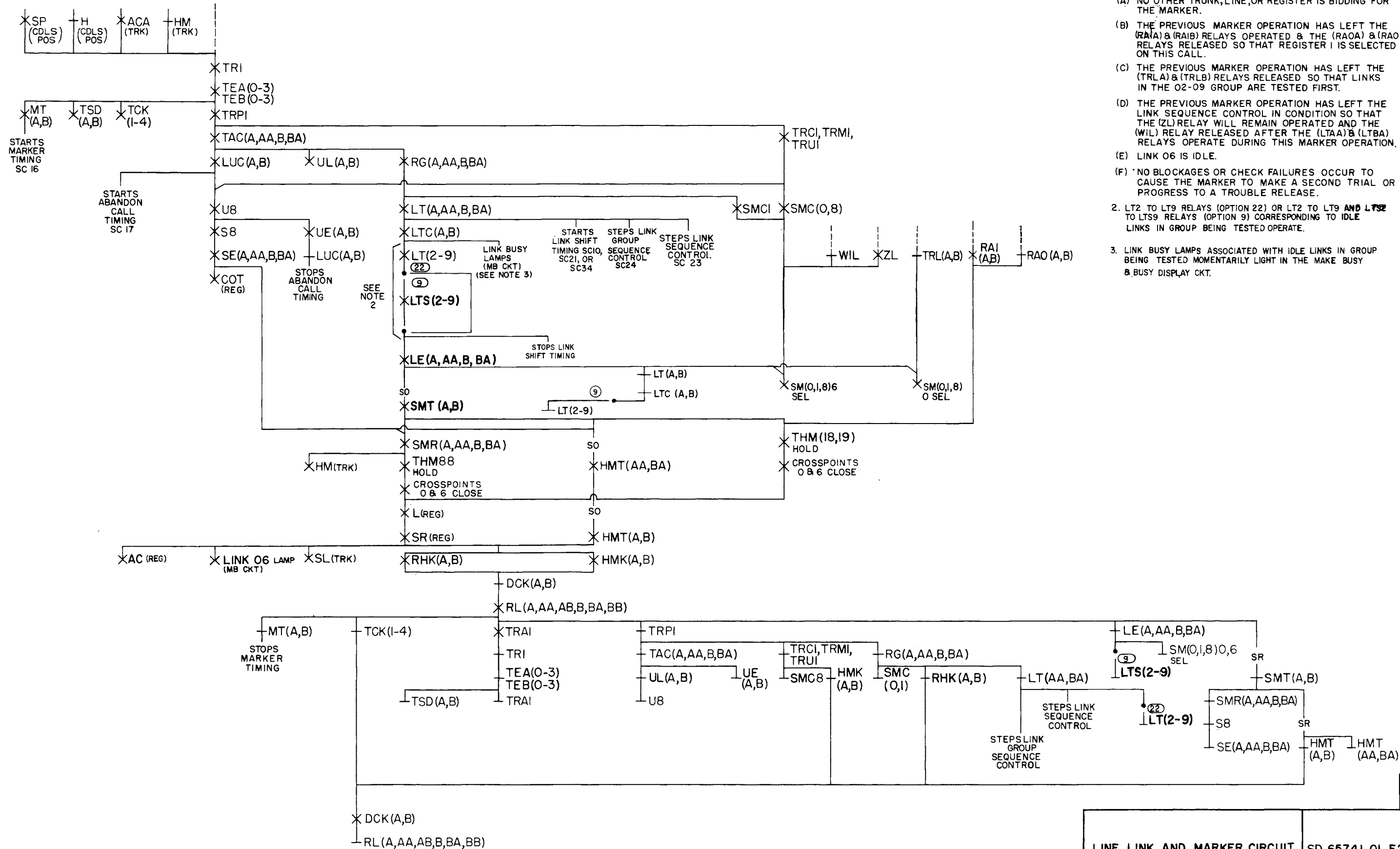
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JD-65741-01-EI

SC 2
CENTRAL OFFICE TRUNK OR RINGDOWN
TIE TRUNK DIAL TONE CONNECTION
SEE NOTE 1

ATTENDANT STEERS INWARD
FOR DIAL TONE CONNECTION
OVER CENTRAL OFFICE OR
RINGDOWN TIE TRUNK 8



SHEET NOTES:

1. SC 2 ASSUMES THE FOLLOWING:
 - (A) NO OTHER TRUNK, LINE, OR REGISTER IS BIDDING FOR THE MARKER.
 - (B) THE PREVIOUS MARKER OPERATION HAS LEFT THE (RAIA) & (RAIB) RELAYS OPERATED & THE (RAOA) & (RAOB) RELAYS RELEASED SO THAT REGISTER 1 IS SELECTED ON THIS CALL.
 - (C) THE PREVIOUS MARKER OPERATION HAS LEFT THE (TRLA) & (TRLB) RELAYS RELEASED SO THAT LINKS IN THE 02-09 GROUP ARE TESTED FIRST.
 - (D) THE PREVIOUS MARKER OPERATION HAS LEFT THE LINK SEQUENCE CONTROL IN CONDITION SO THAT THE (ZL) RELAY WILL REMAIN OPERATED AND THE (WIL) RELAY RELEASED AFTER THE (LTAA) & (LTBA) RELAYS OPERATE DURING THIS MARKER OPERATION.
 - (E) LINK 06 IS IDLE.
 - (F) NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
2. LT2 TO LT9 RELAYS (OPTION 22) OR LT2 TO LT9 AND LT32 TO LT39 RELAYS (OPTION 9) CORRESPONDING TO IDLE LINKS IN GROUP BEING TESTED OPERATE.
3. LINK BUSH LAMPS ASSOCIATED WITH IDLE LINKS IN GROUP BEING TESTED MOMENTARILY LIGHT IN THE MAKE BUSY & BUSY DISPLAY CKT.

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-E2

BELL TELEPHONE LABORATORIES
INCORPORATED

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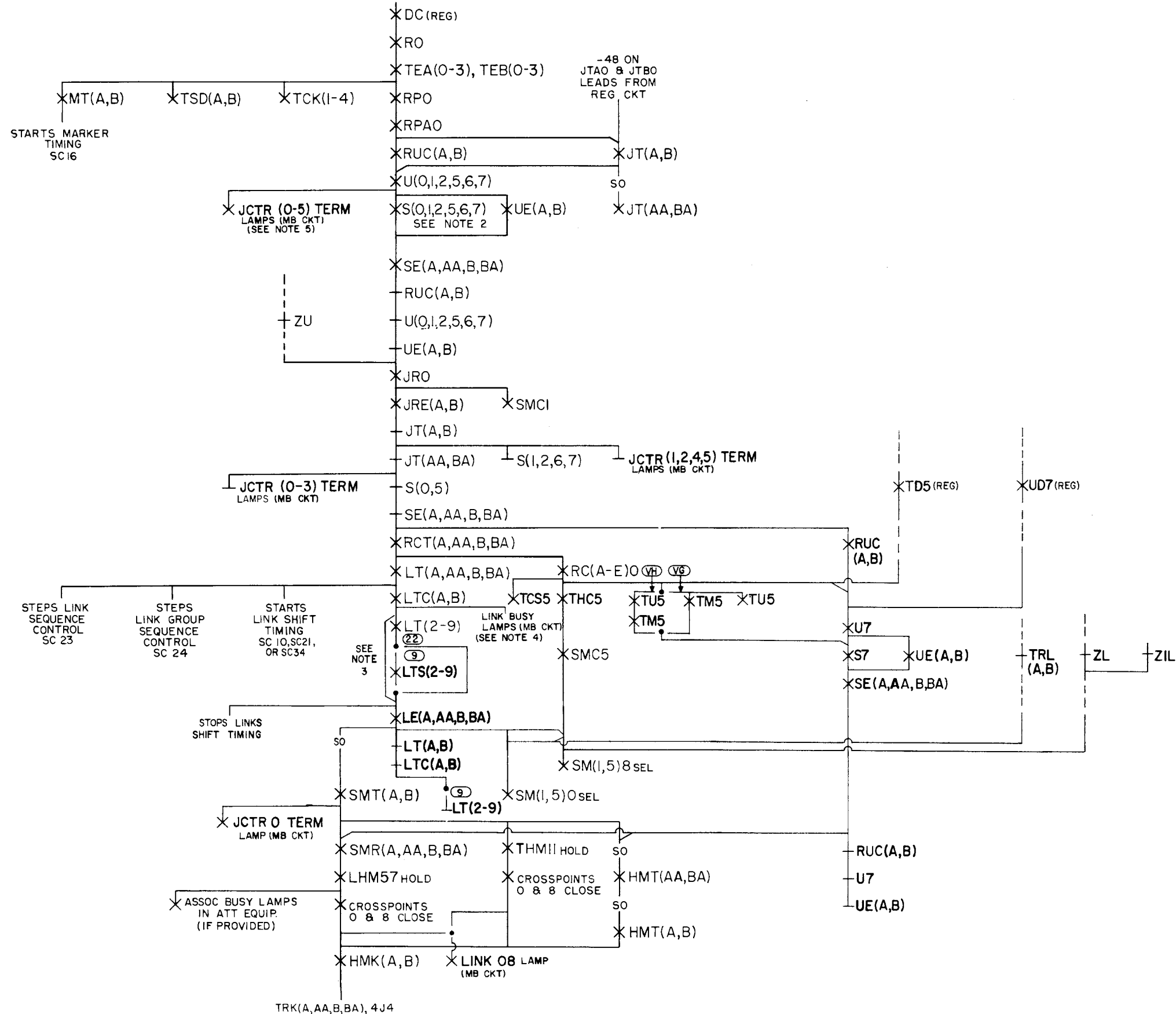
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PART OF SC 3

STATION OR CODE 8 TIE TRUNK TO STATION CONNECTION

SEE NOTE 1

TRUNK 89 OR STATION 39 COMPLETES DIALING 57
INTO REGISTER 0



SHEET NOTES:

- SC 3 ASSUMES THE FOLLOWING:
 - NO OTHER REGISTER, LINE, OR TRUNK IS BIDDING FOR THE MARKER.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE (TRLA) AND (TRLB) RELAYS RELEASED SO THAT LINKS IN 02-09 GROUP ARE TESTED FIRST.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE LINK SEQUENCE CONTROL IN CONDITION SO THAT THE (ZL) AND (ZIL) RELAYS WILL BE RELEASED AFTER THE (LTAA) AND (LTBA) RELAYS OPERATE DURING THIS MARKER OPERATION.
 - LINK 08 IS IDLE.
 - STATION 57 IS IDLE.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE UNITS SEQUENCE ALLOTTER IN CONDITION SO THAT THE (ZU) RELAY IS RELEASED DURING JUNCTOR SELECTION DURING THIS MARKER OPERATION.
 - JUNCTOR 0 IS IDLE.
 - LINK 12 WAS USED FOR THE STATION 39 TO REGISTER 0 DIAL TONE CONNECTION.
 - NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
- (S0) TO (S2) AND (S5) TO (S7) RELAYS CORRESPONDING TO IDLE JUNCTORS WILL OPERATE.
- LT2 TO LT9 RELAYS (OPTION 22) OR LTS2 TO LTS9 AND LT2 TO LT9 RELAYS (OPTION 9) CORRESPONDING TO IDLE LINKS IN GROUP BEING TESTED OPERATE.
- LINK BUSY LAMPS ASSOCIATED WITH IDLE LINKS IN GROUP BEING TESTED MOMENTARILY LIGHT IN THE MAKE BUSY AND BUSY DISPLAY CKT.
- JCTR TERM BUSY LAMPS ASSOCIATED WITH IDLE JUNCTORS MOMENTARILY LIGHT IN THE MAKE BUSY AND BUSY DISPLAY CIRCUIT.

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-E3

BELL TELEPHONE LABORATORIES
INCORPORATED

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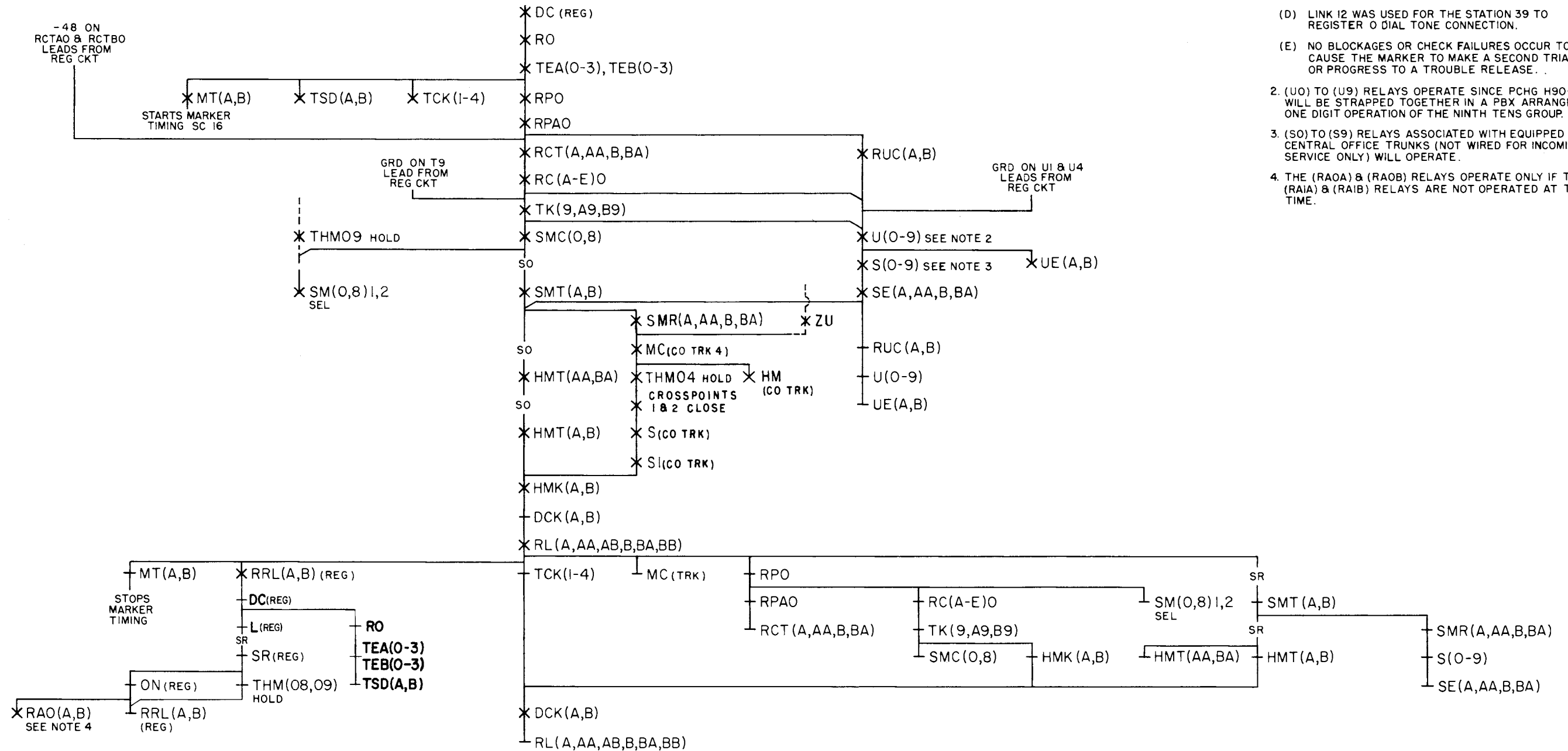
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SD-65741-01-E3

SC 4

STATION TO CENTRAL OFFICE
TRUNK CONNECTION
(ONE DIGIT OPERATION)
SEE NOTE 1

STATION 39 COMPLETES DIALING 9
INTO REGISTER 0



SHEET NOTES:

1. SC 4 ASSUMES THE FOLLOWING:

- NO OTHER REGISTER, LINE, OR TRUNK IS BIDDING FOR THE MARKER.
- THE PREVIOUS MARKER OPERATION HAS LEFT THE UNITS SEQUENCE CONTROL IN CONDITION SO THAT THE (ZU) RELAY IS OPERATED DURING THIS MARKER OPERATION.
- CENTRAL OFFICE TRUNK 4 IS IDLE.
- LINK 12 WAS USED FOR THE STATION 39 TO REGISTER 0 DIAL TONE CONNECTION.
- NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.

2. (UO) TO (U9) RELAYS OPERATE SINCE PCHG H90-H99 WILL BE STRAPPED TOGETHER IN A PBX ARRANGED FOR ONE DIGIT OPERATION OF THE NINTH TENS GROUP.

3. (SO) TO (S9) RELAYS ASSOCIATED WITH EQUIPPED IDLE CENTRAL OFFICE TRUNKS (NOT WIRED FOR INCOMING SERVICE ONLY) WILL OPERATE.

4. THE (RAOA) & (RAOB) RELAYS OPERATE ONLY IF THE (RAIA) & (RAIB) RELAYS ARE NOT OPERATED AT THE TIME.

DRAWING
ISSUE
12B L.M.C. P.O.B.
21B L.M.C. P.O.B.
33D L.M.C. P.O.B.

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LINE, LINK, AND MARKER CIRCUIT (2)

SD-65741-01-E5

BELL TELEPHONE LABORATORIES
INCORPORATED

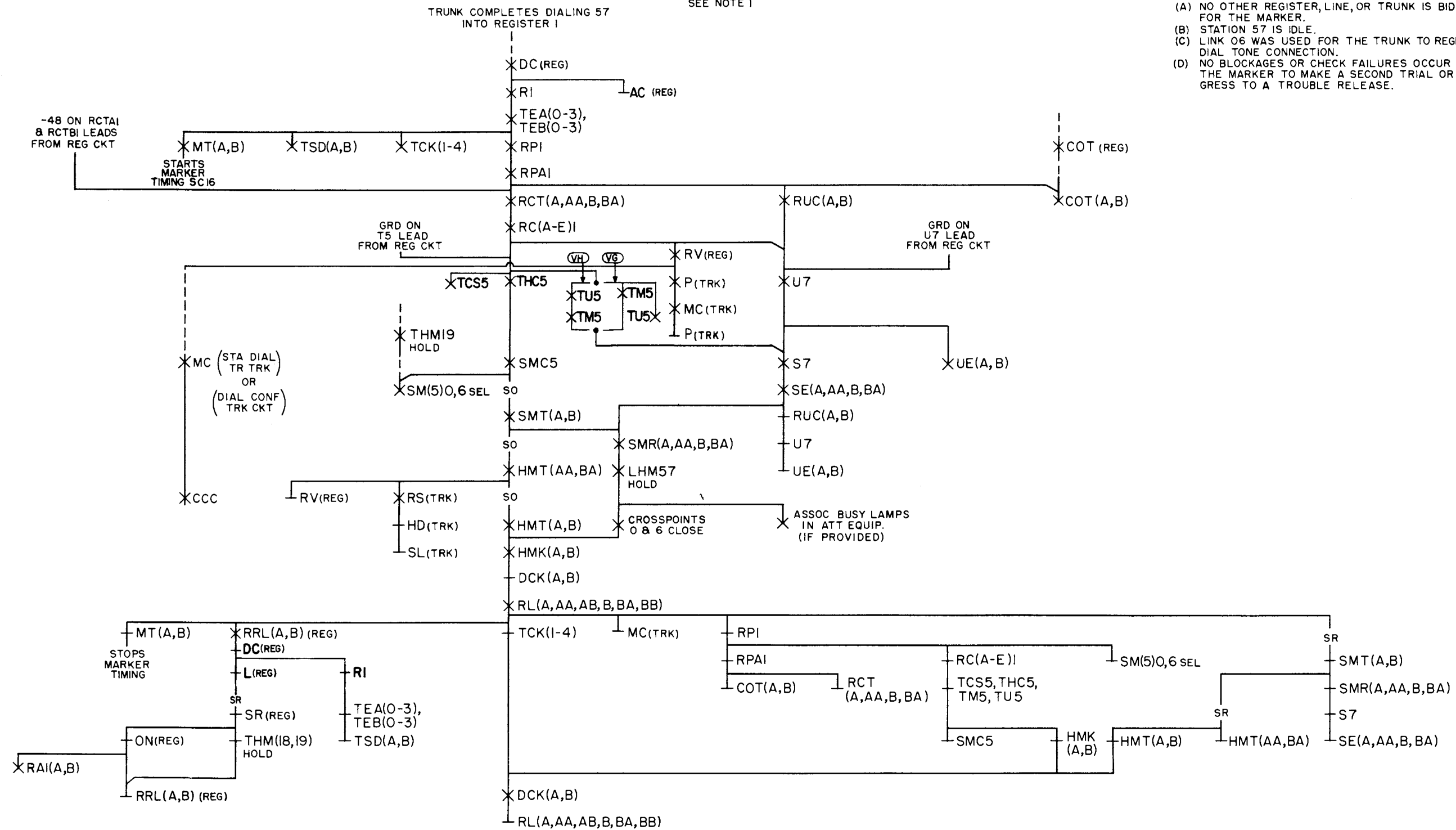
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SHEET NOTES:

I. SC 5 ASSUMES THE FOLLOWING:

- (A) NO OTHER REGISTER, LINE, OR TRUNK IS BIDDING FOR THE MARKER.
- (B) STATION 57 IS IDLE.
- (C) LINK 06 WAS USED FOR THE TRUNK TO REGISTER I DIAL TONE CONNECTION.
- (D) NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.



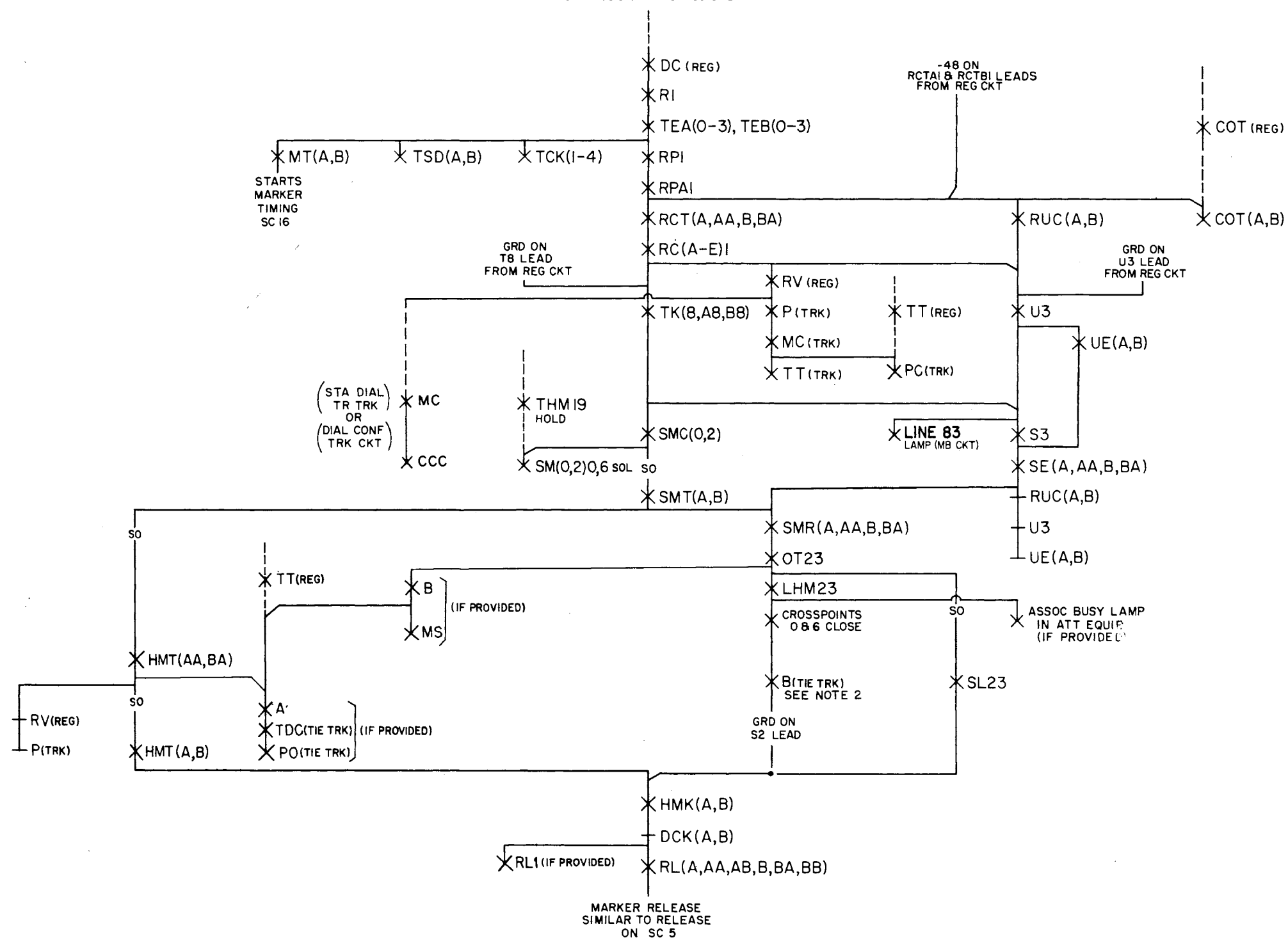
SC 6

CENTRAL OFFICE OR RINGDOWN TIE TRUNK
TO CODE 8 TRUNK CONNECTION
SEE NOTE 1

TRUNK COMPLETES DIALING DIAL TIE
TRUNK CODE 83 INTO REGISTER 1

SHEET NOTES:

- SC 6 ASSUMES THE FOLLOWING:
 - DIAL TIE TRUNK 83 IS IDLE.
 - LINK 06 WAS USED FOR THE TRUNK TO REGISTER DIAL TONE CONNECTION.
 - NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
- RELAY B ON TIE TRUNK PER SD-65718-01 OR EQUIVALENT RELAY ON SIMILAR TIE TRUNKS.



LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-E7

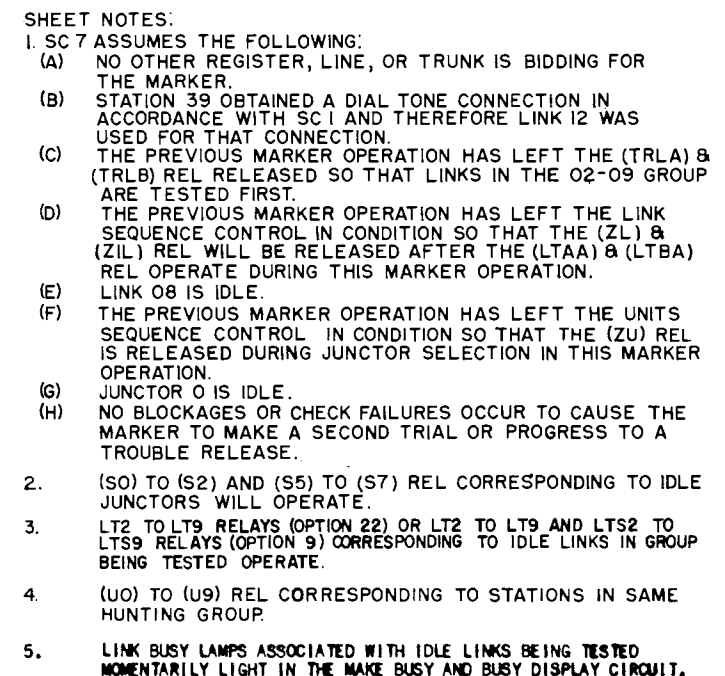
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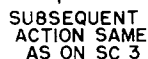
SD-65741-01-E7

DRAWING ISSUE		P.O.
12B	P.L. NAME	
19B	EG WYH PD	1 H.O.
23D	ZEN DHC ARM	2 H.C.
27D	EWB SAK GFH WPA	3 H.W. HW PMT
29B	GFH	5
32D	EWB SAK PMP	6 H.W.
33D	ROZ PUS PMP	7 H.W.
36B	ROZ PUS LDJ	8
37B	ROZ PUS LDJ	9
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BELL TELEPHONE LABORATORIES INCORPORATED	DWG SIZE 6S	PRINTED IN U.S.A.
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SC 8
STATION TO STATION CALL TO
BUSY STATION - STATION IN HUNTING
GROUP IDLE
SEE NOTE 1



1. SC 8 ASSUMES THAT STATION 39 COMPLETES DIALING 57 INTO REGISTER 0 AND THE MARKER ATTEMPTS TO COMPLETE THE CALL AS SHOWN ON SC 3 OR SC 7, BUT STATION 57 IS BUSY AND CALL IS COMPLETED TO THE IDLE STATION 58. IT IS ASSUMED THAT STATION 57 AND 58 ARE IN A TWO WAY HUNTING GROUP OF TWO STATIONS (OR A ONE WAY HUNTING GROUP OF TWO STATIONS ARRANGED TO HUNT FROM 57 TO 58)

2. WHEN (HCA) & (HCB) RELAYS OPERATE THE OPERATE PATHS FOR (BSYAA) & (BSYBA) RELAYS ARE CLOSED BUT THE PATHS ARE OPENED BY THE OPERATION OF THE (SB) RELAY AND THEREFORE THE RELAYS NEVER OPERATE.

3. THE (RAOA) & (RAOB) REL WILL OPERATE ONLY IF THE (RAIA) & (RAIB) REL ARE NOT OPERATED AT THE TIME.

LINE, LINK, AND MARKER CIRCUIT.

SD-65741-01-E9

BELL TELEPHONE LABORATORIES
INCORPORATED

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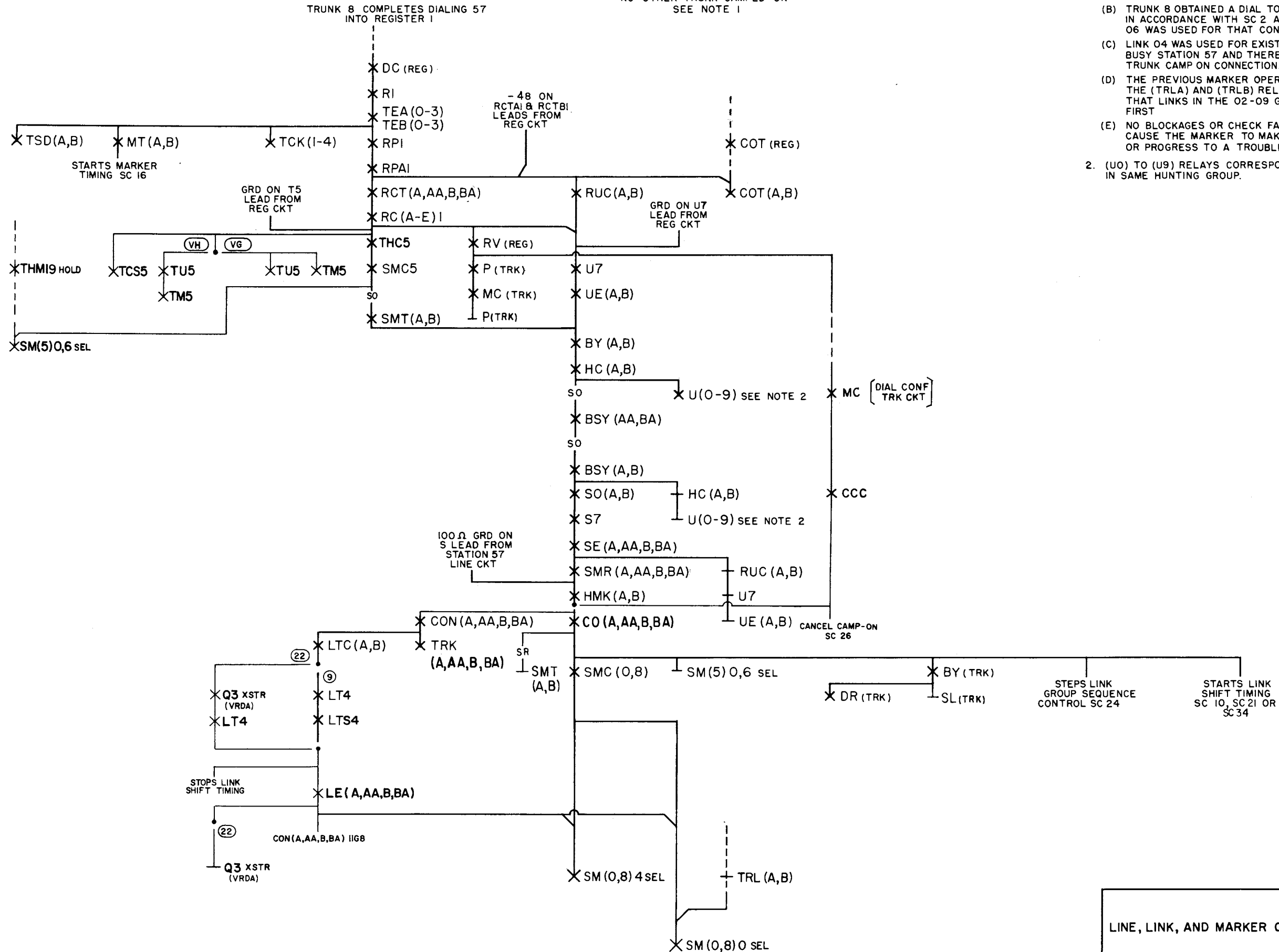
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PART OF SC 9

CENTRAL OFFICE OR RINGDOWN TIE
TRUNK CALL TO BUSY STATION -
ALL OTHER STATIONS IN HUNTING GROUP ALSO BUSY -
NO OTHER TRUNK CAMPED ON
SEE NOTE 1

SHEET NOTES:

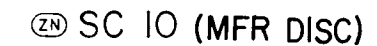
- SC 9 ASSUMES THE FOLLOWING
 - NO OTHER REGISTER, LINE, OR TRUNK IS BIDDING FOR THE MARKER.
 - TRUNK 8 OBTAINED A DIAL TONE CONNECTION IN ACCORDANCE WITH SC 2 AND THEREFORE LINK 06 WAS USED FOR THAT CONNECTION.
 - LINK 04 WAS USED FOR EXISTING CONNECTION TO BUSY STATION 57 AND THEREFORE IS USED FOR TRUNK CAMP ON CONNECTION.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE (TRLA) AND (TRLB) RELAYS RELEASED SO THAT LINKS IN THE 02-09 GROUP ARE TESTED FIRST
 - NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
- (U0) TO (U9) RELAYS CORRESPONDING TO STATION IN SAME HUNTING GROUP.



DRAWING	ISSUE	POB.
12B	L.M.	1
19B	W.H.	1
21B	W.H.	2
23D	W.H.	3
26AC	W.H.	4
29B	W.H.	5
33D	W.H.	6
37B	W.H.	7

37

CENTRAL OFFICE OR RINGDOWN TIE
TRUNK CALL TO BUSY STATION-
ALL OTHER STATIONS IN HUNTING GROUP ALSO BUSY-
NO OTHER TRUNK CAMPED ON



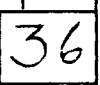
LINK SHIFT TIMING
(ALL LINKS BUSY IN
FIRST GROUP TESTED
SEE NOTE 1)



1. SC 10 ASSUMES THAT THE (WLG), (ZLG), (TRLA), AND (TRLB) RELAYS ARE RELEASED AT THE START OF THE MARKER OPERATION.
2. NO (LTS2) TO (LTS9) RELAYS OPERATE SINCE ALL LINKS IN FIRST GROUP TESTED ARE BUSY.
3. (LT2) TO (LT9) AND (LTS2) TO (LTS9) RELAYS CORRESPONDING TO IDLE LINKS IN SECOND GROUP OR IF A CAMP-ON OPERATION IS INVOLVED, THE RELAYS CORRESPONDING TO THE LINK BEING USED BY THE BUSY STATION.
4. LINK BUSY LAMPS CORRESPONDING TO IDLE LINKS IN SECOND GROUP WILL MOMENTARILY LIGHT OR IF A CAMP ON OPERATION IS INVOLVED, THE LAMP CORRESPONDING TO THE LINK BEING USED BY THE BUSY STATION WILL HAVE ALREADY BEEN LIT.

SC 12

ALL JUNCTORS BUSY-BUSY TONE TRUNK IDLE
SEE NOTE 4



SD- 65741-01-E12

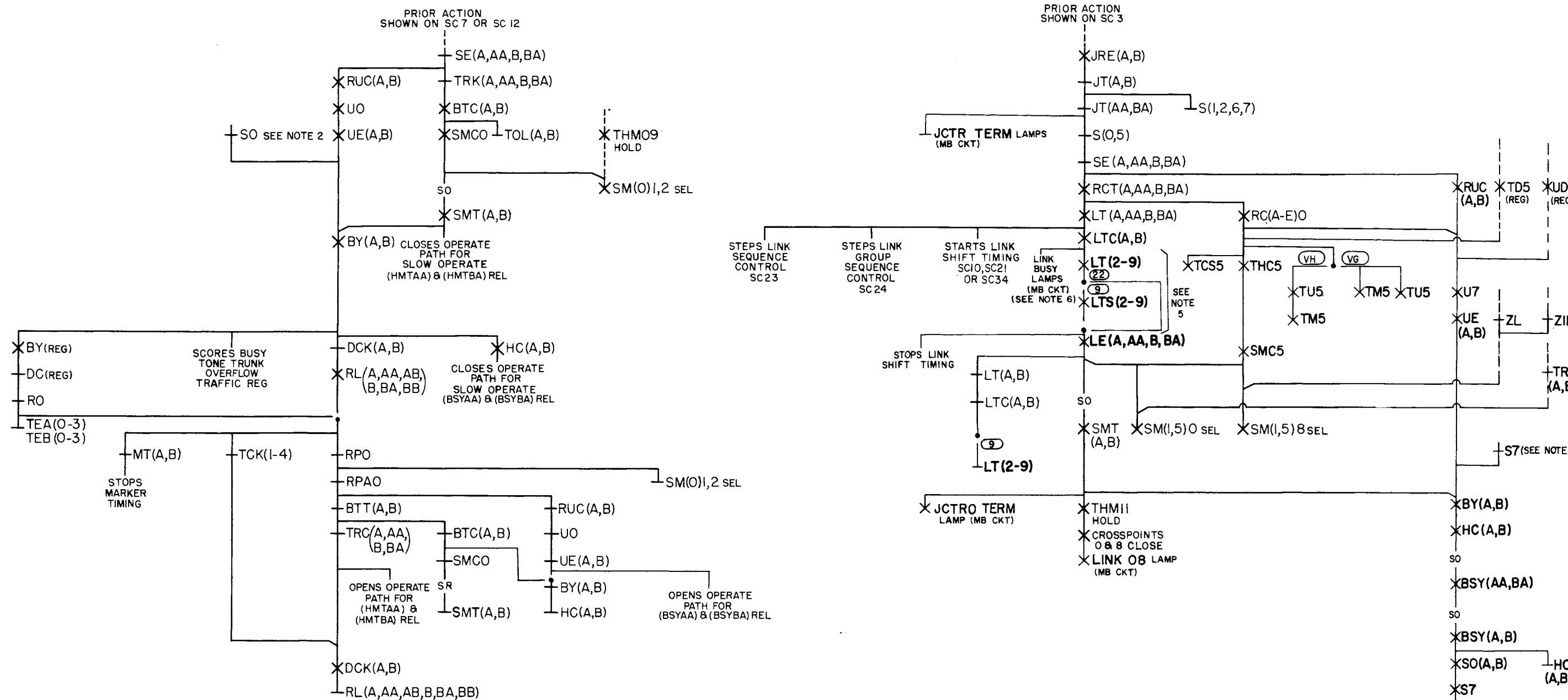
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SC 13

BUSY TONE TRUNK BUSY
SEE NOTE 1

PART OF SC 14

INTERCEPTED CALL -
CALLED LINE UNASSIGNED
SEE NOTE 3



SHEET NOTES:

- SC 13 MAKES THE SAME BASIC ASSUMPTIONS MADE FOR SC 7 AND SC 12.
- SINCE THE BUSY TONE TRUNK IS BUSY THE (SO) RELAY WILL NOT OPERATE.
- SC 14 MAKES THE SAME BASIC ASSUMPTIONS MADE FOR SC 3 EXCEPT THAT STATION 57 IS UNASSIGNED, ATTENDANT TRUNK 0 IS IDLE, AND THAT THE CALL IS ORIGINATED BY A STATION, CODE 8, OR ATTENDANT TRUNK.
- SINCE STATION 57 IS UNASSIGNED, THE (S7) RELAY DOES NOT OPERATE AT THIS TIME.
- LT2 TO LT9 RELAYS (OPTION 22) OR LTS2 TO LTS9 AND LT2 TO LT9 RELAYS (OPTION 9), CORRESPONDING TO IDLE LINKS IN GROUP BEING TESTED OPERATE.
- LINK BUSY LAMPS ASSOCIATED WITH IDLE LINKS IN GROUP BEING TESTED MOMENTARILY LIGHT IN THE MAKE BUSY AND BUSY DISPLAY CKT.

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-E13

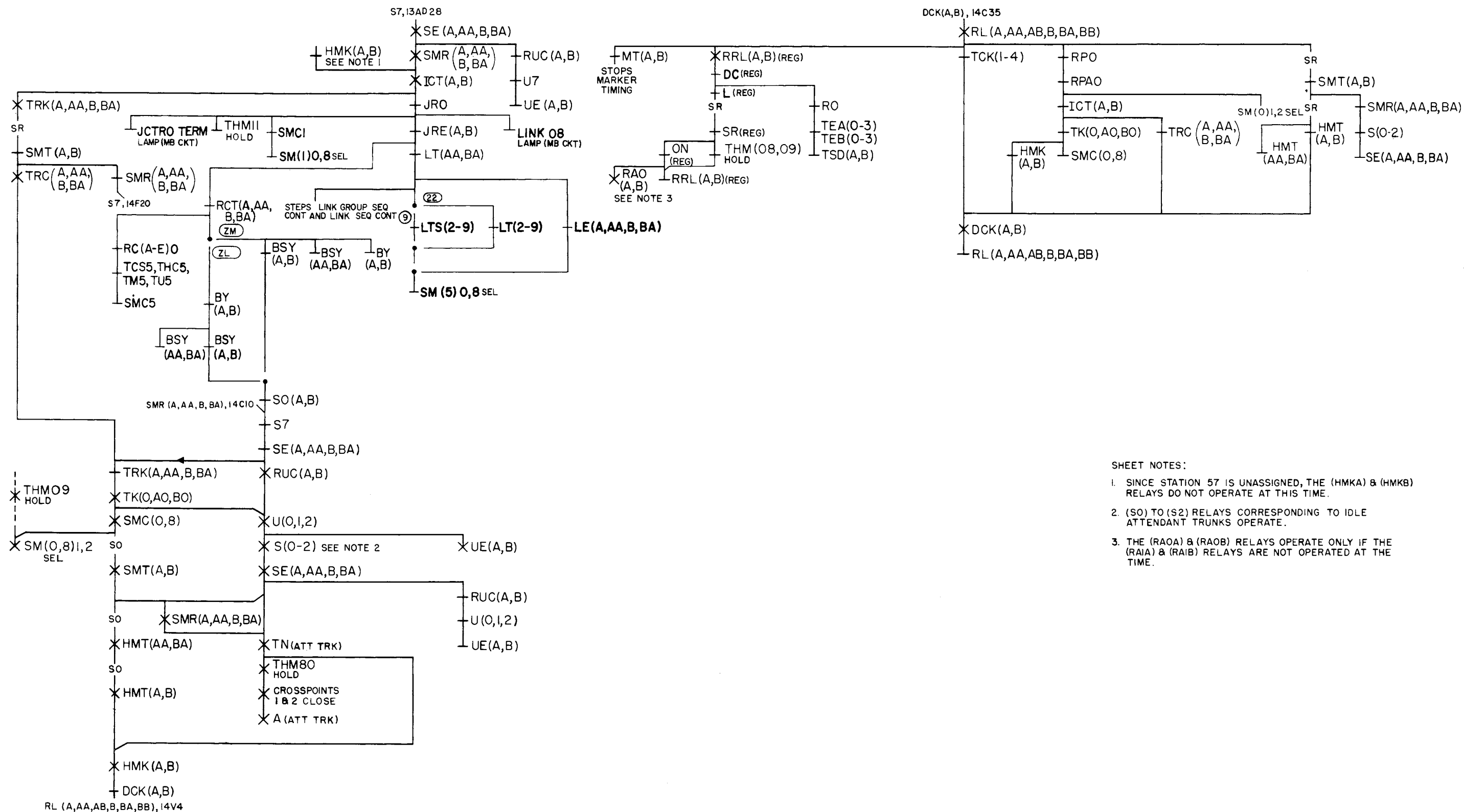
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INCORPORATED

DWG SIZE
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PART OF SC 14

INTERCEPTED CALL -
CALLED LINE UNASSIGNED



SHEET NOTES:

1. SINCE STATION 57 IS UNASSIGNED, THE (HMK) & (HMKB) RELAYS DO NOT OPERATE AT THIS TIME.
2. (S0) TO (S2) RELAYS CORRESPONDING TO IDLE ATTENDANT TRUNKS OPERATE.
3. THE (RAOA) & (RAOB) RELAYS OPERATE ONLY IF THE (RAIA) & (RAIB) RELAYS ARE NOT OPERATED AT THE TIME.

LINE, LINK, AND MARKER CIRCUIT

SD-65741-01-E14

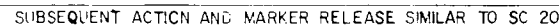
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36

CENTRAL OFFICE OR RINGDOWN TIE TRK
TO CODE 8 TRK CALL-ALL TRK BUSY
SEE NOTE 1



MARKER TIMING
SECOND TRIAL, NO CONNECTION,
AND TROUBLE RELEASE

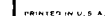


1. SC15 MAKES THE SAME BASIC ASSUMPTIONS MADE FOR SC6 EXCEPT THAT TRUNK 83 AND ALL OTHER TRUNKS IN HUNTING GROUP ARE BUSY.
2. (U0) TO (U2) & (U4) TO (U9) RELAYS ASSOCIATED WITH OTHER TRUNKS IN SAME HUNTING GROUP ALSO OPERATE THRU STRAPPED H80 THRU H89 PUNCHINGS.
3. IF THE MARKER HAS NOT COMPLETED THE CALL IN PROCESS BEFORE THE (STA),(STB),(STAR)&(STBR) RELAYS OPERATE, THE CALL SEQUENCE WILL BE RETURNED TO NEAR THE BEGINNING FOR A SECOND TRIAL & THE LINK & UNIT SEQUENCE CONTROL CIRCUITS ADVANCED.
4. IF THE MARKER HAS NOT BEEN ABLE TO ESTABLISH THE CONNECTION ON A SECOND TRIAL BEFORE THE (NCA) & (NCB) RELAYS OPERATE, AN ATTEMPT IS MADE TO ESTABLISH A BUSY TONE CONNECTION.
5. IF THE MARKER IS NOT ABLE TO ESTABLISH A BUSY TONE CONNECTION ON A "NO CONNECTION" BASIS, THE MARKER WILL TROUBLE RELEASE WHEN THE (RLSA),(RLSAA),(RLSB)&(RLSBA) RELAYS OPERATE & RESTORE TO NORMAL TO SERVE A CALL IN THE NEXT HIGHER TENS GROUP.

