PROMPTS	RESPONSES	COMMENTS
(For incoming TIE trunk when SIGO=STD or ETN)		
>	LD 14	*Trunk Data Block*
TYPE	TIE	Type of trunk
NCOS	0 - 99	NCOS number
(For outgoing routes)		
>	LD 16	*Route Data Block*
TYPE	RDB	Route Data Block
ROUT	0 - 511	Route number
OHQT	0 - 63	Maximum number of Priority 3 Calls allowed to be queued against this route before timing out in the OHQ becomes a strong possibility.

Notes

NARS QRC #32

Coordinated Call Back Queuing

Description

Coordinated Call Back Queuing extends the Call Back Queuing feature to users at M1 ESN nodes and M1 ESN mains when all trunks busy conditions are encountered at the serving M1 ESN node or M1 ESN main.

Provisioning

- At the serving M1, CBQ must be enabled for the customer (LD 87, NCTL) and at least one eligible ISET entry (LD 86, RLB).
- Network Signaling must be enabled at both sites and it must match (LD 16, RDB).
- The NCOS of the call originator must be allowed CBQ at the remote switch (LD 87, NCTL).
- The TIE route on which the call has originated must have CBQ allowed on the incoming end (LD 16, RDB).
- The call originator must have Ring Again provisioned on their phone and it must be idle.
- CCBQ requires the software feature package MCBQ, option 38.

Programming information

PROMPTS	RESPONSES	COMMENTS
At the originating switch:		
>	**LD 10/11**	***Analog/Meridian Digital Telephone***
NCOS	**0 - 99**	**Call originator's NCOS**
for LD 11 only		
KEY	**X RGA**	**X=Key number**
for LD 10 only		
CLS	**XRA XFA**	**Transfer and Ring Again allowed**

PROMPT	RESPONSES	COMMENTS
>	LD 16	***Route Data Block***
TYPE	RDB	Route Data Block
SIGO	ESN3/ESN5	ESN signaling type (Must match terminating end)
At the terminating switch:		
>	LD 87	***Electronic Switched Network 2***
FEAT	NCTL	Network Control Data Block
SCBQ	(NO)/YES	(Disable)/Enable CBQ for customer
CBTL	10 - (20) - 30	Call Back queue time limit
NCOS	0 - 99	NCOS number
CBQ	(NO)/YES	(Disable)/Enable CBQ for call originator's NCOS
>	LD 86	***Electronic Switched Network 1***
FEAT	RLB	Route List Index
RLI	0 - 255	RLI number
ENTR	0 - 63	Entry number
CBQ	(NO)/YES	CBQ is (disabled)/enabled for this NCOS
ISET	(0) - 64	Number of entries included in ISET. Entry on which CBQ has been enabled must be included in this count.

>	LD 16	***Route Data Block***
TYPE	RDB	Route Data Block
SIGO	ESN3/ESN5	Type of signaling. (Must match originating end).
CBQ	(N0)/YES	CBQ is (disabled)/enabled for this incoming TIE route.

Notes

NARS QRC #33

Call Back Queuing Against a Conventional Main

Description

When calls originating at a conventional main encounter all trunks busy at an ESN node or ESN main, Call Back Queuing Against a Conventional Main (CBQCM) allows the call originator to enter the Call Back Queue at the node or the main. When the caller receives the CBQ offer, they accept by dialing the digits to their own extension.

Provisioning

- At the serving M1, CBQ must be enabled for the customer (LD 87, NCTL) and at least one eligible ISET entry (LD 86, RLB).
- The NCOS of the call originator (LD 14, TIE trunk data block) must be allowed CBQ at the serving switch (LD 87, NCTL).
- The TIE route on which the call has originated must have CBQ allowed on the incoming end (LD 16, RDB).
- The TIE route on which the call has originated must specify the number of digits needed to be recognized as a valid CBQCM acceptance (LD 16, RDB).
- The CBQCM offer is established in the NCTL, LD 87.

Programming information

PROMPTS	RESPONSES	COMMENTS
>	LD 87	*Electronic Switched Network 2*
FEAT	NCTL	Network Control Data Block
SCBQ	(NO)/YES	CBQ is (disabled)/enabled
RANC	0 - 511	RAN route for optional CBQCM offer. (<CR> = Standard offer, special dial tone)
NCOS	0 - 99	NCOS number
CBQ	(NO)/YES	CBQ is (disabled) enabled for this NCOS

PROMPTS	RESPONSES	COMMENTS
For the incoming TIE route		
>	LD 16	*Route Data Block*
TYPE	RDB	Route Data Block
SIGO	STD	Standard Signaling
CBQ	YES	CBQ is enabled
NDIG	(2) - 10	Number of digits to be recognized as a valid CBQCM acceptance.
For the incoming TIE trunk		
>	LD 14	*Trunk Data Block*
TYPE	TIE	Trunk data block
NCOS	(0) - 99	NCOS number

NARS QRC #34

Coordinated Dialing Plan

Description

Coordinated Dialing Plan enables a customer with a number of switches to coordinated the dialing plan for stations at these switches. A station user at one switch will be able to dial a station at another switch by dialing a unique 3-7 digit directory number. No access codes are required. The calls are routed via steering codes.