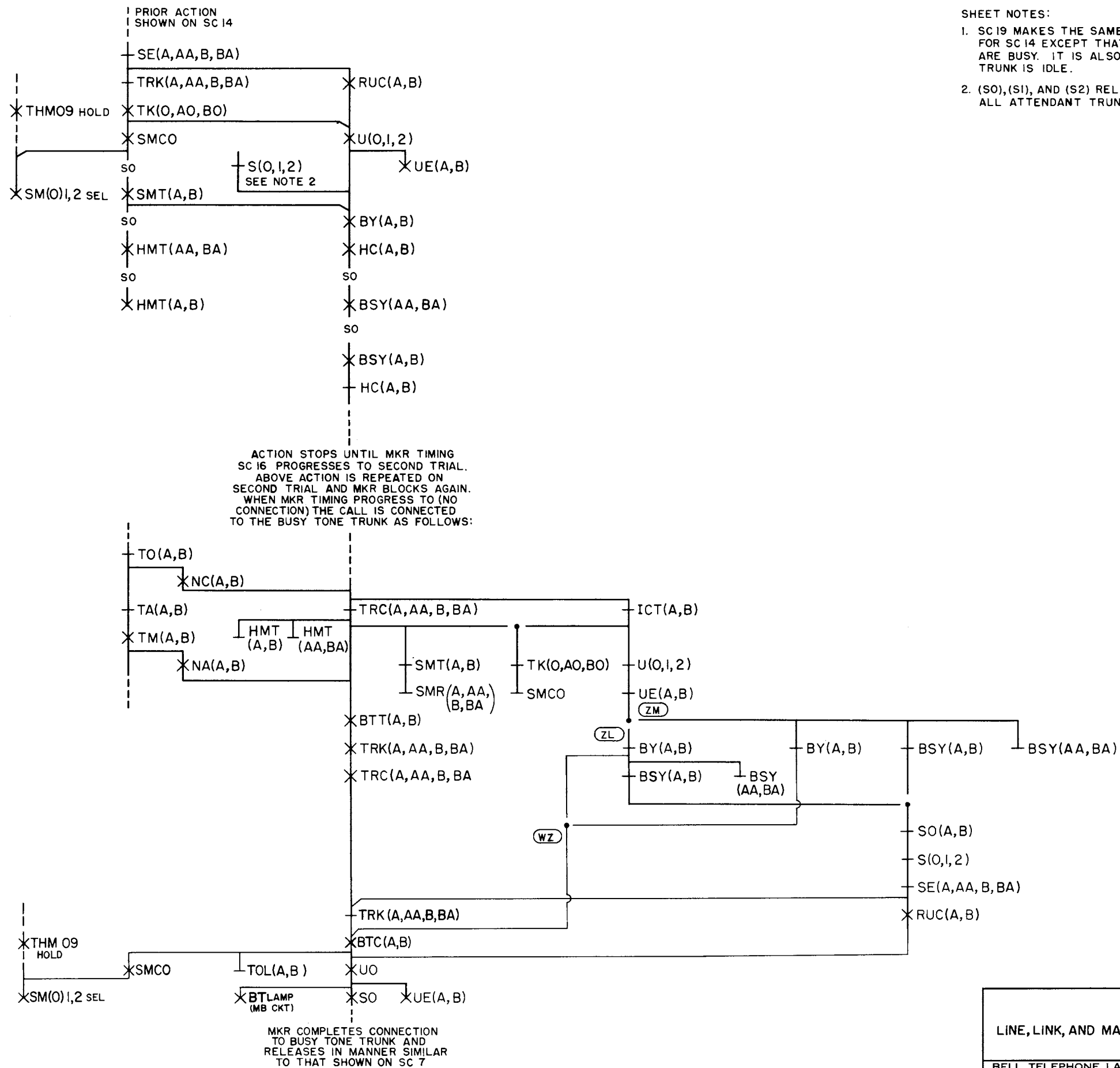
BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
6S

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SC 19
CALLED LINE UNASSIGNED-
ALL ATTENDANT TRUNKS BUSY
SEE NOTE 1



- SHEET NOTES:
- SC 19 MAKES THE SAME BASIC ASSUMPTIONS MADE FOR SC 14 EXCEPT THAT ALL ATTENDANT TRUNKS ARE BUSY. IT IS ALSO ASSUMED THAT BUSY TONE TRUNK IS IDLE.
 - (SO),(SI), AND (S2) RELAYS DO NOT OPERATE SINCE ALL ATTENDANT TRUNKS ARE BUSY.

DRAWING	ISSUE
12B	ASG
23D	WEM
29B	DHC
32D	MM
36B	WFA

36

LINE, LINK, AND MARKER CIRCUIT

2

SD-65741-01-E17

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1. SC 20 ASSUMES THAT TRUNK 8 COMPLETES DIALING 57 INTO REGISTER 1. THE MARKER ATTEMPTS TO COMPLETE THE CONNECTION TO STATION 57 BUT FINDING IT AND THE OTHER STATIONS IN THE HUNTING GROUP BUSY ATTEMPTS TO CAMP THE TRUNK ON TO STATION 57 AS SHOWN ON SC 9. HOWEVER ANOTHER TRUNK IS FOUND TO BE CAMPED ON. LINK 06 IS ASSUMED TO HAVE BEEN USED FOR THE DIAL TONE CONNECTION AND LINK 04 FOR THE BUSY CONNECTION TO STATION 57. IT IS ALSO ASSUMED THAT THE MARKER TESTS LINK GROUP 02-09 FIRST AND THAT NO CHECK FAILURES OR BLOCKAGES OCCUR TO CAUSE A SECOND TRIAL OR A TROUBLE RELEASE.
2. (U0) TO (U9) RELAYS CORRESPONDING TO STATIONS IN SAME HUNTING GROUP.
3. THE COS RELAY (OPTION 9) OR THE Q5 TRANSISTOR (OPTION 22) IS OPERATED FROM GROUND PLACED BY THE MARKER ON THE SLEEVE OF STATION 57 THRU THE OPERATED (BY), (RS), AND (DR) RELAYS OF THE CAMPED ON TRUNK.

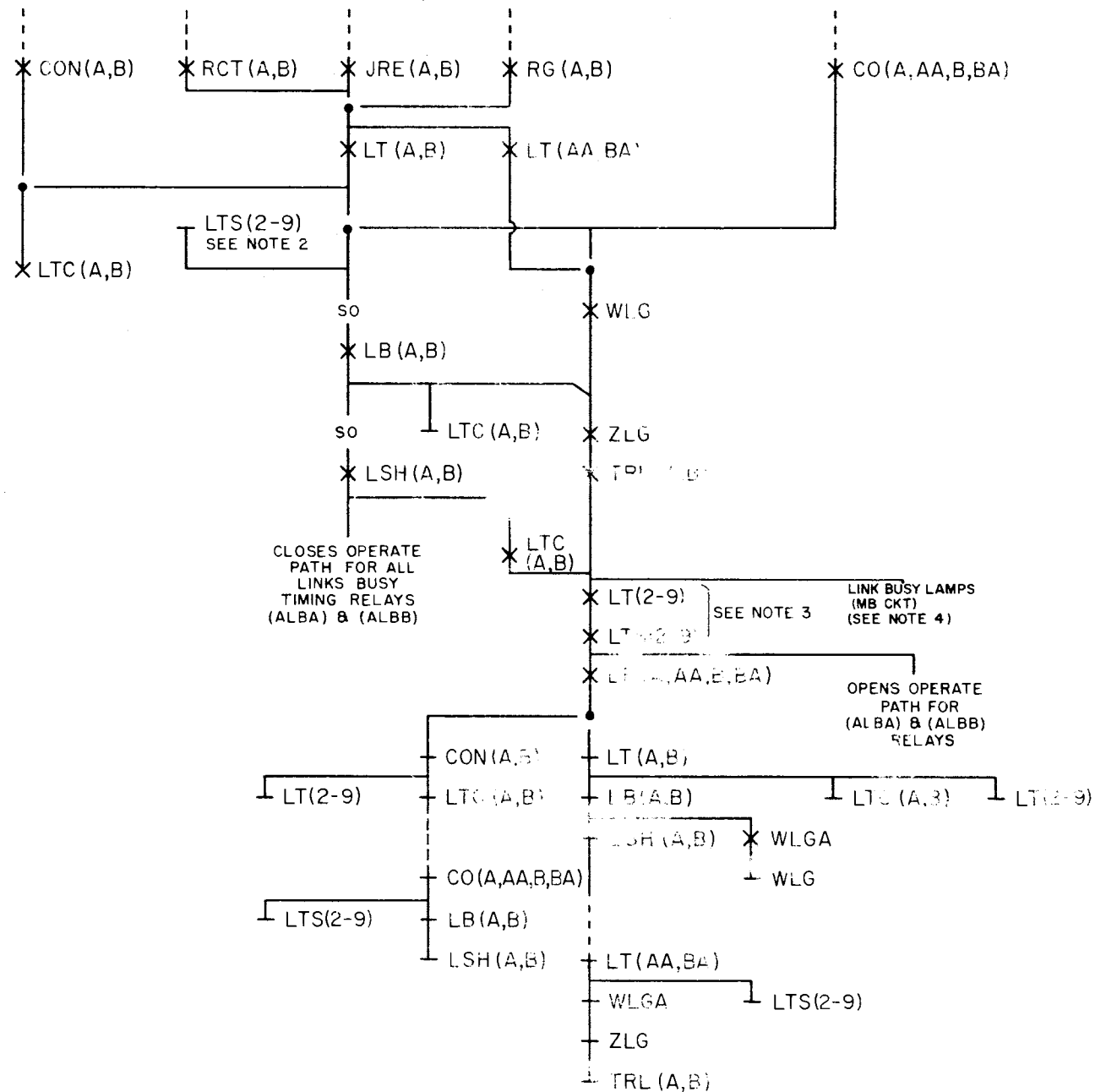
SD-65741-01-E18

2
DWG SIZE
65

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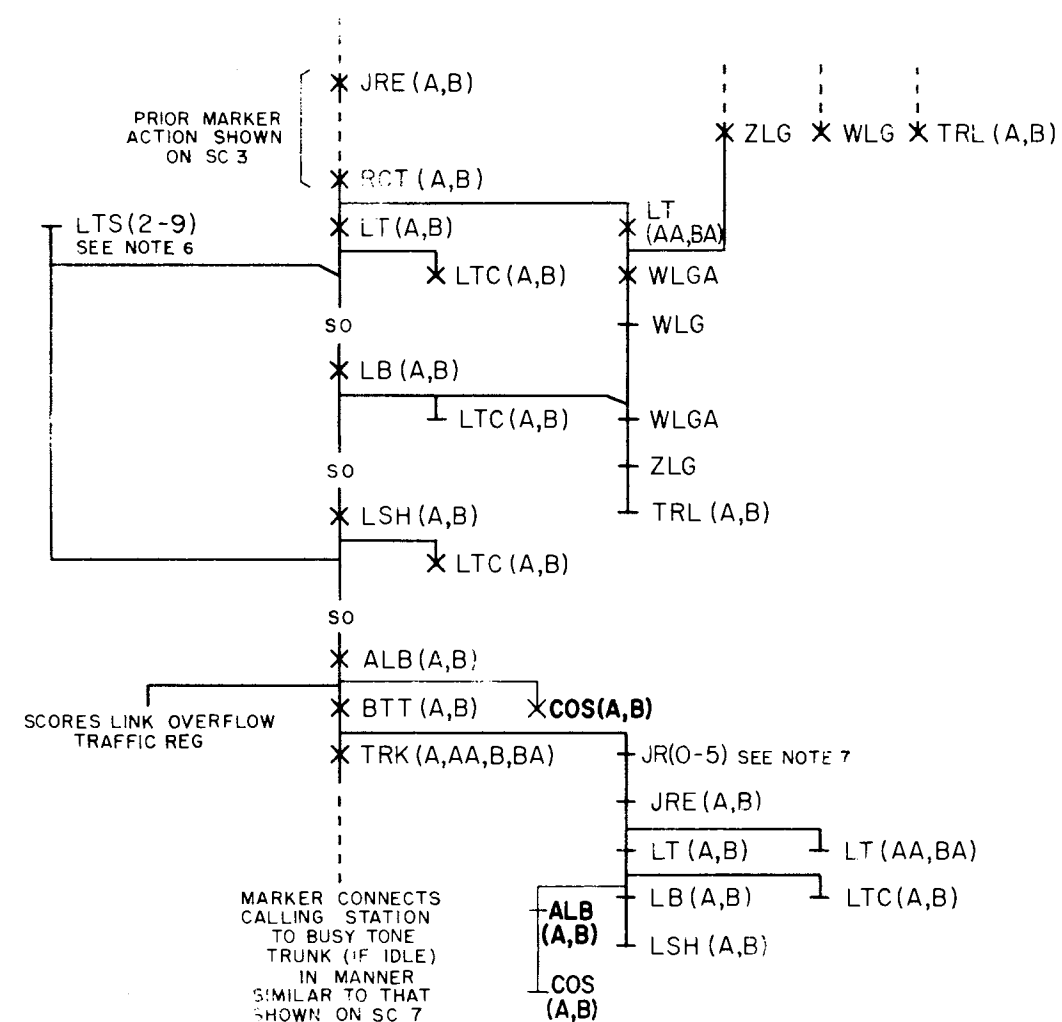
SC 21 (MFR DISC)

LINK SHIFT TIMING
(ALL LINKS BUSY IN
FIRST GROUP TESTED)
SEE NOTE 1



SC 22 (MFR DISC)

LINKS BUSY
STATION TERMINATING
CALL TERMINATING CONDITION
SEE NOTE 5



SHEET NOTES:

- SC 21 ASSUMES THAT THE (WLG), (ZLG), (TRLA), AND (TRLB) RELAYS ARE RELEASED AT THE START OF THE MARKER OPERATION.
- NO (LTS2) TO (LTS9) RELAYS OPERATE SINCE ALL LINKS IN FIRST GROUP TESTED ARE BUSY OR IN THE CAMP ON OPERATION, THE LINK BEING USED BY THE BUSY STATION IS NOT IN FIRST GROUP.
- (LT2) TO (LT9) AND (LTS2) TO (LTS9) RELAYS CORRESPONDING TO IDLE LINKS IN SECOND GROUP OR IF A CAMP ON OPERATION IS INVOLVED, THE RELAY CORRESPONDING TO THE LINK BEING USED BY THE BUSY STATION.
- LINK BUSY LAMPS CORRESPONDING TO IDLE LINKS IN SECOND GROUP WILL MOMENTARILY LIGHT OR IF A CAMP-ON OPERATION IS INVOLVED, THE LAMP CORRESPONDING TO THE LINK BEING USED BY THE BUSY STATION WILL HAVE ALREADY BEEN LIT.
- SC 22 ASSUMES THAT THE (WLG), (ZLG), (TRLA), AND (TRLB) RELAYS ARE OPERATED AT THE START OF THE MARKER OPERATION.
- NO (LTS2) TO (LTS9) RELAYS OPERATE SINCE ALL LINKS IN BOTH GROUPS ARE BUSY.
- (JRO) TO (JRS) RELAYS CORRESPONDING TO JUNCTOR SELECTED FOR THIS CALL AT AN EARLIER STAGE OF THE MARKER OPERATION. SEE SC 3.

LINE, LINK, AND MARKER CIRCUIT

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SD-65741-01-E20

SC 23

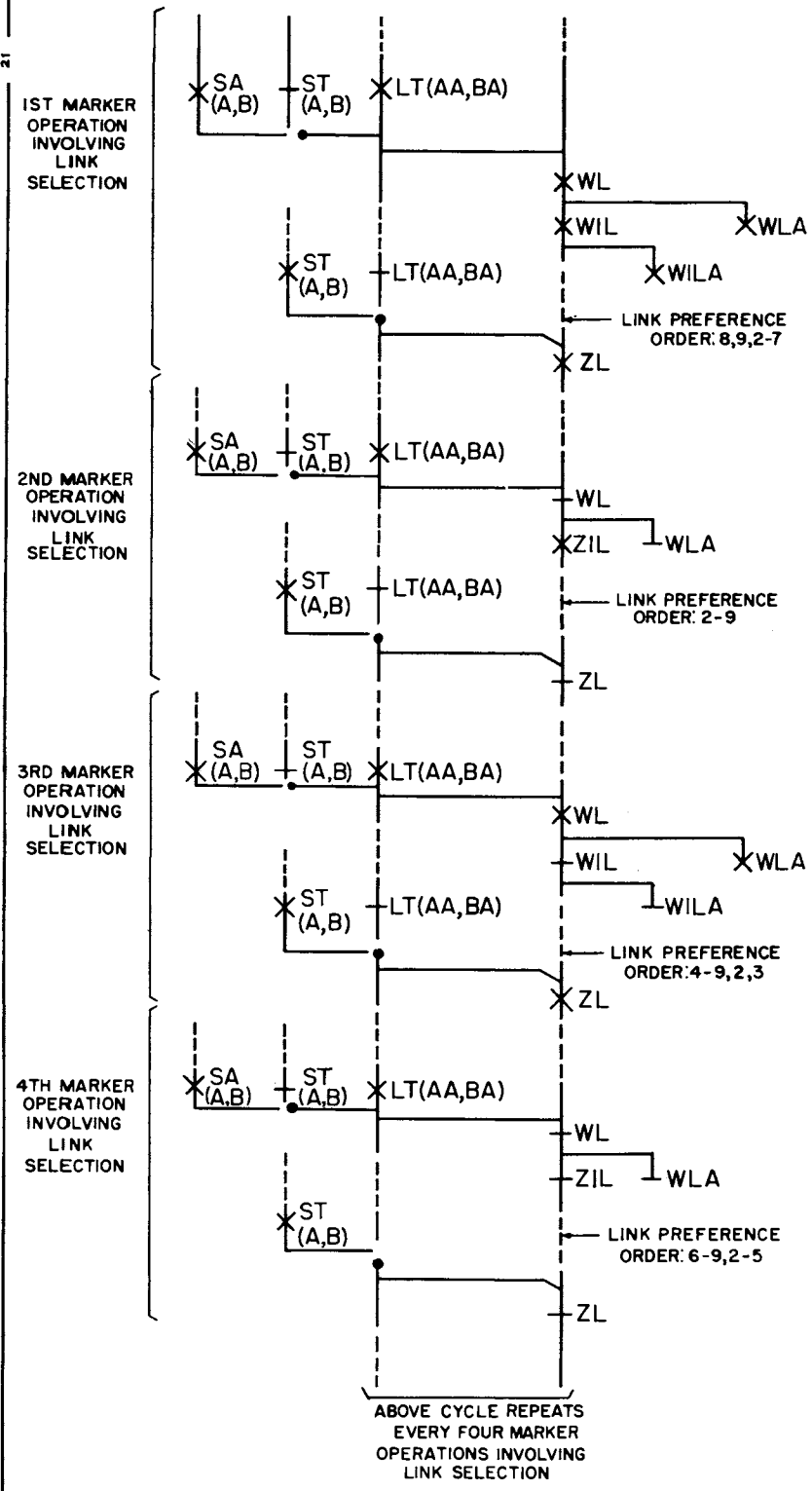
LINK SEQUENCE CONTROL

SC 24

LINK GROUP SEQUENCE CONTROL
SEE NOTE 1

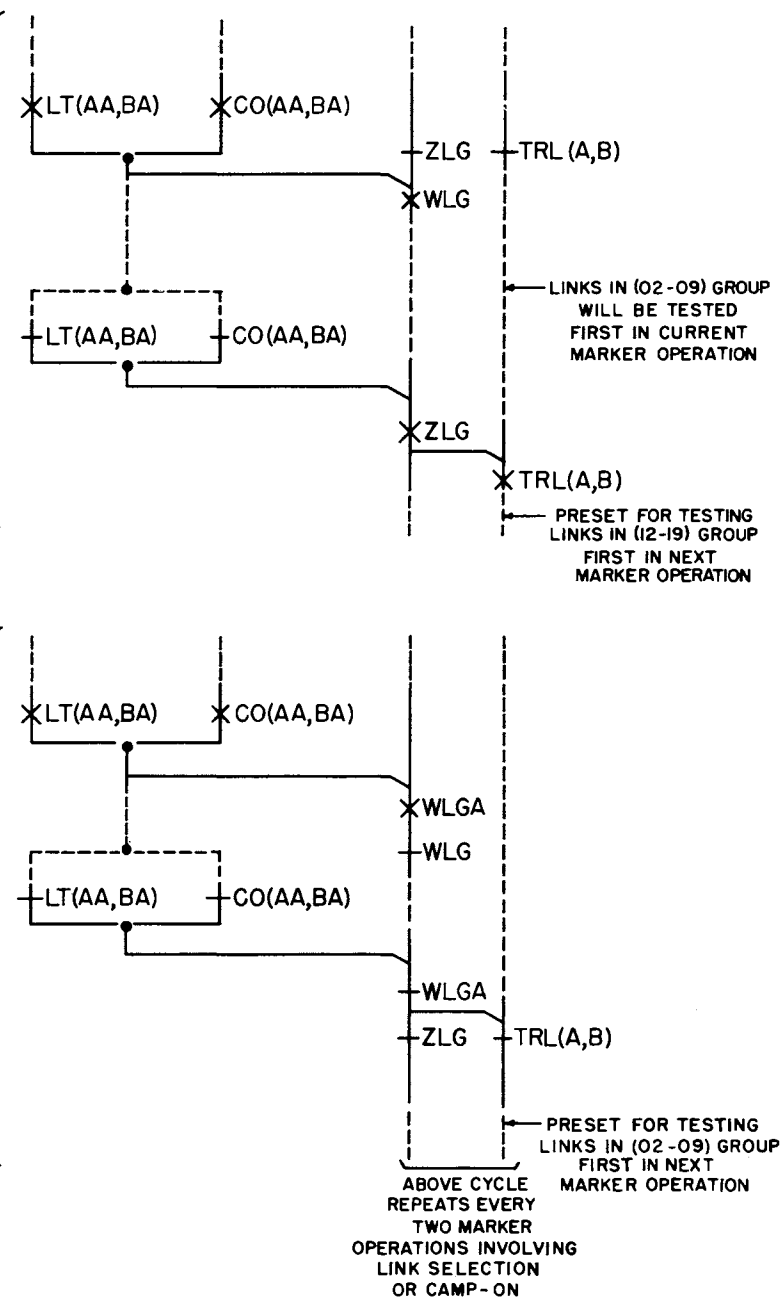
SC 25

UNITS SEQUENCE CONTROL



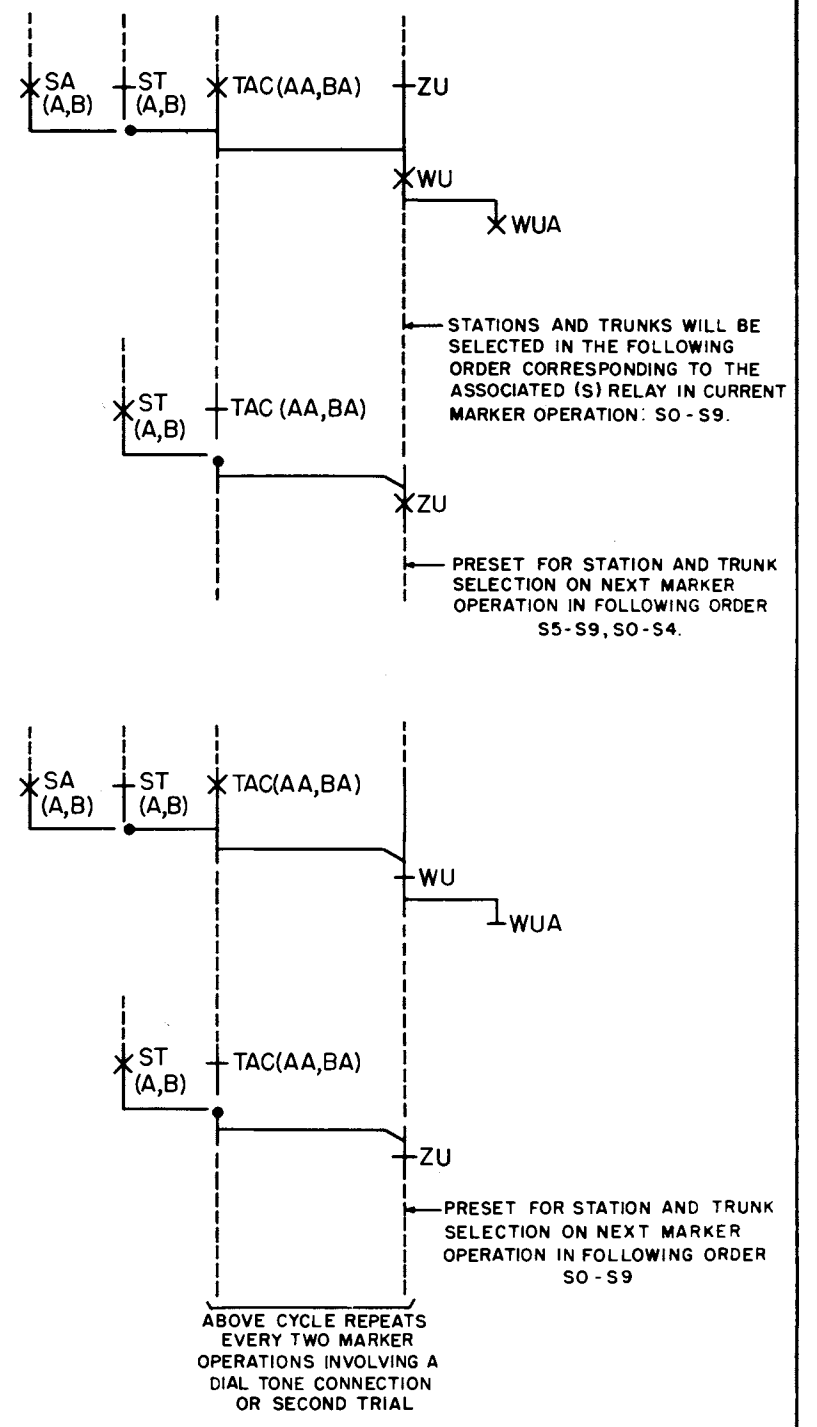
1st MARKER OPERATION INVOLVING LINK SELECTION OR CAMP-ON

2nd MARKER OPERATION INVOLVING LINK SELECTION OR CAMP-ON



1st MARKER OPERATION INVOLVING DIAL TONE CONNECTION OR SECOND TRIAL

2nd MARKER OPERATION INVOLVING DIAL TONE CONNECTION OR SECOND TRIAL

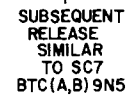


SHEET NOTES:
1. SC 24 ASSUMES THAT ON EACH MARKER OPERATION AN IDLE LINK OR THE CAMP-ON LINK IS FOUND IN FIRST GROUP TESTED.