Provisioning

- CDP must be enabled for the customer (LD 86, ESN).
- An allowance for steering codes must be established for the customer (LD 86, ESN).
- Three types of steering codes may be created in LD 87, the CDP data block, local steering codes (LSC), distant steering codes (DSC), and trunk steering codes (TSC).
- Distant and trunk steering codes are pointed to RLIs, local steering codes keep the call internal.
- Unless digit manipulation occurs, all digits of DSC and TSC are sent with the call.
- CDP requires the CDP software feature package, option 59.

Programming information

PROMPTS	RESPONSES	COMMENTS
>	LD 86	*Electronic Switched Network 1*
FEAT	ESN	ESN data block
CDP	(NO)/YES	CDP feature (disabled)/enabled
MXSC	0 - 10000	Maximum number of steering codes
NCDP	3 - 7	Number of digits needed to be identified as a valid distant steering code.

PROMPTS	RESPONSES	COMMENTS
LD 87	LD 87	*Electronic Switched Network 2*
FEAT	CDP	CDP Data Block
TYPE	LSC	Local Steering Code
LSC	XXX	The local steering code (3-7 digits)
DEL	1 - 3	How many digits of LSC to be deleted
>	LD 87	*Electronic Switched Network 2*
FEAT	CDP	CDP data block
TYPE	DSC	Distant Steering Code
DSC	XXX	The distant steering code (3-7 digits)
RLI	0 - 255	Route List Index to which steering code is pointed.
>	LD 87	*Electronic Switched Network 2*
FEAT	CDP	CDP Data block
TYPE	TSC	Trunk Steering Code
TSC	XXX	The trunk steering code (1-7 digits)
RLI	0 - 255	Route List Index to which steering code is pointed.

NARS QRC #35

Call Trace

Description

The Meridian 1 provides several means by which an outgoing call can be traced. By using the Call Trace feature a system administrator can obtain information such as the call originator's access restriction, the RLI on which the call completed, and any Digit Manipulation or FCAS that applies to the call, among other things, that will assist in troubleshooting and/or verifying your NARS database.

Provisioning

- Network Call Trace requires ISDN/PRI and at least Release 17 software.
- Network Call Trace is allowed in the Class of Service of the set.
- Call Trace and Enhanced Call Trace are implemented by commands in a maintenance overlay, LD 80.

Programming information

PROMPTS	RESPONSES	COMMENTS
For Network Call Trace		
>	LD 10/11	***Analog/Meridian Digital Telephone Administration***
CLS	CLTA (CLTD)	Network Call Trace Allowed (Denied)

PROMPTS	RESPONSES	COMMENTS
For regular Call Trace		
>	LD 80	*Call Trace Maintenance Overlay*
.	TRAC X YYYY DEV	To trace a set, where X = Customer # Y = DN DEV gives auxiliary information such as RLI, entry #, etc.
.	TRAC L S C U DEV	To trace a Terminal Number
.	TRAK C U DEV	To trace a TN in on Option 11
.	TRAT X ZZ DEV	To trace an Attendant console, where X = customer # and Z = attendant #
.	TRAD L CH	To trace a channel of a digital loop
To enable Enhanced Trace:		
>	LD 17	*Configuration Record 1*
TYPE	OVLY	To enter overlay area of configuration
MULTI_USER	(OFF)/ON	MULTI-USER LOGON MUST BE ENABLED TO USE ENHANCED TRACE

>	LD 80	*Call Trace Maintenance Overlay*
.	ENTC L S C U XXXX	Enable enhanced call trace for this TN, where XXXX = the time for the trace. Format is HHMM, 1 hour would be 0100, 5 minutes would be 0005. The time must be at least 1 minute and no more than 23 hours.
.	GOTR	Begin the call trace command
.	FITR	Print out TNs being traced
.	STPT	Stop the trace command
.	DIST X	Disable the enhanced trace function where X = entry number as identified after a FITR command
.	DALL	Disable all enhanced trace command. You must stop all trace commands with STPT command first.

Notes

NARS QRC #36

Network Traffic

Description

The Network Traffic feature provides traffic measurement data related to network performance and network traffic.

Provisioning

- An SDI port must be configured to receive the output traffic data in LD 17.
- Network Traffic is established in LD 2. and requires option 29, NTRF.
- The conventions used to establish the traffic commands are:
  -Data entered by the user is shown in upper case.
  -Data output by the system is shown in lower case.
  -A period (.) prompt indicates that the system is ready to receive a new command.
  -A double dash (- -) indicates that the system is ready to receive data.