SHEET NOTES:

I. SC 26 ASSUMES THE FOLLOWING:

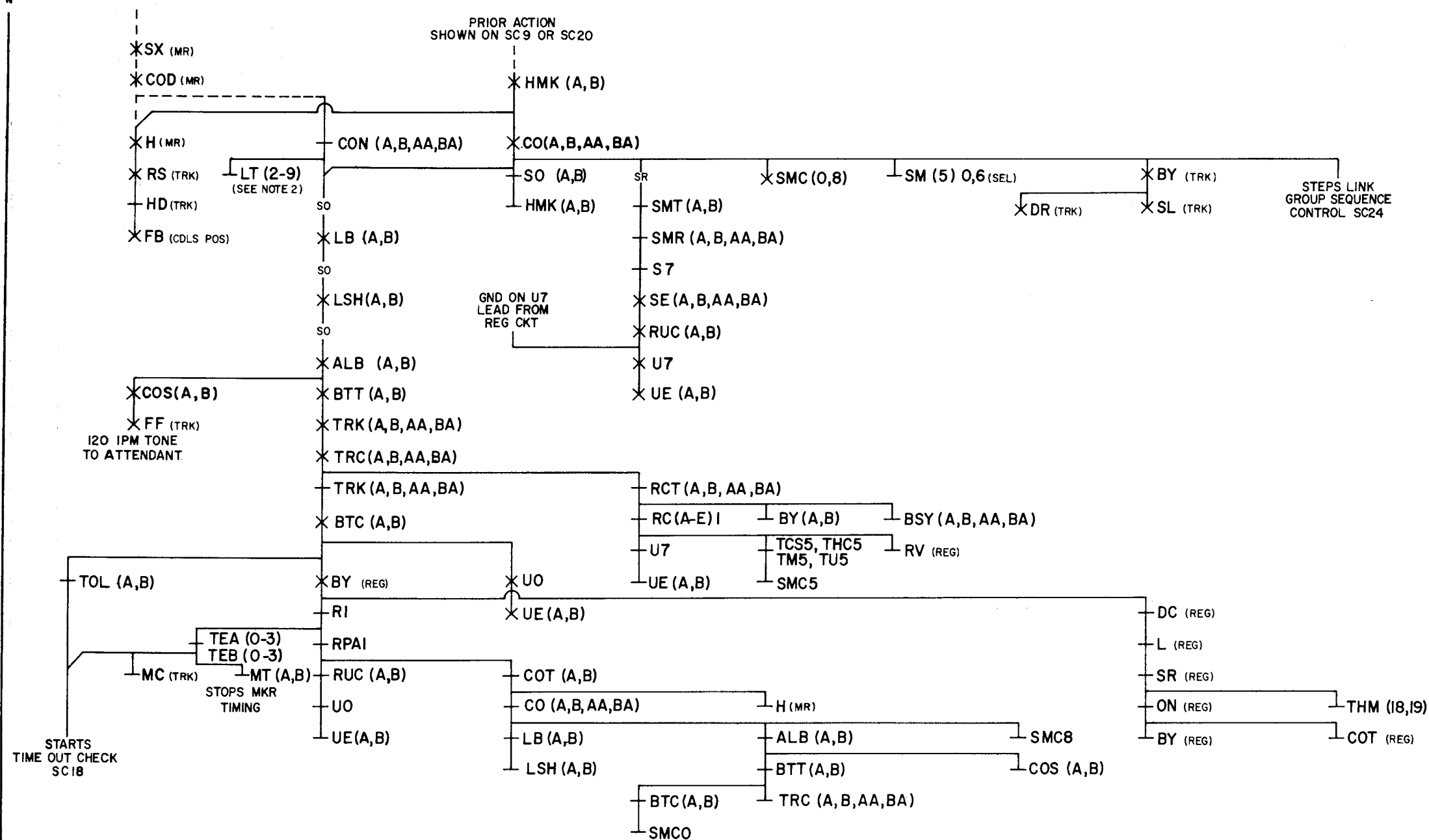
- (A) NO OTHER REGISTER, LINE, OR TRUNK IS BIDDING FOR THE MARKER.
- (B) TRUNK OBTAINED A DIAL TONE CONNECTION IN ACCORDANCE WITH SC 2 AND THEREFORE LINK 06 WAS USED FOR THAT CONNECTION.
- (C) THE PREVIOUS MARKER OPERATION HAS LEFT (TRLA) AND (TRLB) RELAYS RELEASED SO THAT LINKS IN THE 02-09 GROUP ARE TESTED FIRST.
- (E) NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.



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(XK) SC 27 (MFR DISC)

CENTRAL OFFICE OR RINGDOWN TIE TRUNK CALL TO BUSY STATION
MESSAGE REGISTRATION PULSE ON SLEEVE OF ANY LINK
(SEE NOTE 1)



SHEET NOTES:

- SC27 ASSUMES THE FOLLOWING:
 - NO OTHER REGISTER, LINE OR TRUNK IS BIDDING FOR THE MARKER.
 - TRUNK 8 OBTAINED A DIAL TONE CONNECTION IN ACCORDANCE WITH SC2 AND THEREFORE LINK 06 WAS USED FOR THAT CONNECTION.
 - LINK 04 WAS USED FOR EXISTING CONNECTION TO BUSY STATION 57.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE (TRLA) AND (TRLB) RELAYS RELEASED SO THAT LINKS IN THE 02-09 GROUP ARE TESTED FIRST.
 - NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
 - THE MESSAGE REGISTRATION PULSE IS PRESENT PRIOR TO LINK TESTING AND SELECTION PREVENTING THE OPERATION OF THE CON (A,B,AA,BA) RELAYS.
- WITH CON (A,B,AA,BA) NORMAL, NO LT (2-9) RELAYS WILL OPERATE.

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LINE, LINK AND MARKER CIRCUIT

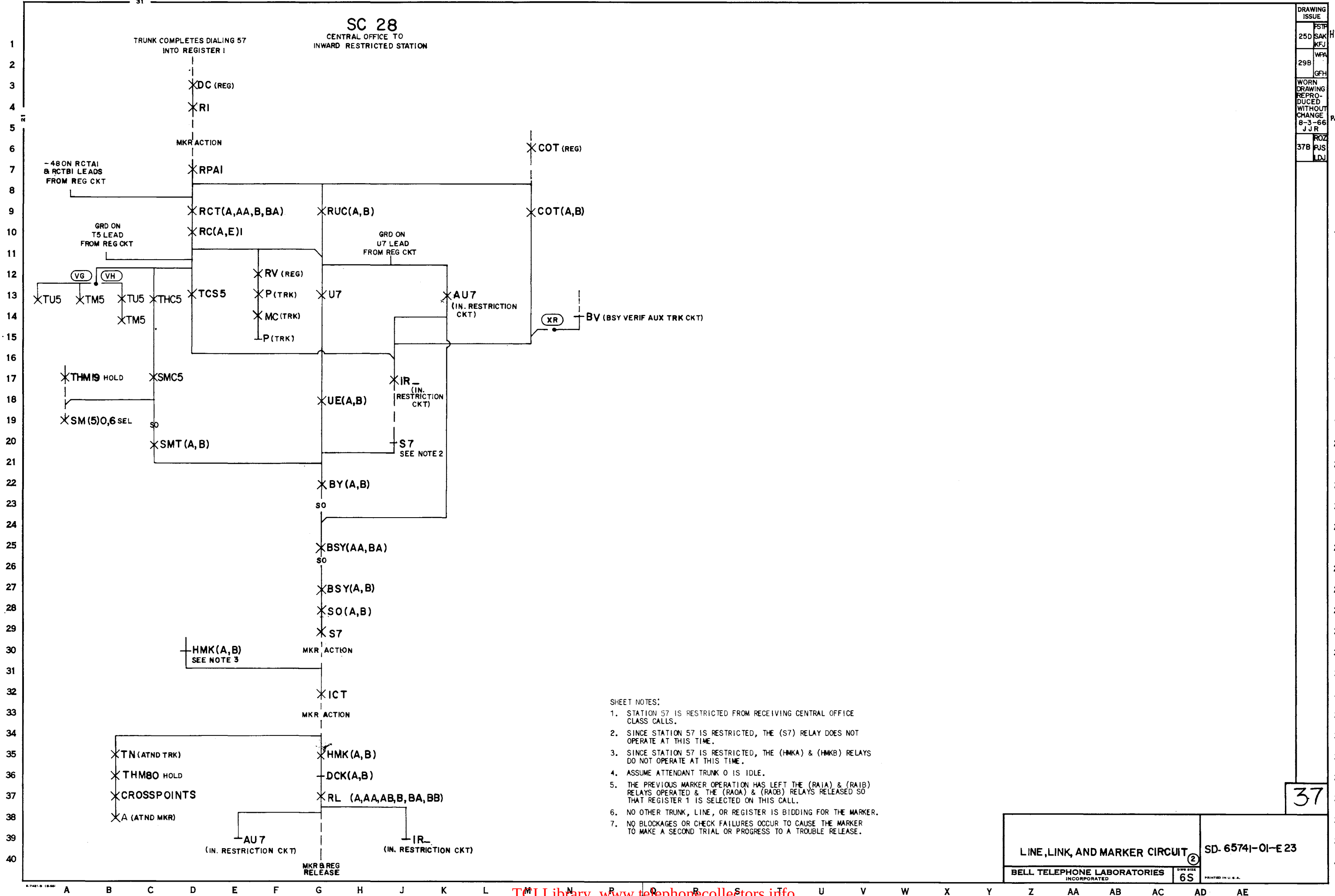
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SD-65741-01-E7



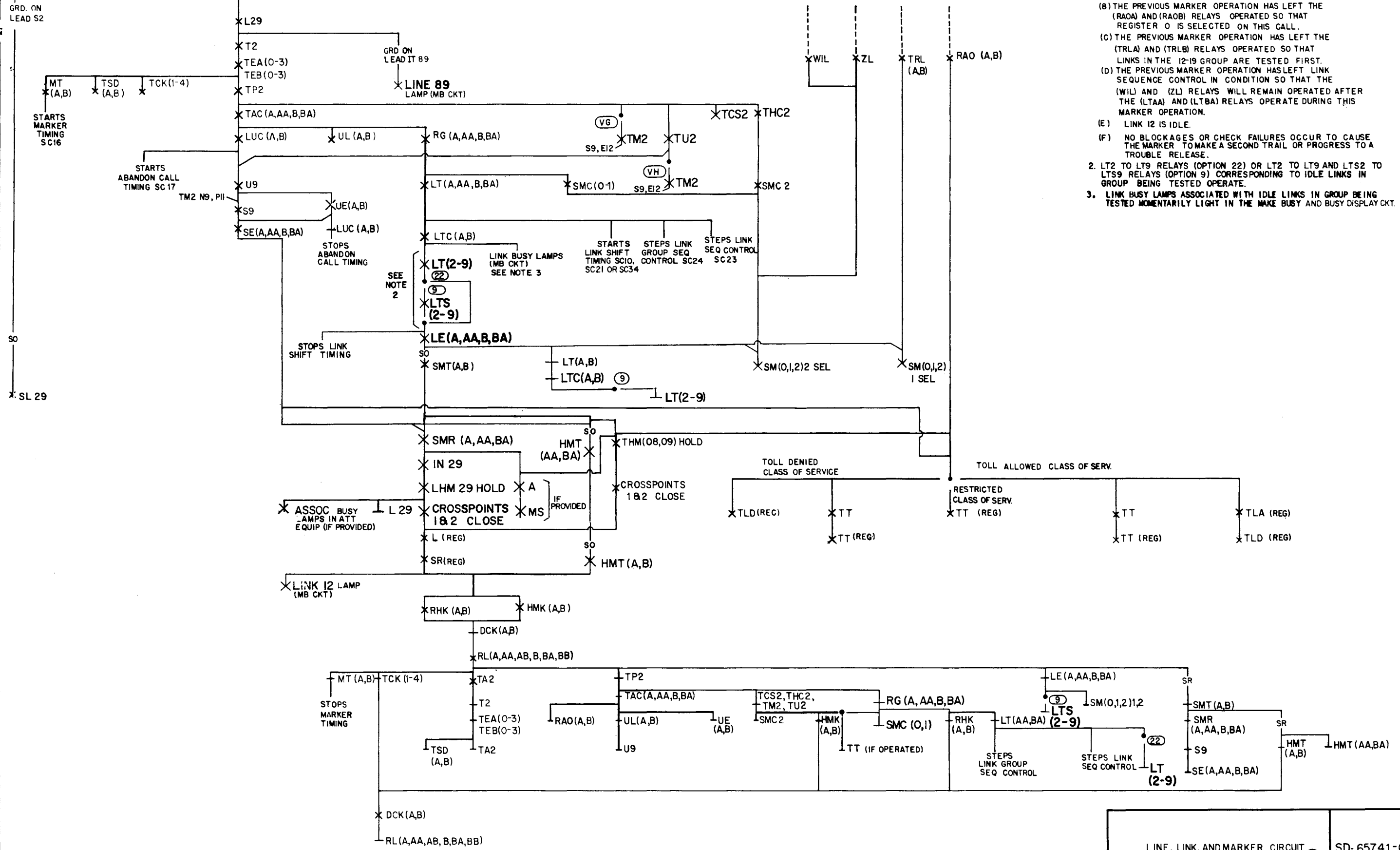
DRAWING ISSUE		HW
25D	SAK KJF	
29B	WPA	2
	GFH	3
WORN DRAWING REPRODUCED WITHOUT CHANGE 8-3-66 JJR		4
		5
37B	ROZ RJS LDU	6
		7
		8
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SD-65741-01-E25

TIE TRUNK 89 SEIZED BY DISTANT PBX

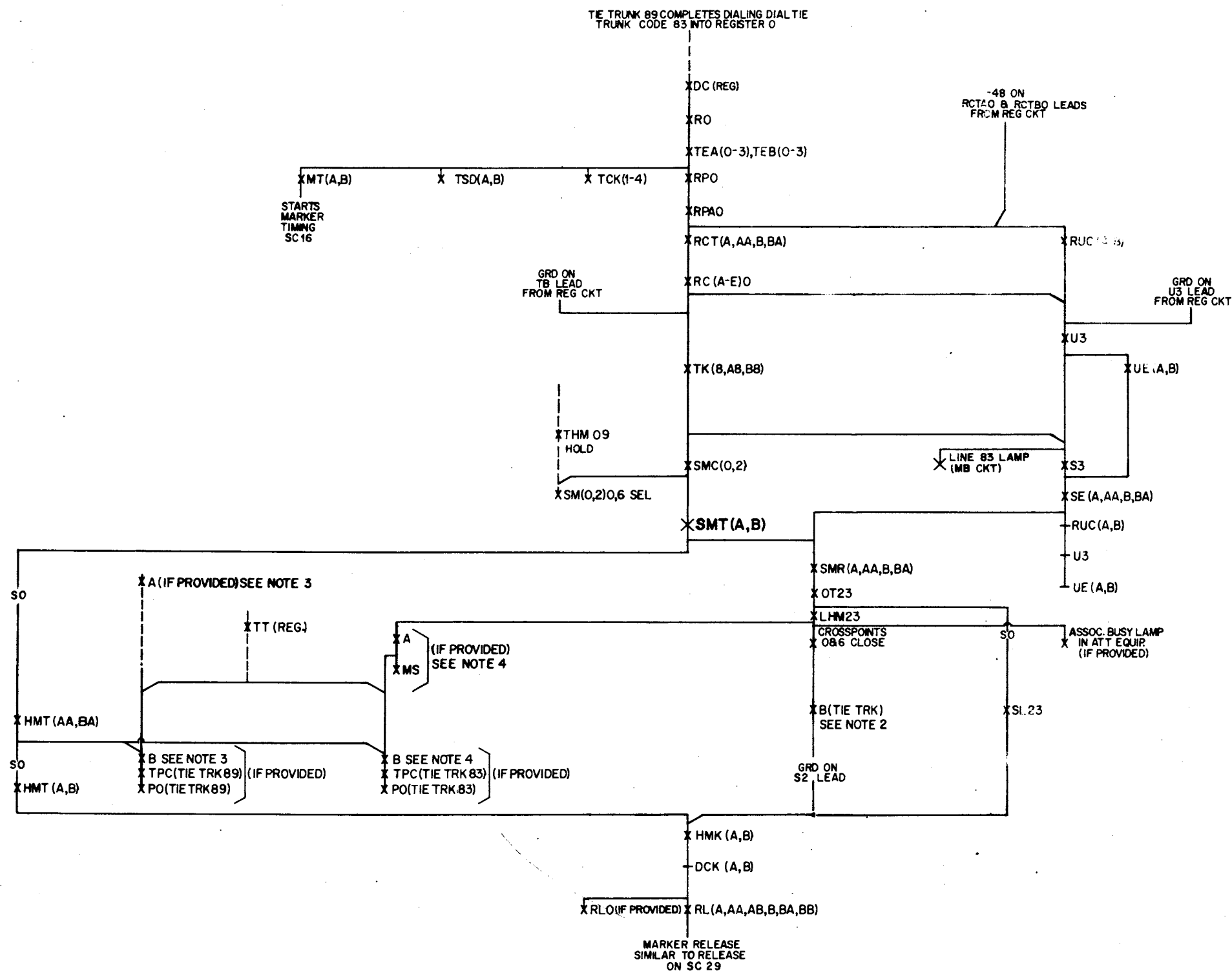
SC 30
CODE 8 TIE TRUNK DIAL TONE CONNECTION
SEE NOTE 1

- SHEET NOTES:
- SC 30 ASSUMES THE FOLLOWING:
(A) NO OTHER LINE, TRUNK, OR REGISTER IS BIDDING FOR THE MARKER.
(B) THE PREVIOUS MARKER OPERATION HAS LEFT THE (RAOA) AND (RAOB) RELAYS OPERATED SO THAT REGISTER 0 IS SELECTED ON THIS CALL.
(C) THE PREVIOUS MARKER OPERATION HAS LEFT THE (TRLA) AND (TRLB) RELAYS OPERATED SO THAT LINKS IN THE 12-19 GROUP ARE TESTED FIRST.
(D) THE PREVIOUS MARKER OPERATION HAS LEFT LINK SEQUENCE CONTROL IN CONDITION SO THAT THE (WIL) AND (ZL) RELAYS WILL REMAIN OPERATED AFTER THE (LTAA) AND (LTBA) RELAYS OPERATE DURING THIS MARKER OPERATION.
(E) LINK 12 IS IDLE.
(F) NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRAIL OR PROGRESS TO A TROUBLE RELEASE.
 - LT2 TO LT9 RELAYS (OPTION 22) OR LT2 TO LT9 AND LTS2 TO LTS9 RELAYS (OPTION 9) CORRESPONDING TO IDLE LINKS IN GROUP BEING TESTED OPERATE.
 - LINK BUSY LAMPS ASSOCIATED WITH IDLE LINKS IN GROUP BEING TESTED MOMENTARILY LIGHT IN THE MAKE BUSY AND BUSY DISPLAY CKT.



SHEET NOTES:

1. SC 31 ASSUMES THE FOLLOWING:
 - (A) DIAL TIE TRUNK 83 IS IDLE.
 - (B) LINK 06 WAS USED FOR THE TRUNK TO REGISTER DIAL TONE CONNECTION.
 - (C) NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
2. RELAY B ON TIE TRUNK PER SD-65718-01 OR EQUIVALENT RELAY ON SIMILAR TIE TRUNKS.
3. RELAY A, B, & MS ASSOCIATED WITH TIE TRUNK 89.
4. RELAY A, B, & MS ASSOCIATED WITH TIE TRUNK 83.



LINE, LINK, AND MARKER CIRCUIT

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1. SC 32 ASSUMES THE FOLLOWING:

- (A) NO OTHER REGISTER, LINE, OR TRUNK IS BIDDING FOR THE MARKER.
 - (B) THE PREVIOUS MARKER OPERATION HAS LEFT THE UNITS SEQUENCE CONTROL IN CONDITION SO THAT THE (ZU) RELAY IS OPERATED DURING THIS MARKER OPERATION.
 - (C) ATTENDANT TRUNK "O" IS IDLE.
 - (D) LINK 12 WAS USED FOR THE STATION 39 TO REGISTER 0 DIAL TONE CONNECTION.
 - (E) NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
2. (S5) TO (S7) RELAYS CORRESPONDING TO IDLE ATTENDANT TRUNKS OPERATE.
 3. THE (RAOA) & (RAOB) RELAYS OPERATE ONLY IF THE (RAIA) & (RAIB) RELAYS ARE NOT OPERATED AT THE TIME.