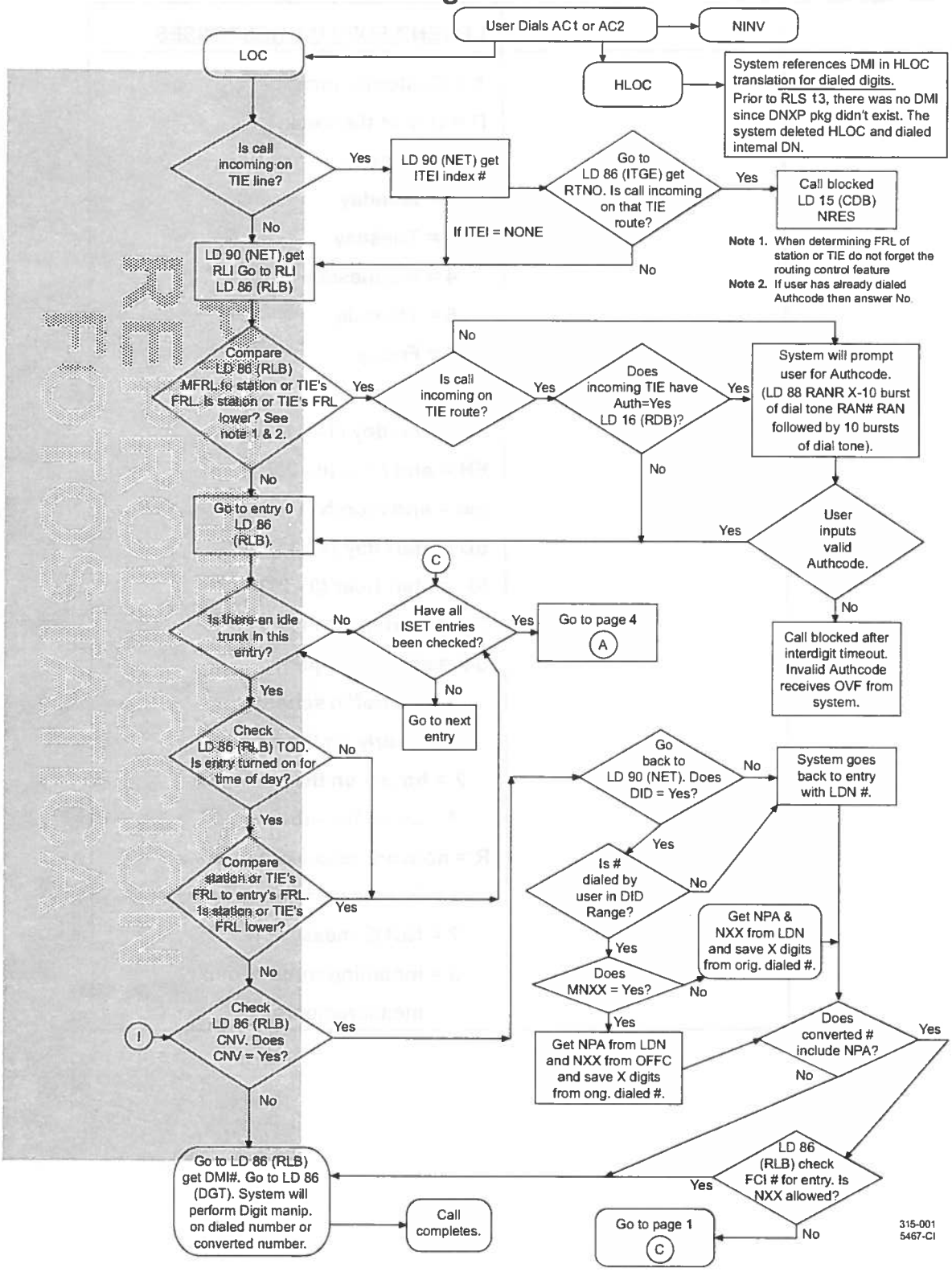
Programming information

>	LD 17	***Configuration Record 1***
REQ NEW	CHG	Change
TYPE HST	ADAN	Change I/O port data
ADAN	A B C	A = Action (NEW, CHG, OUT) B = Output Device (TTY or PRT) C = Device number (0-15)
USER TRF.	TRF	Traffic data output to this device

PROMPTS	RESPONSES	COMMENTS
>	LD 2	*Traffic*
.	TSHC X sd sm ed em sh eh so d d d..	To print the customer report schedule
.	TSHS sd sm ed em sh eh so d d d..	To print the system report schedule
.	SSHC X sd sm ed ed - - SD SM ED EM sh eh so - - SH EH SO d d d - - D D ..	To set the customer report schedule
.	SSHS sd sm ed em - - SD SM ED EM sh eh so - - SH EH SO d d d. -D D ..	To set the system report schedule
.	TOPN X r r r	To print the current network report options
.	SOPN X r r r - - R R R	To set the network report types
.	COPN x r r r - - R R R	To clear one or more report options