SC 33

CENTRAL OFFICE OR RINGDOWN TIE TRUNK CALL TO BUSY STATION
MESSAGE REGISTRATION PULSE ON SLEEVE OF ANY LINK
(SEE NOTE 1)

TRUNK 8 COMPLETES DIALING 57
INTO REGISTER 1

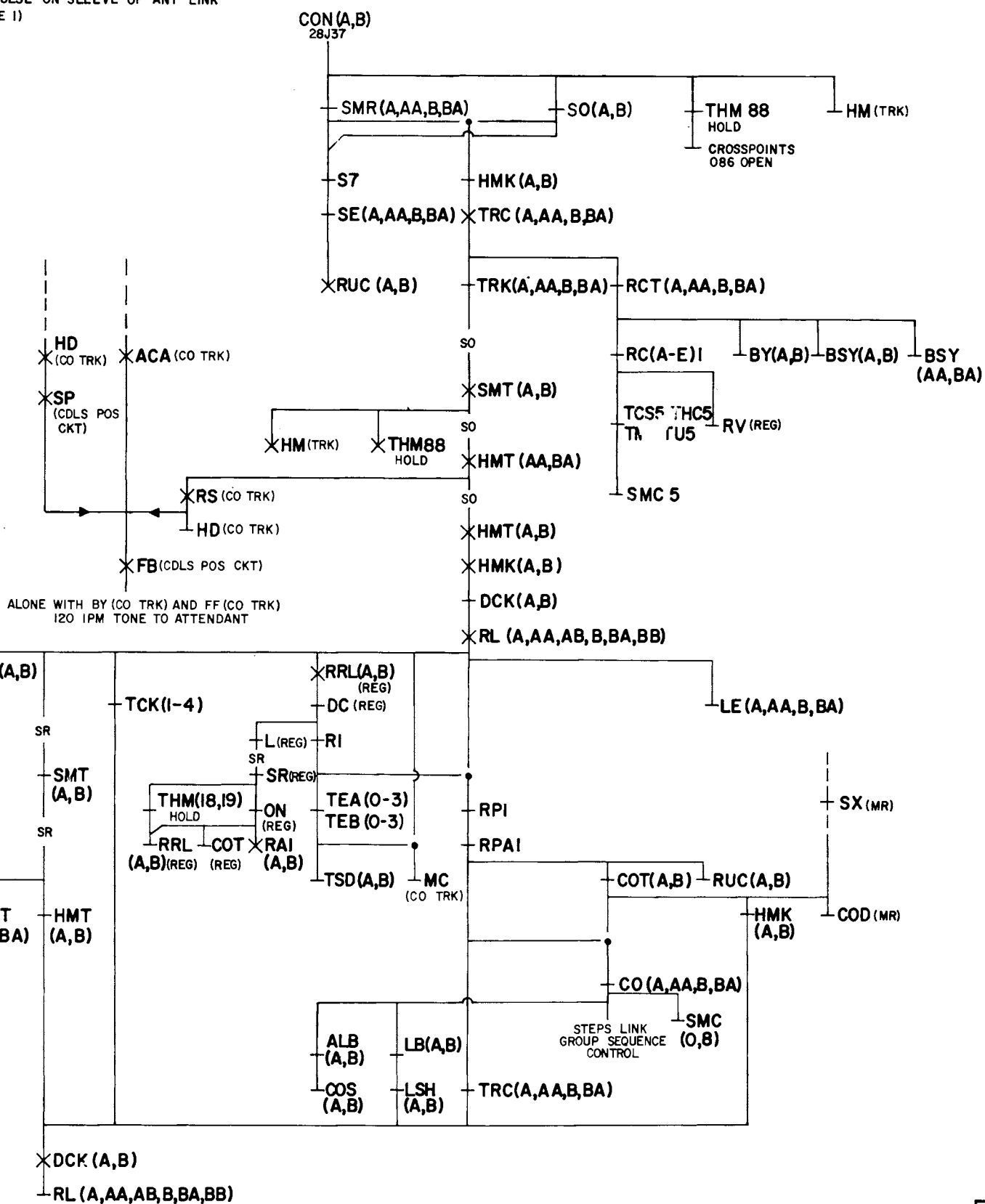
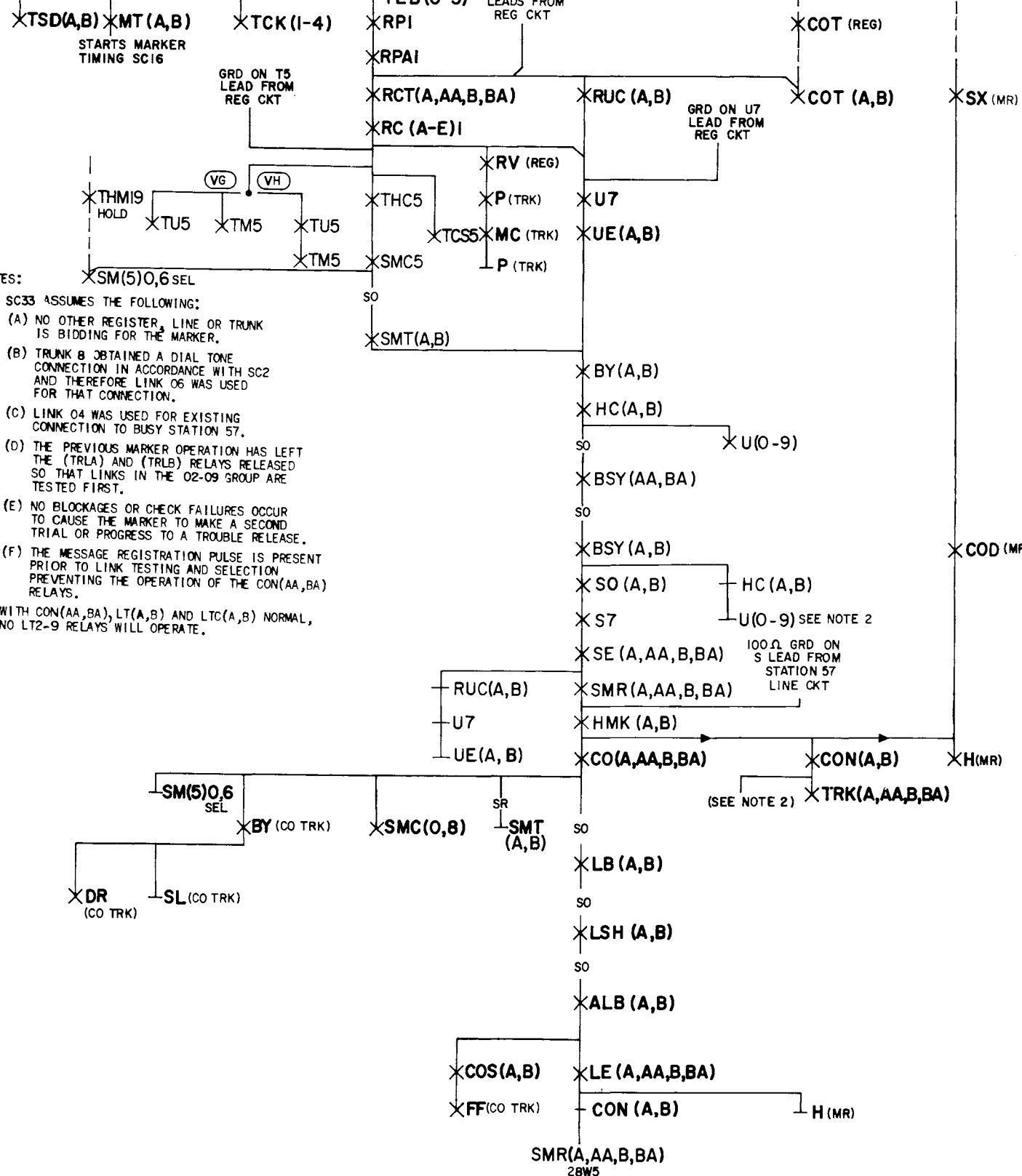
STARTS MARKER
TIMING SC16

GRD ON T5
LEAD FROM
REG CKT

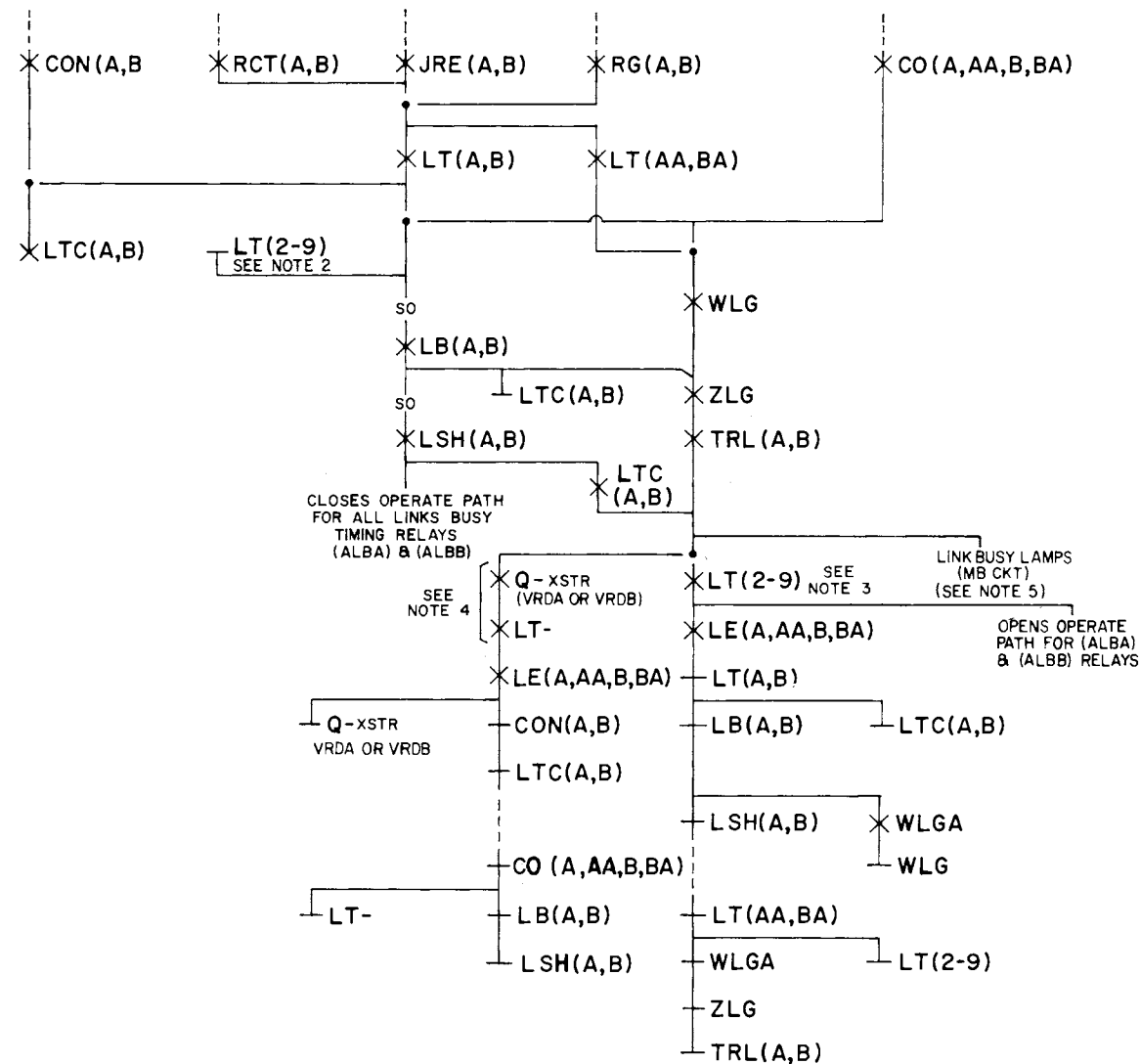
-48 ON
RCTAI & RCTBI
LEADS FROM
REG CKT

GRD ON U7
LEAD FROM
REG CKT

- NOTES:
- SC33 ASSUMES THE FOLLOWING:
 - NO OTHER REGISTER, LINE OR TRUNK IS BIDDING FOR THE MARKER.
 - TRUNK 8 OBTAINED A DIAL TONE CONNECTION IN ACCORDANCE WITH SC2 AND THEREFORE LINK 06 WAS USED FOR THAT CONNECTION.
 - LINK 04 WAS USED FOR EXISTING CONNECTION TO BUSY STATION 57.
 - THE PREVIOUS MARKER OPERATION HAS LEFT THE (TRLA) AND (TRLB) RELAYS RELEASED SO THAT LINKS IN THE 02-09 GROUP ARE TESTED FIRST.
 - NO BLOCKAGES OR CHECK FAILURES OCCUR TO CAUSE THE MARKER TO MAKE A SECOND TRIAL OR PROGRESS TO A TROUBLE RELEASE.
 - THE MESSAGE REGISTRATION PULSE IS PRESENT PRIOR TO LINK TESTING AND SELECTION PREVENTING THE OPERATION OF THE CON(AA,BA) RELAYS.
 - WITH CON(AA,BA), LT(A,B) AND LTC(A,B) NORMAL, NO LT2-9 RELAYS WILL OPERATE.



SC 34
LINK SHIFT TIMING
(ALL LINKS BUSY IN
FIRST GROUP TESTED
SEE NOTE 1)

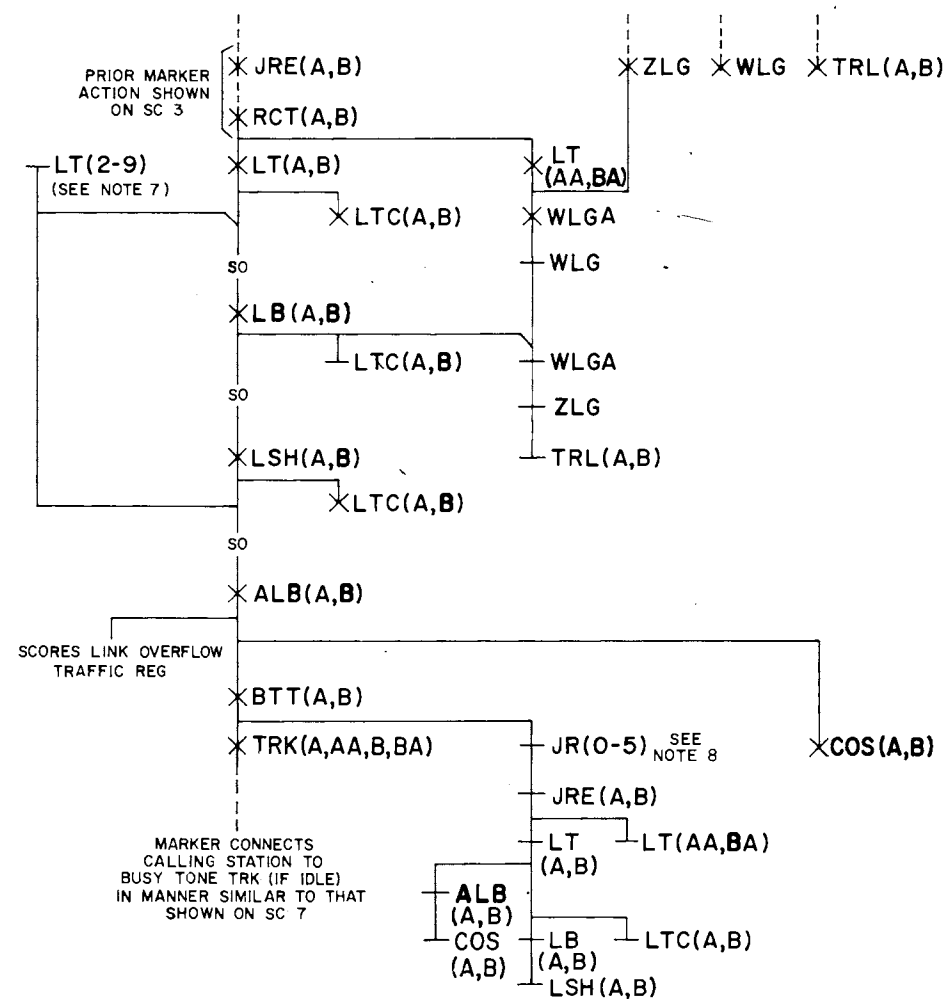


NOTES:

- SC 34 ASSUMES THAT THE (WLG), (ZLG), (TRLA), AND (TRLB) RELAYS ARE RELEASED AT THE START OF THE MARKER OPERATION.
- NO (LT2) TO (LT9) RELAYS OPERATE SINCE ALL LINKS IN FIRST GROUP TESTED ARE BUSY OR IN THE CAMP-ON OPERATION, THE LINK BEING USED BY THE BUSY STATION IS NOT IN FIRST GROUP.
- LT2 TO LT9 RELAYS CORRESPONDING TO IDLE LINKS IN SECOND GROUP OPERATE.
- Q- TRANSISTOR AND LT- RELAY CORRESPONDING TO LINK BEING USED BY THE BUSY STATION OPERATES.
- LINK BUSY LAMPS CORRESPONDING TO IDLE LINKS IN SECOND GROUP WILL MOMENTARILY LIGHT OR IF A CAMP-ON OPERATION IS INVOLVED, THE LAMP CORRESPONDING TO THE LINK BEING USED BY THE BUSY STATION WILL HAVE ALREADY BEEN LIT.
- SC 35 ASSUMES THAT THE (WLG), (ZLG), (TRLA), AND (TRLB) RELAYS ARE OPERATED AT THE START OF THE MARKER OPERATION.
- NO LT2 TO LT9 RELAYS OPERATE SINCE ALL LINKS IN BOTH GROUPS ARE BUSY.
- (JRO) TO (JRS) RELAYS CORRESPONDING TO JUNCTION SELECTED FOR THIS CALL AT AN EARLIER STAGE OF THE MARKER OPERATION. SEE SC 3.

SC 35

ALL LINKS BUSY-STATION TO STATION
CALL TERMINATING CONDITION
(SEE NOTE 6)



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LINE, LINK AND MARKER CIRCUIT

2

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CIRCUIT REQUIREMENTS																				DRAWING ISSUE	
APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				TEST SET		DIRECT CURRENT FLOW REQ.				REMARKS	1 2B 16B	P.D. E.H. J.S. H.P. P.D.B.		
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT. PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST WDG.	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.							
MAGNETS																					
0	324AJ, 324-- XBR SW	ZZ YA	12																		
THM 00-09 HOLD				6A					R(THM-)	GRD 1,2,3	0		31.5	30							
SM 00-09 SEL									R(THM-)	GRD 4	0		75	71							
				101					LT MAG OR TST RB	GRD	0		36.5	34.5							
1	324AJ, 324-- XBR SW	ZZ YA	13																		
THM 10-19 HOLD				6A					R(THM-)	GRD 1,5	0		31.5	30							
SM 10-19 SEL									R(THM-)	GRD 6	0		75	71							
				101					LT MAG OR TST RB	GRD	0		36.5	34.5							
2	324AJ, 324-- XBR SW	ZV ZX	14																		
LHM 20-29 HOLD				6A					R(LHM-)	GRD 1	0		31.5	30							
SM 20-29 SEL																					
				101					LT MAG OR TST RB	GRD	0		36.5	34.5							
3	324AJ, 324-- XBR SW	ZV ZX	14																		
LHM 30-39 HOLD				6A					R(LHM-)	GRD 1	0		31.5	30							
SM 30-39 SEL									R(LHM-)	GRD 7	0		62	59							
				101					LT MAG OR TST RB		0		36.5	34.5							
4	324AJ, 324-- XBR SW	ZV ZX	13																		
LHM 40-49 HOLD				6A					R(LHM-)	GRD 1	0		31.5	30							
SM 40-49 SEL									R(LHM-)	GRD 7	0		62	59							
				101					LT MAG OR TST RB		0		36.5	34.5							
5	324AJ, 324-- XBR SW	ZV ZX	13																		
LHM 50-59 HOLD				6A					R(LHM-)	GRD 1	0		31.5	30							
SM 50-59 SEL									R(LHM-)	GRD 7	0		62	59							
				101					LT MAG OR TST RB		0		36.5	34.5							
TEST NOTES:																					
1. SEE BSP FOR DEFINITION OF OPERATE.																					
2. WHEN TESTING HOLD MAGS. (THM00-04) MAKE BUSY THE ASSOCIATED CENTRAL OFFICE TRUNK AND INSULATE 6(HM) OF THE ASSOCIATED CENTRAL OFFICE TRUNK.																					
3. WHEN TESTING HOLD MAGS. (THM05) & (THM06) MAKE BUSY THE ASSOCIATED ATTENDANT'S TRUNK AND INSULATE 6(AC) OF THE ASSOCIATED ATTENDANT'S TRUNK.																					
4. PAR. COMB. (THM08) & (THM09), WHEN TESTING HOLD MAGS. (THM08) & (THM09) BLOCK (RA0A) NO. & (RA0B) NO.																					
5. WHEN TESTING HOLD MAGS. (THM10-15) BLOCK RELAY (JTB) NO. WHEN TESTING HOLD MAGS. (THM16) & (THM17) BLOCK RELAY (JTB) NO.																					
6. PAR. COMB. (THM18) & (THM19). WHEN TESTING HOLD MAGS. (THM18) & (THM19) BLOCK (RA1A) NO. & (RA1B) NO.																					
7. PAR. COMB. (LHM-) AND (CO-) FOR USE WHEN "Y" OPTION IS PROVIDED.																					
PBX SYSTEMS NO. 756A LINE, LINK AND MARKER CIRCUIT															SD-65741-01- F1						
BELL TELEPHONE LABORATORIES, INC.															PRINTED IN U.S.A.						

CIRCUIT REQUIREMENTS																				DRAWING ISSUE	
APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				TEST SET		DIRECT CURRENT FLOW REQ.				REMARKS	1 2B 16B	P.D. E.H. J.S. H.P. P.D.B.		
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT. PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST WDG.	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.							
6																					
LHM 60-69 HOLD	324AJ, 324-- XBR SW	ZW ZY	12																		
SM 60-69 SEL				6A					R(LHM-)	GRD 1	0		31.5	30							
									R(LHM-)	GRD 2	0		62	59							
				101					LT MAG OR TST RB		0		36.5	34.5							
7	324AJ, 324-- XBR SW	ZW ZY	12																		
LHM 70-79 HOLD				6A					R(LHM-)	GRD 1	0		31.5	30							
SM 70-79 SEL									R(LHM-)	GRD 2	0		62	59							
				101					LT MAG OR TST RB		0		36.5	34.5							
8	324AJ, 324-- XBR SW	ZV ZX	12																		
LHM 80-89 HOLD				6A					R(LHM-)	GRD 1,3,4	0		31	30							
SM 80-89 SEL										5	0										
				101					LT MAG OR TST RB		0		36.5	34.5							
TEST NOTES:																					
1. SEE BSP FOR DEFINITION OF OPERATE.																					
2. PAR. COMB. (LHM-) AND (CO-) FOR USE WHEN "Y" OPTION IS PROVIDED.																					
3. WHEN TESTING HOLD MAGS. (THM85-89) MAKE BUSY THE ASSOCIATED CENTRAL OFFICE TRUNK AND INSULATE 6(HM) OF THE ASSOCIATED CENTRAL OFFICE TRUNK.																					
4. WHEN TESTING HOLD MAG. (THM80) MAKE BUSY THE ASSOCIATED ATTENDANT'S TRUNK AND INSULATE 6(AC) OF THE ASSOCIATED ATTENDANT'S TRUNK.																					
5. WHEN TESTING HOLD MAGS. (THM81-84) BLOCK RELAY (JTB) NO.																					
PBX SYSTEMS NO. 756A LINE, LINK AND MARKER CIRCUIT															SD-65741-01- F1						
BELL TELEPHONE LABORATORIES, INC.															PRINTED IN U.S.A.						

CIRCUIT REQUIREMENTS																				DRAWING ISSUE
NO. 756A LINE, LINK AND MARKER CIRCUIT																				
APPARATUS				MECH REQ		CIRCUIT PREPARATION				TEST SET PREP		DIRECT CURRENT FLOW REQ		REMARKS						
DESIG	CODE	OPTION	FIG	BSP FIG	CONT PRESS	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR		AFTER SOAK MA.	TEST MA.	READJ MA.			
								CONN BAT.	CONN GRD											
FFAYS	AF79	20	20	205				L REL	U REL	B/G			O		9.7	9.2				
								UNDER TST	UNDER TST				NO		4.3	4.5				
ACA	AJ54		7	306			(DCKA)O	L(ACA)	U(ACA)	B/G			O		38	36			STRAP CONTACTS 3AND5	
ACB	AJ54		7	306			(DCKA)G	L(ACB)	U(ACB)	B/G			O		38	36			STRAP CONTACTS 3AND5	
								L(ACB)	U(ACB)	B/G			NO		21	22.5			(ACB)	
ALBA	AJ54		9,22	306			(CCSA)NO	L(ALBA)	U(ALBA)	B/G			O		38	36			STRAP CONTACTS 3 AND 5	
							(9TTA)NO	L(ALBA)	U(ALBA)	B/G			NO		21	22.5			(ALBA)	
							(ACA)NO													
							(ALEA)													
ALBB	AJ54		9,22	306			(CCSB)NO	L(ALBB)	U(ALBB)	B/G			O		38	36			STRAP CONTACTS 3 AND 5	
							(8TTB)NO	L(ALBB)	U(ALBB)	B/G			NO		21	22.5			(ALBB)	
							(ACB)NO													
							(1(ALBB)													
ARBA	AF55		4	26			(11(RAOB)	L(ARBA)	U(ARBA)	B/G			O		37	35			STRAP CONTACTS 4 AND 10	
							(1,2(ARBA)												(ARBA)	
ARBB	AF55		4	26			(9(RAOB)	L(ARBB)	U(ARBB)	B/G			O		37	35			STRAP CONTACTS 4 AND 10	
							(1,2(ARBB)												(ARBB)	
B	AF79	20	20	205				L REL	U REL	B/G			O		9.7	9.2				
								UNDER TST	UNDER TST				NO		4.3	4.5				
BSYA	AJ54		7	306			(BYA)NO	L(BSYA)	U(BSYA)	B/G			O		38	36			STRAP CONTACT 5(BSYA)	
							(4,10,11,12	L(BSYA)	U(BSYA)	B/G			NO		21	22.5				
							(BSYA)													
							(2(BSYBA)													
BSYAA	AJ54		8	306			(2,12(BSYAA)	L(BSYAA)	U(BSYAA)	B/G			O		38	36				
							(2(BSYBA)	L(BSYAA)	U(BSYAA)	B/G			NO		21	22.5				
BSYB	AJ54		7	306			(12(BSYAA)	L(BSYB)	U(BSYB)	B/G			O		38	36			STRAP CONTACT 5(BSYB)	
							(BYB)NO	L(BSYB)	U(BSYB)	B/G			NO		21	22.5				
							(4,10,11,12													
							(BSYB)													
BSYBA	AJ54		8	306			(2,12(BSYBA)	L(BSYBA)	U(BSYBA)	B/G			O		38	36				
							(12(BSYAA)	L(BSYBA)	U(BSYBA)	B/G			NO		21	22.5				
BTCA	AF55		8	26			(8TTA)NO	L(BTCA)	U(BTCA)	B/G			O		37	35				
							(2,4,11,													
							(12(BTCA)													
BTCB	AF55		8	26			(8TTB)NO	L(BTCB)	U(BTCB)	B/G			O		34.5	32.5				
							(2,4,11,													
							(12(BTCB)													
BTTA	AJ12		8	220			(ALBA)NO	L(BTTA)	U(BTTA)	B/G			O		42.5	40.5			STRAP CONTACTS 3,4,5,7,8 AND	
							(NAA)NO												9(BTTA)	
							(1,10,11(BTTA)													
							(10(COTA)													
							(BTCA)NO													
BTTB	AJ12		8	220			(ALBB)NO	L(BTTB)	U(BTTB)	B/G			O		42.5	40.5			STRAP CONTACTS 3,4,5,7,8 AND	
							(NCB)NO												9(BTTB)	
							(1,10,11(BTTB)													
							(10(COTB)													
							(BTCB)NO													
BTTC	1/2AK7	XA	8	203									O		27	25.5			MOUNTED WITH (CCC)	
													R		10.5	11				
BYA	AF64		7	219			(2,5,6,11,		U(BYA)	GRD			O		11.2	10.6				
							(12(BYA)													
BYB	AF64		7	219			(2,5,6,11,		U(BYB)	GRD			O		11.2	10.6				
							(12(BYB)													
CCC	1/2AK7	XA	8	203									O		27	25.5			MOUNTED WITH (BTTC)	
													R		10.5	11				
CO20	EA43	XW,Y	3	11/11	H								O		10.2	9.7				
CO79		XX											NO		3.8	4.0				

1 IF OPTION WZ IS PROVIDED (ISSUE 36B), INSULATE 10M OF (BTC-) INSTEAD OF CONTACT 2.

LINE, LINK AND MARKER CIRCUIT

SD-6574I-OI-F2

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CIRCUIT REQUIREMENTS																				DRAWING ISSUE
APPARATUS				MECH REQ			CIRCUIT PREPARATION					DIRECT CURRENT FLOW REQ				REMARKS				
DESIG	CODE	OPTION	FIG	BSP FIG	CONT PRESS	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.		READJ MA.			
								CONN BAT.	CONN GRD											
COA	AJ12		8	220			7(LEAA) 10(COTA) 6,7,9,12 (COA) (COAA) NO	L(COA)	U(COA)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (COA) & (COAA) STRAP CONTACTS 3,5,6,7 AND 11(COA)			
COAA	AJ202		8	500			7(LEAA) 10,12(COTA) (COA) NO 4,8,9,10,11,12 (3,24(COAA)	L(COAA)	U(COAA)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (COA) & (COAA)			
COAL	1/2 AK24	WT	11	12			1,4,5(COAL)		2L(COAL)	GRD			0		7.8	7.4	MOUNTED WITH XCAL			
COB	AJ12		8	220			8(LEAA) 10(COTB) 6,7,9,12 (COB) (COBA) NO	L(COB)	U(COB)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (COB) & (COBA) STRAP CONTACTS 3,5,6,7 AND 11 (COB)			
COBA	AJ202		8	500			8(LEAA) 10,12(COTB) (COB) NO 4,8,9,10,11, 12,13,24 (COBA)	L(COBA)	U(COBA)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (COB) & (COBA)			
CONA	AF132		8	61			*	L(CONA)	U(CONA)	B/G	2		0		34.5	32.5	WDG ALONE			
CONAA	AF132	WS	8	61			*	L(CONA)	U(CONA)	B/G	2		0		76.5	72.5	PAR COMB. (CONA) & (CONAA)			
CONAA	AJ15	WT	8	249			**	L(CONA)	U(CONA)	B/G	1,2		0		84.8	80.8	PAR COMB. (CONA) & (CONAA)			
CONB	AF132		8	61			***	L(CONB)	U(CONB)	B/G	2		0		34.5	32.5	WDG ALONE			
CONBA	AF132	WS	8	61			***	L(CONB)	U(CONB)	B/G	2		0		76.5	72.5	PAR COMB (CONB) & (CONBA)			
CONBA	AJ15	WT	8	249			****	L(CONB)	U(CONB)	B/G	1,2		0		84.8	80.8	PAR COMB (CONB) & (CONBA)			

CIRCUIT REQUIREMENTS																							DRAWING ISSUE	
APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				TEST SET PREP		DIRECT CURRENT FLOW REQ.					REMARKS		DRAWING ISSUE				
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT. PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG.	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ. MA.	REMARKS		DRAWING ISSUE					
								CONN. BAT.	CONN. GRD.															
COTA	AF55		8	26			18(RPA0) 18(RPA1) .8,10 (COTA)	L(COTA)		BAT.			0		37	35		STRAP CONTACT 7 (COTA)	28	100				
COTB	AF55		8	26			17(RPA0) 17(RPA1) .8,10 (COTB)	L(COTA)		BAT.			0		37	35		STRAP CONTACT 7 (COTB)	50	100				
DCKA	AF10		8	214			(RLAA)NO 12(DCKA) (TOKA)NO 5(RLBA)	U(DCKA)	GRD			0		7.6	7.2									
DCKB	AF10		8	214			(RLBA)NO (TOKB)NO 12(DCKB) 5(RLAA)	U(DCKB)	GRD			0		7.6	7.2									
HCA	AF132		7	61			(BYA)NO (THC2)- (THC7)NO	L(HCA)	U(HCA)	B/G		0		34.5	32.5									
HCB	AF132		7	61			(BYB)NO (THC2)- (THC7)NO	L(HCB)	U(HCB)	B/G		0		34.5	32.5									
HMKA	AF88		7	42			4(SOA) 4(SMTA) (TRKA)NO (TRKAA) NO (JTAA)NO (COTA)NO (BTTA)NO (DCKA)Q	U(HMKA)	GRD			0		33.5	31.5		STRAP CONTACTS 1 AND 11 (HMKA)							
HMKB	AF88		7	42			4(SOB) 4(SMTB) (HMTB)NO (TRKB)NO (TRKBA) NO (COTB)NO (BTTB)NO (DCKB)Q	U(HMKB)	GRD			0		33.5	31.5		STRAP CONTACTS 1 AND 11 (HMKB)							
HMTA	AJ62		8	313			(HMTAA)NO 4,10,11 (HMTA) (TRKA)NO (TRKAA)NO	L(HMTA)	U(HMTA)	B/G		0		38	36		STRAP CONTACTS 8,9 (HMTA)							
HMTAA	AJ54		8	306			(HMTA)NO 1,4,12(HMTAA) (SMTA)NO (ALBA)NO	L(HMTAA)	U(HMTAA)	B/G		0		38	36		STRAP CONTACTS 5,7 AND 9 (HMTAA)							
HMTB	AJ62		8	313			(HMTBA)NO 4,10,11 (HMTB) (TRKB)NO (TRKBA)NO	L(HMTB)	U(HMTB)	B/G		0		38	36		STRAP CONTACTS 8,9 (HMTB)							
HMTBA	AJ54		8	306			(HMTB)NO (SMTB)NO (ALBB)NO 1,4,12(HMTBA)	L(HMTBA)	U(HMTBA)	B/G		0		38	36		STRAP CONTACTS 5,7 AND 9 (HMTBA)							

LINE, LINK AND MARKER CIRCUIT

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CIRCUIT REQUIREMENTS																							DRAWING ISSUE	
APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				TEST SET PREP		DIRECT CURRENT FLOW REQ.					REMARKS		DRAWING ISSUE				
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT. PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG.	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ. MA.	REMARKS		DRAWING ISSUE					
								CONN. BAT.	CONN. GRD.															
ICTA	AF140		8	304			2(NCB) 4,8 (ICTA) (TRKA)NO (TRKAA) NO	L(ICTA)	U(ICTA)	B/G			0		9.1	8.6		STRAP CONTACTS 3,5,9 AND 7 (ICTA)	28	100				
ICTB	AF140		8	304			5(NCA) 5(NCB) 4,8 (ICTB) (TRKB)NO (TRKBB) NO	L(ICTB)	U(ICTB)	B/G			0		9.1	8.6		STRAP CONTACTS 5,7,9 AND 3 (ICTB)	50	100				
IN20-IN29	AK7		1	203			8(IN-)	2U(IN-)	GRD			0		27	25.5									
JR0-JR5	AF132		7	61			4,7,10,11, 12,5(JR)	L(JR-)	U(JR-)	B/G		0		34.5	32.5									
JRAL	AF115		11	274			4(JRAL)	U(JRAL)	GRD			0		7.1	6.7									
JREA	AJ12		7	220			(TRKA)NO (TRKAA)NO 4,6,10(JREA)	L(JREA)	U(JREA)	B/G		0		42.5	40.5		STRAP CONTACTS 2,3,5,6,7,9 (JREA)							
JREB	AJ12		7	220			(TRKB)NO (TRKBA)NO 4,6,10(JREB)	L(JREB)	U(JREB)	B/G		0		42.5	40.5		STRAP CONTACTS 2,3,5,6,7,9 (JREB)							
JTA	AF132		7	61			22(RPA0) 22(RPA1) 2,3,4,6, 7,8,9, (JTA) (JTAA)NO	L(JTA)	U(JTA)	B/G		0		34.5	32.5									
JTAA	AJ28		7	257			(JTA)NO 9,11(JTAA)	L(JTAA)	U(JTAA)	B/G	2	S	O		12.4	11.8								
JTB	AF132		7	61			21(RPA0) 21(RPA1) 2,3,4,6, 7,8,9 (JTB) (JTBA)NO	L(JTB)	U(JTB)	B/G		0		34.5	32.5									
JTBA	AJ28		7	257			(JTB)NO 9,11(JTBA)	L(JTBA)	U(JTBA)	B/G	2	S	O		12.4	11.8								
L20-L29	AF141		1	225	H		4(L) 4(L)	1L(L)	2U(L)	M	I	P/S	0		17	16								
L30-L59	EA26	K	1,2	4/-	H		2T(L) 2T(L)	3RT(L)	GRD	I		0		22	21									
L30-L59	EA44	G	1,2	4/-	H		2T(L) 2T(L)	3RT(L)	GRD	I		0		22	21									
L60-L79	EA26	F	2	4/-	H		2T(L) 2T(L)	3RT(L)	GRD	I		0		22	21									
L60-L79	EA44	E	2	4/-	H		2T(L) 2T(L)	3RT(L)	GRD	I		0		22	21									
LAL1	AF85		11	401			3(LAL1)	U(LAL1)	GRD			0		36	34									
								U(LAL1)	GRD			NO		22.5	23.5									
								U(LAL1)	GRD			R		9.9	10.5									

TEST NOTES:
1. BLOCK ASSOCIATED LINE HOLD MAGNET OFF-NORMAL SPRINGS OPERATED.
2. IF OPTION WX IS PROVIDED (ISSUE 36B), ALSO INSULATE 2 OF (JT-A).

LINE, LINK, AND MARKER CIRCUIT

SD-6574I-0I-F3

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CIRCUIT REQUIREMENTS																		DRAWING ISSUE	
APPARATUS				MECH REQ			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ							REMARKS	12B NC WM
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.			
								CONN. BAT.	CONN. GRD.										
LAL2	AF85		11		401		3(LAL2)		U(LAL2)	GRD				O		36	34	33D FED R-P	
									U(LAL2)	GRD				NO		22.5	23.5		
									U(LAL2)	GRD				R		9.9	10.5		
LAL2A	AF85		11		401		3(LAL2A)		U(LAL2A)	GRD				O		36	34		
									U(LAL2A)	GRD				NO		22.5	23.5		
									U(LAL2A)	GRD				R		9.9	10.5		
LBA	AJ27		9,22		213		(LTA)NO (COA)NO (ALBA)NO (LTA)NO (COA)NO (LSHA)NO 12(LBA)	L(LBA)		BAT.				O		14.9	14.2	STRAP CONTACTS 4,5 & 7(LBA) WITH ZN OPTION	
								L(LBA)		BAT.				NO		8.1	8.6		
									U(LBA)	GRD				O		14.9	14.2		
									U(LBA)	GRD				NO		8.1	8.6	STRAP CONTACTS 5,7(LBA) WITH ZO OPTION	
LBB	AJ27		9,22		213		(LTB)NO (COB)NO (ALBB)NO (LTB)NO (COB)NO (LSHB)NO 12(LBB)	L(LBB)		BAT.				O		14.9	14.2	STRAP CONTACTS 4,5 & 7(LBB) WITH ZN OPTION	
								L(LBB)		BAT.				NO		8.1	8.6		
									U(LBB)	GRD				O		14.9	14.2		
									U(LBB)	GRD				NO		8.1	8.6	STRAP CONTACTS 5,7(LBB) WITH ZO OPTION	
LCK1	1/2 AK4		9,22		202		8(LEA) 8(LEB) 8,9,12(LCK1)	1U(LCK1)	2U(LCK1)	B/G				O		11.9	11.3	MOLNTED WITH LCK2	
LCK2	1/2 AK4		9,22		202		1,5(LCK2)		2L(LCK2)	GRD				O		11.9	11.3	MOLNTED WITH LCK1	
LEA	AF55		9,22		26		(LTAA)NO 2,19(COBA) (COBA)NO 11,12(LEA) (LEAA)NO (COAA)NO	L(LEA)	U(LEA)	B/G				O		37	35	WDG ALONE PAR. COMB. (LEA) & (LEAA) STRAP CONTACTS 4 & 7(LEA)	
														O		82	78		
LEAA	AJ12		9,22		220		(LTAA)NO 2,19(COBA) (LEA)NO (COAA)NO	L(LEAA)	U(LEAA)	B/G				O		42.5	40.5	WDG ALONE PAR. COMB. (LEAA) & (LEA) STRAP CONTACTS 4,7,8 & 10(LEAA)	
														O		95	90		
LEB	AF55		9,22		26		(LTBA)NO 3,10(COAA) (LEBA)NO (COSB)NO 11,12(LEB) (COBA)NO	L(LEB)	U(LEB)	B/G				O		37	35	WDG ALONE PAR. COMB. (LEB) & (LEBA) STRAP CONTACTS 4 & 7(LEB)	
														O		82	78		
LEBA	AJ12		9,22		220		(LTBA)NO 3,10(COAA) (LEB)NO (COBA)NO	L(LEBA)	U(LEBA)	B/G				O		42.5	40.5	WDG ALONE PAR. COMB. (LEBA) & (LEB) STRAP CONTACTS 4,7,8 AND 10(LEBA)	
														O		95	90		
LSHA	AF113	ZO	9,22		273		(LBA)NO (ALBA)NO (LTCA)NO (LEA)NO (LEAA)NO 6(LSHA)		U(LSHA)	GRD				O		8.7	8.2	STRAP CONTACT 9(LSHA)	
LSHB	AF113	ZO	9,22		273		(LBB)NO (ALBB)NO (LTCB)NO (LEB)NO (LEBA)NO 6(LSHB)		U(LSHB)	GRD				O		8.7	8.2	STRAP CONTACT 9(LSHB)	
LT2	280EE		9		8		3(TRLB) 2(CONAA) 2(CONBA) 2(LTA) 2(LTB) (LTS2)NO	2(CONAA) 3(TRLB) 2(CONAA) 3(TRLB) 2(LTA) 3(TRLB) 2(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	O NO O NO O NO	-40 -40 -40 -40 0 0		0.9 0.6 6.4 3.5 9.9 4.7			
LT2	AJ68		22		277		1,2,4,6,8,10,12 LT2,1(CONAA)	L(LT2) L(LT2)	U(LT2) U(LT2)	B/G B/G				O NO		28.4 18	27 19		
LINE, LINK, AND MARKER CIRCUIT																		SD-65741-01-F4	
BELL TELEPHONE LABORATORIES INCORPORATED																			

6-7482 (10-68)

CIRCUIT REQUIREMENTS																	DRAWING ISSUE
APPARATUS				MECH REQ			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ				REMARKS		
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS.	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	
								CONN BAT.	CONN GRD								
LT3	280EE		9				4(TRLB) 3(CONAA) 3(CONBA) 3(LTA) 3(LTB) (LTS3)NO	3(CONAA) 4(TRLB) 3(CONAA) 4(TRLB) 3(LTA) 4(TRLB) 3(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	0 NO -40 -40 -40 -40	-40 -40 6.4 3.5 9.9 4.7		C.9 0.6 6.1 3.7	
LT3	AJ68		22	277			1,2,4,6,8,10,12 (LTS3)(CONAA)	L(LT3)	U(LT3)	B/G				NO	28.4	27	
LT4	280EE		9				6(TRLB) 4(CONAA) 4(CONBA) 4(LTA) 4(LTB) (LTS4)NO	4(CONAA) 6(TRLB) 4(CONAA) 6(TRLB) 4(LTA) 6(TRLB) 4(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	0 NO -40 -40 -40 -40	-40 -40 6.4 3.5 9.9 4.7		0.9 0.6 6.1 3.7	
LT4	AJ68		22	277			1,2,4,6,8,10,12 (LTS4)(CONAA)	L(LT4)	U(LT4)	B/G				NO	28.4	27	
LT5	280EE		9				7(TRLB) 5(CONAA) 5(CONBA) 5(LTA) 5(LTB) (LTS5)NO	5(CONAA) 7(TRLB) 5(CONAA) 7(TRLB) 5(LTA) 7(TRLB) 5(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	0 NO -40 -40 -40 -40	-40 -40 6.4 3.5 9.9 4.7		0.9 0.6 6.1 3.7	
LT5	AJ68		22	277			1,2,4,6,8,10,12 (LTS5)(CONAA)	L(LT5)	U(LT5)	B/G				NO	28.4	27	
LT6	280EE		9				3(TRLA) 7(CONAA) 7(CONBA) 7(LTA) 7(LTB) (LTS6)NO	7(CONAA) 3(TRLA) 7(CONAA) 3(TRLA) 7(LTA) 3(TRLA) 7(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	0 NO -40 -40 -40 -40	-40 -40 6.4 3.5 9.9 4.7		0.9 0.6 6.1 3.7	
LT6	AJ68		22	277			1,2,4,6,8,10,12 (LTS6)(CONAA)	L(LT6)	U(LT6)	B/G				NO	28.4	27	
LT7	280EE		9				4(TRLA) 9(CONAA) 9(CONBA) 9(LTA) 9(LTB) (LTS7)NO	9(CONAA) 4(TRLA) 9(CONAA) 4(TRLA) 9(LTA) 4(TRLA) 9(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	0 NO -40 -40 -40 -40	-40 -40 6.4 3.5 9.9 4.7		0.9 0.6 6.1 3.7	
LT7	AJ68		22	277			1,2,4,6,8,10,12 (LTS7)(CONAA)	L(LT7)	U(LT7)	B/G				NO	28.4	27	
LT8	280EE		9				6(TRLA) 10(CONAA) 10(CONBA) 10(LTA) 10(LTB) (LTS8)NO	10(CONAA) 6(TRLA) 10(CONAA) 6(TRLA) 10(LTA) 6(TRLA) 10(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	0 NO -40 -40 -40 -40	-40 -40 6.4 3.5 9.9 4.7		0.9 0.6 6.1 3.7	
LT8	AJ68		22	277			1,2,4,6,8,10,12 (LTS8)(CONAA)	L(LT8)	U(LT8)	B/G				NO	28.4	27	
LT9	280EE		9				7(TRLA) 11(CONAA) 11(CONBA) 11(LTA) 11(LTB) (LTS9)NO	11(CONAA) 7(TRLA) 11(CONAA) 7(TRLA) 11(LTA) 7(TRLA) 11(LTA)	B/G B/G B/G B/G B/G B/G			P P P P S S	0 NO -40 -40 -40 -40	-40 -40 6.4 3.5 9.9 4.7		0.9 0.6 6.1 3.7	
LT9	AJ68		22	277			1,2,4,6,8,10,12 (LTS9)(CONAA)	L(LT9)	U(LT9)	B/G				NO	28.4	27	
LTA	AF132		9				10(LEAA) (LTCA)NO 2,3,4,5,7,8, 10,11(LTA)	L(LTA)	U(LTA)	B/G				0	34.5	32.5	
LTA	AJ15		22	249			10(LEAA) 1-12(LTA)	L(LTA)	U(LTA)	B/G				0	42.5	40.5	
LTAA	AJ12	9,22		220			10(LEAA) (RGA)NO (JREA)NO 2,3,4,7 (LTAA)	L(LTAA)	BAT.				0	42.5	40.5		
LTB	AF132		9				10(LEBA) (LCTB)NO 2,3,4,5,7,8, 9,10,11(LTB)	L(LTB)	U(LTB)	B/G				0	34.5	32.5	
LTB	AJ15		22	249			10(LEBA) 1-12(LTB)	L(LTB)	U(LTB)	B/G				0	42.5	40.5	
LTBA	AJ12	9,22		220			10(LEBA) (RGB)NO (JPB)NO 2,3,4,7(LTBA)	L(LTBA)	BAT.				0	42.5	40.5		
LTCA	AJ202		9				(LTA)NO (CONA)NO (LTA)NO (CONA)NO 1-8(LTCA)	L(LTCA)	U(LTCA)	B/G				0	42.5	40.5	
LTCA	AF24		22				(LTA)NO (CONA)NO 1-8(LTCA)	L(LTCA)	U(LTCA)	B/G				0	30.5	29	
LTCB	AJ202		9				(LTB)NO (CONB)NO (LTB)NO (CONB)NO 1-8(LTCB)	L(LTCB)	U(LTCB)	B/G				0	42.5	40.5	
LTCB	AF24		22				(LTB)NO (CONB)NO 1-8(LTCB)	L(LTCB)	U(LTCB)	B/G				0	30.5	29	

LINE, LINK, AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES
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CIRCUIT REQUIREMENTS

APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ.								REMARKS
DESIG.	CODE	OPTION	FIG.	BSP. FIG.	CONT. PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP.	SEE TEST NOTE	TEST WDG.	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ. MA.			
								CONN. BAT.	CONN. GRD.										
LTS2 LTS3	AF94		9	243			3(LT-) 23(COAA) 23(COBA) 12(LTAA) 12(LTBA) 1,2,4,6,10 11,12 (LTS-)	1L(LTS-) 2L(LTS-)		BAT. B/G			P S	0 0		21 12.6	20 12	STRAP CONTACTS 4,7 AND 8(LTS-)	
LTS4 LTS5	AF94		9	243			3(LT-) 22(COAA) 22(COBA) 12(LTBA) 1,2,4,6,10 11,12 (LTS-)	1L(LTS-) 2L(LTS-)		BAT. B/G			P S	0 0		21 12.6	20 12	STRAP CONTACTS 4,7 AND 8(LTS-)	
LTS6 LTS7	AF94		9	243			3(LT-) 21(COAA) 21(COBA) 8(LTAA) 8(LTBA) 1,2,4,6 10,11,12 (LTS-)	1L(LTS-) 2L(LTS-)		BAT. B/G			P S	0 0		21 12.6	20 12	STRAP CONTACTS 4,7 AND 8(LTS-)	
LTS8 LTS9	AF94		9	243			3(LT-) 20(COAA) 20(COBA) 8(LTAA) 8(LTBA) 1,2,4,6 10,11,12 (LTS-)	1L(LTS-) 2L(LTS-)		BAT. B/G			P S	0 0		21 12.6	20 12	STRAP CONTACTS 4,7 AND 8(LTS-)	
LUCA	AF132		7	61			8(UEB) 1,2,3,4, 5,6,7,9, 10,11,12 (LUCA)	L(LUCA)	U(LUCA)	B/G				0		34.5	32.5		
LUCB	AF132		7	61			6(UEB) 1,2,3,4, 5,6,7,9, 10,11,12 (LUCB)	L(LUCB)	U(LUCB)	B/G				0		34.5	32.5		
MAL	AF118		11	401			6(MAL)		U(MAL)	GRD				0		14	13.3		
MON2- MON7	AJ5	Y	3	220				L(MON-)		BAT.				0		13.3 95	12.6 90	WDG ALONE PAR COMB. (MON2)-(MON6)	
MON A,B,C	AJ205	XW,XX	3					L(MON-)		BAT.				0		170	160	PAR COMB. (MON A,B,C)	
MS	1/2AK23	20	20	3					2L REL UNDER TST	GRD				0		7.8	7.4	FOR EVEN NUMBERED CKT. ON UNIT.	
MS	1/2AK23	20	20	3					2U REL UNDER TST	GRD				0		7.8	7.4	FOR ODD NUMBERED CKT. ON UNIT.	
MTA	AF132		10	61			9(RLB) (TMA) NO 6(MTA)	L(MTA)	U(MTA)	B/G				0		34.5	32.5		
MTB	AF132		10	61			7(RLB) (TMB) NO 6(MTB)	L(MTB)	U(MTB)	B/G				0		34.5	32.5		

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LINE, LINK, AND MARKER CIRCUIT

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CIRCUIT REQUIREMENTS

APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW TEST						REMARKS
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT. PRESS.	ARM TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST WDG.			TEST FOR	AFTER SOAK MA.	TEST MA.	READJ. MA.			
								CONN. BAT.	CONN. GRD.										
NAA	AJ12		10	220			(NCA) NO (MTA) NO 11 (NAA)	L (NAA)	U (NAA)	B/G			C		42.5	40.5	STRAP CONTACTS 1, 3, 5, 7, (NAA).		
NAB	AJ12		10	220			(NCB) NO (MTB) NO 3 (NAB)	L (NAB)	U (NAB)	B/G			O		42.5	40.5	STRAP CONTACTS 1, 3, 5, 7, 9 AND 11 (NAB).		
NCA	AJ3		10	226			7 (TAA) (MTA) NO (BT TA) NO	L (NCA)	U (NCA)	B/G			O		18	17	STRAP CONTACTS 1, 2, 3, 4, 10 AND 11 (NCA).		
NCB	AJ3		10	226			7 (TAB) (MTB) NO (BTTB) NO	L (NCB)	U (NCB)	B/G			O		18	17	STRAP CONTACTS 1, 2, 3, 4, 10 AND 11 (NCB).		
NT	AF88		9, 22	42			10, 12 (NT)	L (NT) L (NT)		BAT. BAT			O NO		33.5 12.2	31.5 12.9	STRAP CONTACTS 1, 3, 5, 7, 9 AND 11 (NT).		
OT20-29	AK7		1	203			1, 5 (OT-) 12 (IN-)		2L (OT-) 2L (OT-)	GRD GRD			O NO		27 10.4	25.5 11			

TEST NOTES:

1. MAKE REGISTER 0 BUSY.
2. MAKE REGISTER 1 BUSY.

LINE, LINK, AND MARKER CIRCUIT

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CIRCUIT REQUIREMENTS																	DRAWING ISSUE		
APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ.					REMARKS	1	P.C.	
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP.	SEE TEST NOTE	TEST WDG.	TEST FOR	AFTER SOAK MA.	TEST MA.		READJ. MA.	2B	VZ M.S.
								CONN. BAT.	CONN. GRD.										
RCBO	AF111		5	270			(RCAO)NO (RCCO)NO (RCDO)NO (RCEO)NO 5,6,9,10,11, 12(RCBO)	L(RCBO)	U(RCBO)	B/G	1		0		42.5	40.5	WDG ALONE PAR COMB. (RCBO), (RCAO), (RCCO), (RCDO), (RCEO) STRAP CONTACTS 7 AND 8(RLBO)	30D	PJS GFH
RCBI	AF111		5	270			(RCAI)NO (RCCI)NO (RCDI)NO (RCEI)NO 5,6,9,10,11, 12(RCBI)	L(RCBI)	U(RCBI)	B/G	2		0		42.5	40.5	WDG ALONE PAR COMB. (RCBI), (RCAI), (RCCI), (RCDI), (RCEI) STRAP CONTACTS 7 AND 8(RCBI)		
RCCO	AF132		5	61			OTHER (RC-O)NO	L(RCCO)	U(RCCO)	B/G			0		34.5	32.5	WDG ALONE PAR COMB. (RCCO), (RCAO), (RCBO), (RCDO), (RCEO)		
RCCI	AF132		5	61			OTHER (RC-I)NO	L(RCCI)	U(RCCI)	B/G			0		34.5	32.5	WDG ALONE PAR COMB. (RCCI), (RCAI), (RCBI), (RCDI), (RCEI)		
RCKA	AF87		8	240			8(TRA)	L(RCKA)		BAT.			0		14.3	13.6			
RCKB	AF87		8	240			8(TRB)	L(RCKB)		BAT.			0		14.3	13.6			
RCTA	AF24		7	8			(RCTAA) NO 1,2,3,4, 5,6,7,8 (RCTA) 7(TRCA)	L(RCTA)	U(RCTA)	B/G			0		30.5	29	WDG ALONE PAR COMB. (RCTA) & (RCTAA)		
RCTAA	1/2AK6		7	2			(RCTA)NO 1,5(RCTAA) 7(TRCA)	1L(RCTAA)	2L(RCTAA)	B/G			0		29	27.5	WDG ALONE PAR COMB. (RCTAA) & (RCTA) STRAP CONTACT 4(RCTAA) MOUNTED WITH (SEAA)		
RCTB	AF24		7	8			(RCTBA) NO 1,2,3,4, 5,6,7,8 (TRCA)	L(RCTB)	U(RCTB)	B/G			0		30.5	29	WDG ALONE PAR COMB. (RCTB) & (RCTBA)		
RCTBA	1/2AK6		7	2			(RCTB)NO 1,5(RCTBA) 5(TRCA)	1L(RCTBA)	2L(RCTBA)	B/G			0		29	27.5	WDG ALONE PAR COMB. (RCTB) & (RCTBA) MOUNTED WITH (SEBA)		
RGA	AF132		5	61			10(TP2)- 10(TP7) 10(TRPO) 10(TRPI) (RGAA)NO 1,2,3,4,7, 9,10,11, (RGA)	L(RGA)	U(RGA)	B/G			0		34.5	32.5	WDG ALONE PAR COMB. (RGA) & (RGAA)		
TEST NOTES: 1. MAKE REGISTER 0 BUSY. 2. MAKE REGISTER 1 BUSY.																	(22 PAGES) PAGE 11		
LINE, LINK AND MARKER CIRCUIT																	SD-65741-01-F6		
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CIRCUIT REQUIREMENTS																			DRAWING ISSUE
APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ.					REMARKS			
DESIG	CODE	OPTION	FIG.	BSF FIG.	CONT PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP.	SEE TEST NOTE	TEST WDG.	TEST FOR	AFTER SOAK MA.	TEST MA.				READJ. MA.
								CONN. BAT.	CONN. GRD.										
RGAA	AF132		5	61			10(TP2)- 10(TP7) 10(TRP0) 10(TRP1) (RGA)NO	L(RGAA)	U(RGAA)	B/G			0		34.5	32.5	WDG ALONE PAR COMB. (RGAA) & (RGA)		
RGB	AF132		5	61			9(TP2)- 9(TP7) 10(TRP0) 10(TRP1) (RGBA)NO 1,2,3,4,7, 9,10,11 (RGB)	L(RGB)	U(RGB)	B/G			0		34.5	32.5	WDG ALONE PAR COMB. (RGB) & (RGBA)		
RGBA	AF132		5	61			9(TP2)- 9(TP7) 9(TRP0) 9(TRP1) (RGB)NO	L(RGBA)	U(RGBA)	B/G			0		34.5	32.5	WDG ALONE PAR COMB. (RGBA) & (RGB)		
RHKA	AF114		5	54			(HMTA)NO 10(RHKA)		U(RHKA)	GRD			0		24.5	23	STRAP CONTACT 2(RHKA)		
RHKB	AF114		5	54			(HMTB)NO 10(RHKB)		U(RHKB)	GR			0		24.5	23	STRAP CONTACT 2(RHKB)		
RLO	1/2AK5	19	19	4			1M(RLO)		2L(RLO)	GRD			0		15.8	15.0	MTD. WITH RLI		
RLI	1/2AK5	19	19	4			12M(RLI)		2U(RLI)	GRD			0		15.8	15.0	MTD. WITH RLO		
RLA	AF88		8	42			(DCKA)O (RLAA)NO (RLAB)NO 2,4(RLA)	L(RLA)	U(RLA)	B/G			0		33.5	31.5	WDG ALONE PAR COMB. (RLA), (RLAA), (RLAB) STRAP CONTACTS 5,7 AND 11(RLA)		
RLAA	AJ5		8	220			(DCKA)O (RLA)NO (RLAB)NO	L(RLAA)	U(RLAA)	B/G			0		13.5	12.6	WDG ALONE PAR COMB. (RLAA), (RLA), (RLAB) STRAP CONTACTS 1,3,9 AND 11(RLAA)		
RLAB	AF88		8	42			(DCKA)O (RLA)NO (RLAA)NO 2,4 (RLAB)	L(RLAB)	U(RLAB)	B/G			0		33.5	31.5	WDG ALONE PAR COMB. (RLAB), (RLA) (RLAA) STRAP CONTACTS 1,7,9, AND 11(RLAB)		
RLAL	AF85		11	401			3(RLAL)		U(RLAL)	GRD			0		36.	34.			
									U(RLAL)	GRD			NO		22	23.5			
									U(RLAL)	GRD			R		9.9	10.5			
RLB	AF88		8	42			(DCKB)O (RLBA)NO (RLBB)NO 2,4(RLB)	L(RLB)	U(RLA)	B/G			0		33.5	31.5	WDG ALONE PAR COMB. (RLB), (RLBA), (RLBB) STRAP CONTACTS 3,9 AND 11(RLB)		
RLBA	AJ5		8	220			(RLB)NO (RLBB)NO (DCKB)O	L(RLBA)	U(RLBA)	B/G			0		13.6	12.6	WDG ALONE PAR COMB. (RLBA), (RLB), (RLBB) STRAP CONTACTS 1,3,9 AND 11(RLBA)		
													0		129	123			

LINE, LINK AND MARKER CIRCUIT

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BELL TELEPHONE LABORATORIES, INC.

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CIRCUIT REQUIREMENTS

DRAWING
ISSUE1
2B
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9B
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CIRCUIT REQUIREMENTS

DRAWING
ISSUE1
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APPARATUS				MECH REQ			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ				REMARKS				
DESIG	CODE	OPTION	FIG.	BSP FIG	CONT PRESS	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK		TEST	READJ		
								CONN BAT	CONN GRD					MA		MA	MA		
RLBB	AF68		8	42			(DCKB)O (RLB)NO (RLBA)NO 2,4 (RLBB)	L(RLBB)	U(RLBB)	B/G				C	33.5	31.5	85	81	WDG ALONE PAR COMB. (RLBB) & (RLB). (RLBA) STRAP CONTACTS 1,7,9, 11(RLBB)
RLSA	AJ12	ZH	10	220			(RCKA)O (RLSAA)NO	L(RLSA)	U(RLSA)	B/G				0	42.5	40.5	95	90	WDG ALONE PAR COMB. (RLSA) & (RLSAA) STRAP CONTACTS 2,5,8,9, AND 10(RLSA)
RLSA	AJ39	ZI	10	220			(RCKA)O (RLSAA)NO	L(RLSA)	U(RLSA)	B/G				0	18.5	17.5	49	46.5	WDG ALONE PAR COMB. (RLSA) & (RLSAA) STRAP CONTACTS 2,5,8,9, AND 10(RLSA)
RLSAA	AJ12		10	220			(RCKA)O (RLSAA)NO 3,6 (RLSAA)	L(RLSAA)	U(RLSAA)	B/G	3	0	0	0	95	90	80	75	WDG ALONE PAR COMB. (RLSAA) & (RLSA) STRAP CONTACTS 4,8,9,10, AND 11(RLSAA)
RLSB	AJ12	ZH	10	220			(RCKB)O (RLSBA)NO	L(RLSB)	U(RLSB)	B/G				0	42.5	40.5	95	90	WDG ALONE PAR COMB. (RLSB) & (RLSBA) STRAP CONTACTS 2,5,8,9, AND 12(RLSB)
RLSB	AJ39	ZI	10	220			(RCKB)O (RLSBA)NO	L(RLSB)	U(RLSB)	B/G				C	18.5	17.5	49	46.5	WDG ALONE PAR COMB. (RLSB) & (RLSBA) STRAP CONTACTS 2,5,8,9, AND 12(RLSB)
RLSBA	AJ12		10	220			(RCKB)O (RLSBA)NO 3,6 (RLSBA)	L(RLSBA)	U(RLSBA)	B/G	3	0	0	0	95	90	80	75	WDG ALONE PAR COMB. (RLSBA) & (RLSB) STRAP CONTACTS 4,8,9,10, AND 11(RLSBA)
RPO	AF77		4	8			(RPAO)NO 3,4,9,10,12 (RPO)	L(RPO)	U(RPO)	B/G	1	P	C		49	46.5	44	41.5	
RPI	AF77		4	8			(RPAI)NO 3,4,9,10,12 (RPI)	L(RPI)	U(RPI)	B/G	2	P	0		49	46.5	44	41.5	
RPAO	AJ202		7	500			1,2,7,8, 9,10,11, 12 (RPAO)	L(RPAO)	U(RPAO)	B/G	1		0		42.5	40.5			
RPAI	AJ202		7	500			1,2,7,8, 9,10,11, 12 (RPAI)	L(RPAI)	U(RPAI)	B/G	2		0		42.5	40.5			
RUCA	AF132		7	61			9(SEB) 1,2,3,4, 5,7,9,10, 11,12 (RUCA)	L(RUCA)	U(RUCA)	B/G				C	34.5	32.5			
RUCB	AF132		7	61			7(SEB) 1,2,3,4, 5,7,9,10, 11,12 (RUCB)	L(RUCB)	U(RUCB)	B/G				C	34.5	32.5			
SO-SQ	AJ55		7	62			(II-)NO 1,2,3,4, 6,8,10, 11,12(S-)	L(S-)	U(S-)	BAT		P	0		6.6	6.2	25.5		STRAP CONTACTS 4,6,8 AND 10(S-)
SAA	AF64		10	219			(MTA)NO 2,4,8, 10(SAA)	L(SAA)	U(SAA)	B/G				C	11.2	10.6			
SAB	AF64		10	219			(MTB)NO 2,4,8, 10(SAB)	L(SAB)	U(SAB)	B/G				C	11.2	10.6			

TEST NOTES:

1. MAKE REGISTER C BUSY.
2. MAKE REGISTER I BUSY.
3. TEST VALUES FOR LSE WHEN ZH OPTION IS FURNISHED.
4. TEST VALUES FOR LSE WHEN ZI OPTION IS FURNISHED.

NO. 756A
LINE, LINK AND MARKER CIRCUIT

SD-65741-01-F7

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APPARATUS				MECH REQ			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ				REMARKS		
DESIG	CODE	OPTION	FIG	BSP FIG	CONT PRESS	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK		TEST	READJ
								CONN BAT.	CONN GRD					NA.		MA.	MA.
SEA	AF64		7	219			10(RLSBA) (SEAA)NO 1,2,3,4,5, 8,10 (SEA)	L(SEA)	U(SEA)	B/G				0	11.	10.6	WDG ALONE PAR COMB. (SFA) & (SEAA) STRAP CONTACT 9(SEA)
														0	29	27.5	WDG ALONE PAR COMB. (SEAA) & (SEA) STRAP CONTACTS 12 AND 11(SEA)
SEAA	1/2 AK6		7	2			10(RLSBA) (SEA)NO 10(SEAA)	1U(SEAA)	2U(SEAA)	B/G				0	50.5	48.5	MOUNTED WITH (RCTAA)
														0			WDG ALONE PAR COMB. (SEB) & (SEBA) STRAP CONTACT 9(SEB)
SEB	AF64		7	219			10(RLSAA) (SEBA)NO 1,2,3,4,5, 8,10 (SEB)	L(SEB)	U(SEB)	B/G				0	11.	10.6	WDG ALONE PAR COMB. (SEB) & (SEBA) STRAP CONTACT 9(SEB)
														0			
SEBA	1/2 AK6		7	2			10(PLSAA) (SEB)NO 10(SEBA)	1U(SEBA)	2U(SEBA)	B/G				0	29	27.5	WDG ALONE PAR COMB. (SEBA) & (SEB) STRAP CONTACTS 10 AND 8(SEBA)
														0	50.5	48.5	MOUNTED WITH (RCTSA)
SL20 29	AF10		17	214					U	REL TST	GRD			0	8.1	7.2	
SMCO 1 2,3 4,5 6,7 8	AF24		16 15 1 15 16 16	8			11,12(SMC-)		U(SMC-)	GRD				0	30.5	29	
SMRA	AF132		8	61			(SMTA)NO (COMA)NO (BYA)NO 1,2,3,4, 5,7,9, 10,11,12 (SMRA)	L(SMRA)	U(SMRA)	B/G				0	34.5	32.5	WDG ALONE PAR COMB. (SMRA) & (SMRAA)
														0	76.5	72.5	
SMRAA	AF132		8	61			(SMTA)NO (COMA)NO (BYA)NO 1,2,3,4, 5,7,8,9, 10,11,12 (SMRAA)	L(SMRAA)	U(SMRAA)	B/G				0	34.5	32.5	WDG ALONE PAR COMB. (SMRAA) & (SMRA)
														0	76.5	72.5	
SMRB	AF132		8	61			(SMTB)NO (COMB)NO (BYB)NO 1,2,3,4, 5,7,9, 10,11,12 (SMRB)	L(SMRB)	U(SMRB)	B/G				0	34.5	32.5	WDG ALONE PAR COMB. (SMRB) & (SMRBA)
														0	76.5	72.5	
SMRBA	AF132		8	61			(SMTB)NO (COMB)NO (BYB)NO 1,2,3,4, 5,7,8,9, 10,11,12 (SMRBA)	L(SMRBA)	U(SMRBA)	B/G				0	34.5	32.5	WDG ALONE PAR COMB. (SMRBA) & (SMRB)
														0	76.5	72.5	

NO. 756A
LINE, LINK AND MARKER CIRCUIT

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BELL TELEPHONE LABORATORIES, INC

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CIRCUIT REQUIREMENTS

APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ.						REMARKS
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK	TEST	READJ	
								CONN. BAT.	CONN. GRD.					MA.	MA.	MA.	
SMTA	AJ53		9,22	298			9(RLSB) (HMTAA)NO (SMRA)NO (SMRAA) NO (TRKA)NO (TRKAA) NO 4,5,7 (SMTA)	L(SMTA)	U(SMTA)	B/G	I		0		39	37	STRAP CONTACT 10(SMTA)
								L(SMTA)	U(SMTA)	B/G			NO		21	22.5	
SMTB	AJ53		9,22	298			9(RLSA) (HMTBA)NO (SMRB)NO (SMRBA) NO (TRKB)NO (TRKBA) NO 4,5,7 (SMTB)	L(SMTB)	U(SMTB)	B/G	I		0		39	37	STRAP CONTACT 10(SMTB)
								L(SMTB)	U(SMTB)	B/G			NO		21	22.5	
SOA	AF82		8	235			(BSYA)NO 1,2,3,4, 5,6,7,8,9, 10,11, (SOA)	L(SOA)	U(SOA)	B/G			0		37	35	STRAP CONTACTS 4 AND 8(SOA)
SOB	AF82		8	235			(BSYB)NO 1,2,3,4, 5,6,7,8,9, 10,11, (SOB)	L(SOB)	U(SOB)	B/G			0		37	35	STRAP CONTACTS 4 AND 8(SOB)
STA	AJ15		10	249			(MTA)NO 9(SAA)	L(STA)	U(STA)	B/G			0		42.5	40.5	STRAP CONTACTS 2,3,9 AND 10 (STA)
STAR	1/2AK4		10	202			(MTA)NO 9(SAA)	IU(STAR)	2U(STAR)	B/G			0		11.9	11.3	STRAP CONTACTS 8,9,10, AND 11(STAR).
STB	AJ15		10	249			(MTB)NO 9(SAB)	L(STB)	U(STB)	B/G			0		42.5	40.5	STRAP CONTACTS 2,3,9 AND 10 (STB)
STBR	1/2AK4		10				(MTB)NO 9(SAB)	IL(STBR)	2L(STBR)	B/G			0		11.9	11.3	STRAP CONTACTS 2,3,4, AND 5(STBR).
T2-5 T6,7	AJ12	V	4	220			(TA-)NO 2,3,4,5, 7,9(T-)	L(T-)	U(T-)	B/G			0		42.5	40.5	STRAP CONTACTS 3,5,7 AND 9(T-)
TA2-5 TA6,7	AJ31	V	4	36			(T-)NO 10(TA-)	L(TA-)	U(TA-)	B/G			0		14.4	13.7	
TAA	AJ54		10	306			(MTA)NO (STA)NO 10J2(TAA)	L(TAA)	U(TAA)	B/G			0		38	36	STRAP CONTACTS 8,9(TAA)
								L(TAA)	U(TAA)	B/G			NO		21	22.5	
TAAL	AF9		11	213			12(TAAL)		U(TAAL)	GRD			0		8.7	8.2	
TAB	AJ54		10	306			(MTB)NO (STB)NO 10J2(TAB)	L(TAB)	U(TAB)	B/G			0		38	36	STRAP CONTACTS 4,9(TAB)
								L(TAB)	U(TAB)	B/G			NO		21	22.5	

1. IF OPTION WX IS PROVIDED (ISSUE 36B), ALSO INSULATE 9 OF (SMT-).

LINE, LINK AND MARKER CIRCUIT

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CIRCUIT REQUIREMENTS

APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ.							REMARKS
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.		
								CONN. BAT.	CONN. GRD.									
TACA	AF24		7	8			11(RLSBA) (TACAA) NO 1,2,5,6 (TACA)	L(TACA)	U(TACA)	B/G			0		30.5 68	29 64.5	WDG ALONE PAR COMB. (TACA) & (TACAA)	
TACAA	AF55		7	26			11(RLSBA) (TACAA)NO 1,2,4,6 (TACAA)	L(TACAA)	U(TACAA)	B/G			0		37 82	35 78	WDG ALONE PAR COMB. (TACAA) & (TACA)	
TACB	AF24		7	8			11(RLSAA) (TACBA) NO 1,2,5,6 (TACB)	L(TACB)	U(TACB)	B/G			0		30.5 68	29 64.5	WDG ALONE PAR COMB. (TACB) & (TACBA)	
TACBA	AF55		7	26			11(RLSAA) (TACB)NO 1,2,4,6 (TACBA)	L(TACBA)	U(TACBA)	B/G			0		37 82	35 78	WDG ALONE PAR COMB. (TACBA) & (TACB)	
TAL	AF85		11	401			3(TAL)		U(TAL) U(TAL) U(TAL)	GRD GRD GRD			0 NO R		36 2.2 9.9	34 23.5 10.5		
TCK1	1/2AK3		4	3			1(RLAA)	IU(TCK1)		BAT.			0		33	31	MOUNTED WITH (TCK2)	
TCK2	1/2AK3		4	3			9(RLAA)		2L(TCK2)	GRD			0		27.5	26	MOUNTED WITH (TCK1)	
TCK3	1/2AK3		4	3			11(RLAA)		2L(TCK3)	GRD			0		27.5	26	MOUNTED WITH (TCK4)	
TCK4	1/2AK3		4	3			3(RLAA)	IU(TCK4)		BAT.			0		33	31	MOUNTED WITH (TCK3)	
TCS2-5 TCS6,7	AF132	V	1,2	61			(T-)NO (TM-)NO (TU-)NO (THC-)NO 1-5,7,9-12 (TCS-)	L(TCS-)	U(TCS-)	B/G			0		34.5 160	32.5 152	WDG ALONE PAR COMB. (TCS-), (TM-), (TU-), (THC-)	
TEAO	AF55		4	26			8(RLSA) (TEA1)NO (TEA2)NO (TEA3)NO	L(TEAO)	U(TEAO)	B/G	I		0		37 75	35 71	WDG ALONE	
TEA1	AF129		4	28			8(RLSA) (TEAO)NO (TEA2)NO (TEA3)NO	L(TEA1)	U(TEA1)	B/G	I		0		10 79	9.5 75	WDG ALONE STRAP CONTACTS 1,3,5,7,9 AND 11 (TEA1)	
TEA2	AF129		4	28			8(RLSA) (TEAO)NO (TEA1)NO 2,4 (TEA2) (TEA3)NO	L(TEA2)	U(TEA2)	B/G	I		0		10 79	9.5 75	WDG ALONE STRAP CONTACTS 5,9(TEA2)	
TEA3	AF119		4	266			8(RLSA) (TEAO)NO (TEA1)NO (TEA2)NO 2,4(TEA3)	L(TEA3)	U(TEA3)	B/G	I		0		12.6 99	12 94	WDG ALONE STRAP CONTACTS 7,9(TEA3)	

TEST NOTES:

1. PARALLEL COMBINATION (TEAO), (TEA1), (TEA2) AND (TEA3).

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CIRCUIT REQUIREMENTS																			DRAWING ISSUE	
APPARATUS				MECH REQ			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ				REMARKS					
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS.	ARM. TRVL	BLOCK OF INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA.			TEST MA.	READJ MA.		
								CONN BAT.	CONN GRD											
TEBO	AF55		4		26		8(RLSB) (TEB1)NO (TEB2)NO (TEB3)NO	L(TEBO)	U(TEBO)	B/G	3		0		37	35	WDG ALONE			
													0		75	71				
TEB1	AF129		4		28		8(RLSB) (TEB0)NO (TEB2)NO (TEB3)NO	L(TEB1)	U(TEB1)	B/G	3		0		10	9.5	WDG ALONE			
													0		79	75	STRAP CONTACTS 1,3,5,7, 9 & 11 (TEB1)			
TEB2	AF129		4		28		8(RLSB) (TEB0)NO (TEB1)NO 2,4 (TEB2) (TEB3)NO	L(TEB2)	U(TEB2)	B/G	3		0		10	9.5	WDG ALONE			
													0		79	75	STRAP CONTACTS 5 & 9 (TEB2)			
TEB3	AF119		4		226		8(RLSB) (TEB0)NO (TEB1)NO (TEB2)NO 2,4 (TEB3)	L(TEB3)	U(TEB3)	B/G	3		0		12.6	12	WDG ALONE			
													0		99	94	STRAP CONTACTS 7 & 9 (TEB3)			
THC2-5 THC6,7	AF132		1,2		61		(T-)NO (TM-)NO (TU-)NO (TCS-)NO 1-5,7,9-12 (THC-)	L(THC-)	U(THC-)	B/G	1		0		34.5	32.5	WDG ALONE			
		V											0		160	152	PAR COMB. (THC-), (TM-), (TCS-), (TU-)			
TKO	AF132		6		61		(TKAO)NO (TKBO)NO 9(RCEO) 9(RCEI) 11(TRKA) 1,2,3,7, 9,10(TKO)	L(TKO)	U(TKO)	B/G			0		34.5	32.5	WDG ALONE			
													0		119	113	PAR COMB. (TKO), (TKAO), (TKBO), STRAP CONTACT 8 (TKO)			
TKB, TK9	AF132		1 6		61		(TKA-)NO (TKB-)NO 1-5,7,9-12 (TK-)	L(TK-)	U(TK-)	B/G	2		0		34.5	32.5	WDG ALONE			
													0		140	130	PAR COMB. (TK-), (TKA-), (TKB-) REL & (TK-) RES STRAP CONTACT 8 (TK-)			
TKAO	AF132		6		61		(TKO)NO (TKAO)NO 9(RCEO) 9(RCEI) 11(TRKA) 1,2,3,7,9, 10(TKAO)	L(TKAO)	U(TKAO)	B/G			0		34.5	32.5	WDG ALONE			
													0		119	113	PAR COMB. (TKAO), (TKO), (TKBO) STRAP CONTACT 8 (TKAO)			
TKA8, TKA9	AF132		1 6		61		(TK-)NO (TKB-)NO 1-5,7,9-12 (TKA-)	L(TKA-)	U(TKA-)	B/G	2		0		34.5	32.5	WDG ALONE			
													0		140	130	PAR COMB. (TKA-), (TKB-), (TK-) REL & (TK-) RES STRAP CONTACT 8 (TK-)			
TKBO	AF132		6		61		(TKO)NO (TKAO)NO 9(RCEO) 9(RCEI) 11(TRKA) 11,12(TKBO)	L(TKBO)	U(TKBO)	B/G			0		34.5	32.5	WDG ALONE			
													0		119	113	PAR COMB. (TKBO), (TKO), (TKAO)			
TKB8, TKB9	AF132		1 6		61		(TK-)NO (TKA-)NO 11,12(TKB-)	L(TKB)	U(TKB)	B/G	2		0		34.5	32.5	WDG ALONE			
													0		140	130	PAR COMB. (TKB-), (TK-), (TKA-) REL & (TK-) RES			
TM2-5 TM6,7	AF132		1,2		61		(T-)NO (THC-)NO (TCS-)NO (TU-)NO 1-5,7,9-12 (TM-)	L(TM-)	U(TM-)	B/G	4		0		34.5	32.5	WDG ALONE			
		V											0		160	152	PAR COMB. (TM-), (THC-), (TCS-), (TU-)			
TEST NOTES: 1. INSULATE CONTACTS ON (RCD0), (RCD1), (RCEO) AND (RCEI) AS FOLLOWS: THC2-12(RCD-) THC3-11(RCD-) THC4-10(RCD-) THC5- 9(RCD-) THC6- 7(RCD-) THC7-12(RCE-) 2. INSULATE CONTACTS ON (RCEO) AND (RCEI) AS FOLLOWS: TKB-11 TK9-10 3. PARALLEL COMBINATION (TEBO), (TEB1), (TEB2) AND (TEB3). 4. INSULATE CONTACTS ON (RCD0), (RCD1), (RCEO) AND (RCEI) AS FOLLOWS: TM2 12(RCD-) TM3 11(RCD-) TM4 10(RCD-) TM5 9(RCD-) TM6 7(RCD-) TM7 12(RCE-)																				
PBX SYSTEMS NO. 756A LINE, LINK AND MARKER CIRCUIT													SD-65741-01-F9							
BELL TELEPHONE LABORATORIES, INC													PRINTED IN U.S.A.							

CIRCUIT REQUIREMENTS																		DRAWING ISSUE	
APPARATUS				MECH REQ			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ				REMARKS				
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PREP.	ARM. TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.			
								CONN BAT.	CONN GRD.										
TMA	AG8		10	448			(TOA)NO (MTA)NO	L(TMA)	U(TMA)	B/G			O	20	7.7	7.3			
								L(TMA)	U(TMA)	B/G			H	20	1.1	1			
								L(TMA)	U(TMA)	B/G			R	20	.5	.7			
TMB	AG8		10	448			(TOB)NO (MTB)NO	L(TMB)	U(TMB)	B/G			O	20	7.7	7.1			
								L(TMB)	U(TMB)	B/G			H	20	1.1	1			
								L(TMB)	U(TMB)	B/G			R	20	.5	.7			
TQA	AG2		10	368			(TAA)NO (MTA)NO 8(TOA)	L(TOA)	U(TOA)	B/G			O	36	12.4	11.8			
								L(TOA)	U(TOA)	B/G			H	36	2.1	2.0			
								L(TOA)	U(TOA)	B/G			R	36	1.1	1.4			
TOAL	AF85		11	401			3(TOAL)		U(TOAL)	GRD			O		36	34			
									U(TOAL)	GRD			NO		22	23.5			
									U(TOAL)	GRD			R		9.9	10.5			
TOALA	AF85		11	401			3(TOALA)		U(TOALA)	GRD			O		36	34			
									U(TOALA)	GRD			NO		22	23.5			
									U(TOALA)	GRD			R		9.9	10.5			
TOB	AG2		10	368			(TAB)NO (MTB)NO 10(TOB)	U(TOB)	L(TOB)	B/G			O	36	12.4	11.8			
								U(TOB)	L(TOB)	B/G			H	36	2.1	2.0			
								U(TOB)	L(TOB)	B/G			R	36	1.1	1.4			
TOKA	AF64		10	219			(TAAL)O 4,5 (TOKA)	L(TOKA)	U(TOKA)	B/G			O		11.2	10.6	STRAP CONTACTS 3 AND 5 (TOKA)		
TOKB	AF64		10	219			(TAAL)O 4,5 (TOKB)	L(TOKB)	U(TOKB)	B/G			O		11.2	10.6	STRAP CONTACTS 3 AND 5(TOKB)		
TOLA	AF9		10	213			(TOKA)NO (TOKB)NO 10(TOLA)	L(TOLA)	U(TOLA)	B/G			O		8.7	8.2			
TOLB	AF9		10	213			(TOKA)NO (TOKB)NO 10(TOLB)	L(TOLB)	U(TOLB)	B/G			O		8.7	8.2			
TP2-5 TP6,7	AF77	V	4	8			(T-)NO 1,2,3 (TP-)	1L(TP-) 2L(TP-)	1U(TP-) 2U(TP-)	B/G B/G		P S	O O		49 44	46.5 41.5			
TRO, TRI	AJ12		4	220			(TRA-)O 2,3,4,5, 7,9(TRA-)	L(TR-)	U(TR-)	B/G			O		42.5	40.5	STRAP CONTACTS 3,5,7 AND 9(TRA-)		
TRA	AG21		10	282B			(MTA)NO (RCKA)O	1L(TRA) 1L(TRA) 1L(TRA)	1U(TRA) 1U(TRA) 1U(TRA)	B/G B/G B/G	2,3	P P P	O H R		48.5 6. 3.9	46 5.7 4.6			
TRA0 TRA1	AJ31		4	36			(TR-)NO 10(TRA-)	L(TRA-)	U(TRA-)	B/G			O		14.4	13.7			
TRAL	AF28		11	400B			4(TRAL)		U(TRAL)	GRD			O		27.5	26			
									U(TRAL)	GRD			R		10.3	10.9			
TRB	AG21		10	282B			(MTB)NO (RCKB)O	1L(TRB) 1L(TRB) 1L(TRB)	1U(TRB) 1U(TRB) 1U(TRB)	B/G B/G B/G	2,3	P P P	O H R		48.5 6 3.9	46 5.7 4.6			
TRC0 TRC1	AF132		6	61			(TR-)NO (TRM-)NO (TRU-)NO	L(TRC-)	L(TRC.)	B/G	1		O O		34.5 119	32.5 113	WDG ALONE PAR COMB.(TRC-), (TRM-) (TRU-)		
TEST NOTES: 1. INSULATE CONTACTS 1,2,3,4 AND 5 ON (TRC0). INSULATE CONTACTS 7,9,10,11 AND 12 ON (TRC1). 2. PRIMARY TEST, REQUIREMENTS APPLY TO PRIMARY WINDING WITH SECONDARY WINDING SHORT-CIRCUITED. 3. ARMATURE BACK TENSION MAX 60 GRAMS READJUST, 65 GRAMS TEST.																			

PBX SYSTEMS
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LINE, LINK AND MARKER CIRCUIT

BELL TELEPHONE LABORATORIES, INC

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CIRCUIT REQUIREMENTS																				DRAWING ISSUE
APPARATUS				MECH REQ			CIRCUIT PREPARATION				DIRECT CURRENT FLOW REQ				REMARKS					
DESIG	CODE	OPTION	FIG.	BSP FIG.	CONT PRESS.	ARM. TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA.					TEST MA.	READJ MA.
								CONN BAT.	CONN GRD											
TRCA	AJ15		7				(TRKA)NO (TRCAA) NO (HMTAA)NO 3,8 (TRCA)	L (TRCA)	U (TRCA)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (TRCA) & (TRCAA) STRAP CONTACTS 2, AND 4 (TRCA)			
TRCAA	AF64		7				(TRKA)NO (TRCA)NO 1,2,4,5,8,10, 11 (TRCAA)	L (TRCAA)	U (TRCAA)	B/G			0		11	10.6	WDG ALONE PAR COMB. (TRCAA) & (TRCA) STRAP CONTACTS 3,9,12 (TRCAA)			
TRCB	AJ15		7				(TRKB)NO (TRCBA) NO (HMTBA)NO 3,8 (TRCB)	L (TRCB)	U (TRCB)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (TRCB) & (TRCBA) STRAP CONTACTS 4,7 (TRCB)			
TRCBA	AF64		7				(TRKB)NO (TRCB)NO 1,2,4,5,8,10, 11 (TRCBA)	L (TRCBA)	U (TRCBA)	B/G			0		11	10.6	WDG ALONE PAR COMB. (TRCBA) & (TRCB) STRAP CONTACTS 3,9,12 (TRCBA)			
TRKA	AF88		7				(JREA)NO 11 (TRCA) 4 (TRKA) (TRKAA) NO	L (TRKA)	U (TRKA)	B/G			0		33.5	31.5	WDG ALONE PAR COMB. (TRKA) & (TRKAA) STRAP CONTACTS 3,5,7,9 AND 11 (TRKA)			
TRKAA	AJ12		7				(JREA)NO 11 (TRCA) 4,12 (TRKAA) (TRKA)NO	L (TRKAA)	U (TRKAA)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (TRKAA) & (TRKA) STRAP CONTACT 7 (TRKAA)			
TRKB	AF88		7				(JREB)NO 9 (TRCB) 4 (TRKB) (TRKBA) NO	L (TRKB)	U (TRKB)	B/G			0		33.5	31.5	WDG ALONE PAR COMB. (TRKB) & (TRKBA) STRAP CONTACTS 3,5,9 AND 11 (TRKB)			
TRKBA	AJ12		7				(JREB)NO (TRKB)NO 9 (TRCB) 4,12 (TRKBA)	L (TRKBA)	U (TRKBA)	B/G			0		42.5	40.5	WDG ALONE PAR COMB. (TRKBA) & (TRKB) STRAP CONTACTS 3, AND 9 (TRKBA)			
TRLA	AJ12		9,22				(ZLG)NO 1,2,3,4,5,6,7, 9,10,11,12 (TRLA)	L (TRLA)		BAT.			0		42.5	40.5	STRAP CONTACTS 1,2,3,4,6,7,9,10, 11,12 (TRLA)			
TRLB	AJ12		9,22				(ZLG)NO 1,2,3,4,5,6,7, 9,10,11,12 (TRLB)	L (TRLB)		BAT.			0		42.5	40.5	STRAP CONTACTS 1,2,3,4,6,7,9,10, 11,12 (TRLB)			
TRMO, TRMI	AF132		6				(TR-)NO (TRU-)NO (TRC-)NO	L (TRM-)	U (TRM-)	B/G	I		0		34.5	32.5	WDG ALONE PAR COMB. (TRM-), (TRU-), TRC-)			
1. INSULATE CONTACTS 1,2,3,4,5,7 AND 9 (TRMO). INSULATE CONTACTS 1,7,9,10,11 AND 12 (TRMI).																				

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CIRCUIT REQUIREMENTS

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CIRCUIT REQUIREMENTS

APPARATUS				MECH. REQ.			CIRCUIT PREPARATION				TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQ.					REMARKS
DESIG	CODE	OPTION	FIG.	BSP FIG	CONT PRESS	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST TEST FOR			TEST WDG	TEST FOR	AFTER SOAK	TEST	READJ	
								CONN BAT.	CONN GRD									
ULB	AF132		7	E1			11 (TACA) 11 (TACB) 1,2,3,4,5,7,9,10,11,12 (ULB) 6 (UEB)	L (ULB)	U (ULB)	B/G			0		34.5	32.5		
WIL	AJ3		9,22	226			1 (WL) 6 (WL) 4 (ZIL) (ZIL)NO		U (WIL)	GRD			0	18	17	WDG ALONE PAR COMB. (WIL) & (ZIL)		
WILA	1/2AK7		9,22	203			(WIL)NO (ZIL)NO 8 (WILA)		2U (WILA)	GRD			0 NO	27 10.4	25.5 11	MOUNTED WITH (WLGA)		
WL	AJ3		9,22	226			4 (LTAA) 4 (LTBA) 6 (WL) 4 (ZL) (ZL)NO 1 (WL)		U (WL)	GRD			0 0	18 39	17 37	WDG ALONE PAR COMB. (WL) & (ZL)		
WLA	1/2AK7		9,22				(WL)NO (ZL)NO 5 (WLA)		2L (WLA)	GRD			C NO	27 10.4	25.5 11	MOUNTED WITH (WUA)		
WLG	AF98		9,22	245			2 (WLGA) 4,10 (WLG)		U (WLG)	GRD			0	14.8	14.1			
WLGA	1/2AK7		9,22	203			(WLG)NO (ZLG)NO		1L (WLGA)	GRD			C NO	27 10.4	25.5 11	MOUNTED WITH (WILA)		
WU	AF98		9,22	245			4,6 (WU) 1 (ZU) (ZU)NO		U (WU) U (WU)	GRD GRD			0 C 0	14.8 25 34	14.1 23.5 32	WDG ALONE PAR COMB. (WU) & (ZU) "B" OPT PAR COMB. (WU) & (ZU) "A" OPT		
WUA	1/2AK7		9,22	203			(WU)NO (ZU)NO 8 (WUA)		2U (WUA)	GRD			0 NO	27 10.4	25.5 11	MOUNTED WITH (WLA)		
XC	AF96		22	46			4,6,8 (XC) (COAA)NO (COBA)NO		1U (XC) 1U (XC)	GRD GRD		P P	0 NO	99.8 80.8	95 85			
XCAL	1/2AK24	WT	11	12			8,9,12 (XCAL)		2U (XCAL)	GRD			0	7.8	7.4	MOUNTED WITH COAL		
ZIL	AF110		9,22	272			(WIL)NO 6 (WIL) (WL)NO 4 (ZIL)		U (ZIL)	GRD			0 0	16.5 36	15.5 34	WDG ALONE PAR COMB. (ZIL) & (WIL)		

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CIRCUIT REQUIREMENTS

APPARATUS				MECH. REQ.			CIRCUIT PREPARATION		TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQ.					REMARKS	
DESIG	CODE	OPTION	FIG.	BSP FIG	CONT PRESS	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA			TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.		
								CONN BAT.									CONN GRD
ZL	AF98		9,22	245			(WL)NO 6(WL) 4(ZL)		U(ZL)	GRD		0 0		14.8 33	14.1 31	WDG ALONE PAR COMB. (ZL) & (WL)	
ZLG	AF98		9,22	245			2,6(ZLG) (WLG)NO (WLGA)NO	L(ZLG)		BAT		0 0		14.8 33	14.1 31	WDG ALONE PAR COMB. (ZLG) & (WLG)	
ZU	AJ5	B	9	220			1,2,4,6,8,9, 10,11,12(ZU) (WU)NO 6(WU)		U(ZU)	GRD		0 0		13.3 42	12.6 40	WDG ALONE PAR COMB. (ZU) & (WU). STRAP CONTACTS 2,4,6,8,9,10,11,12(ZU)	
ZU	AJ39	A	9,22	220			1,2,4,6,8,9, 10,11,12(ZU) (WU)NO 6(WU)		U(ZU)	GRD		0 0		18.5 41	17.5 39	WDG ALONE PAR COMB. (ZU) & (WU). STRAP CONTACTS 2,4,6,8,9,10,11,12(ZU)	
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