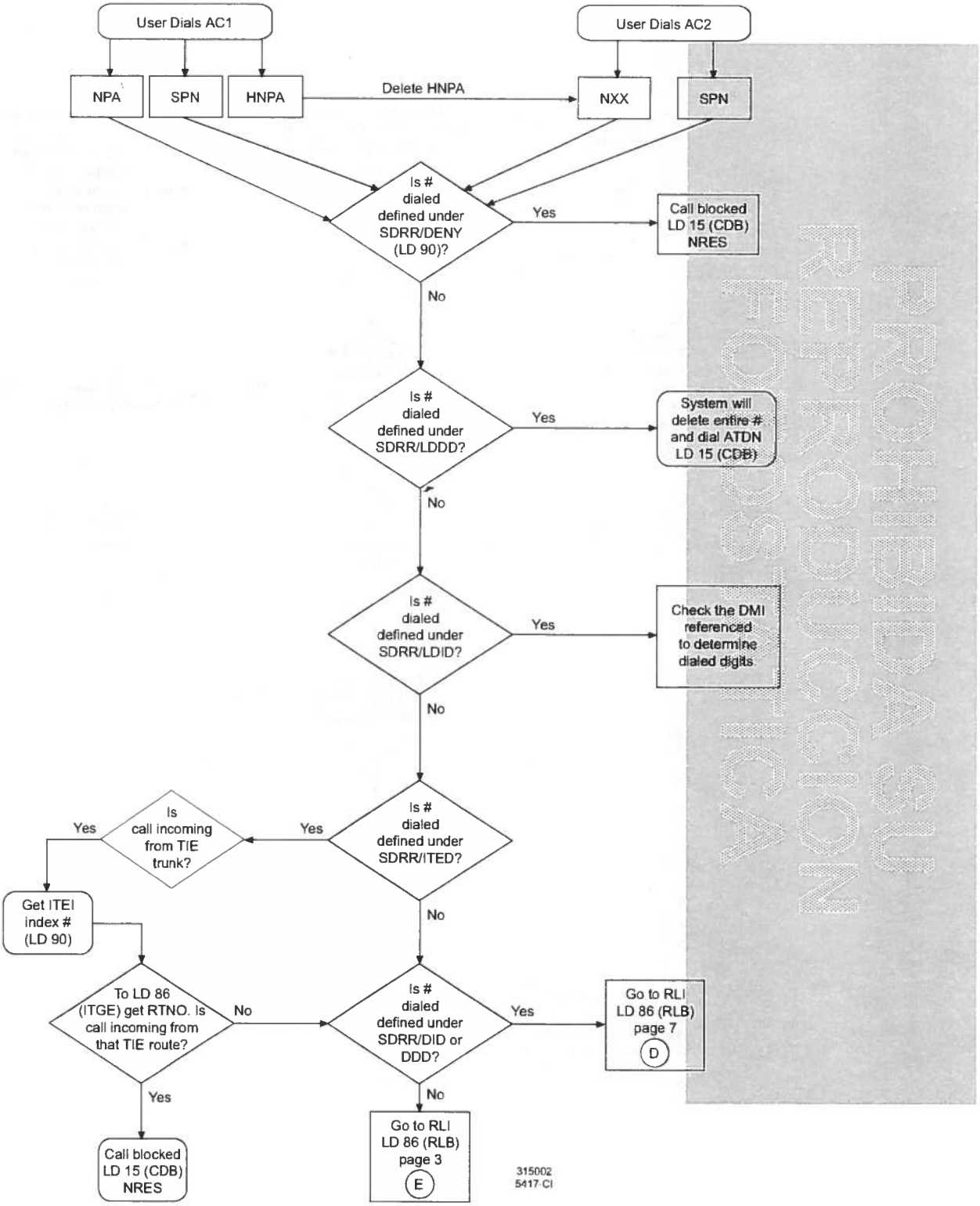
		LEGEND FOR LD 2 RESPONSES
		X = Customer number D = Day of the week: 1 = Sunday 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday ED = end day (1 - 31) EH = end hour (0 - 23) EM = end month (1 - 12) SD = start day (1 - 31) SH = start hour (0 - 23) SM = start month (1 - 12) SO = schedule options : 0 = no traffic scheduled 1 = hourly on the hour 2 = hourly on the half-hour 3 = every half-hour R = network report options 1 = RLI measurement 2 = NCOS measurement 3 = incoming trunk group measurements

NARS Flow Chart - Page 1

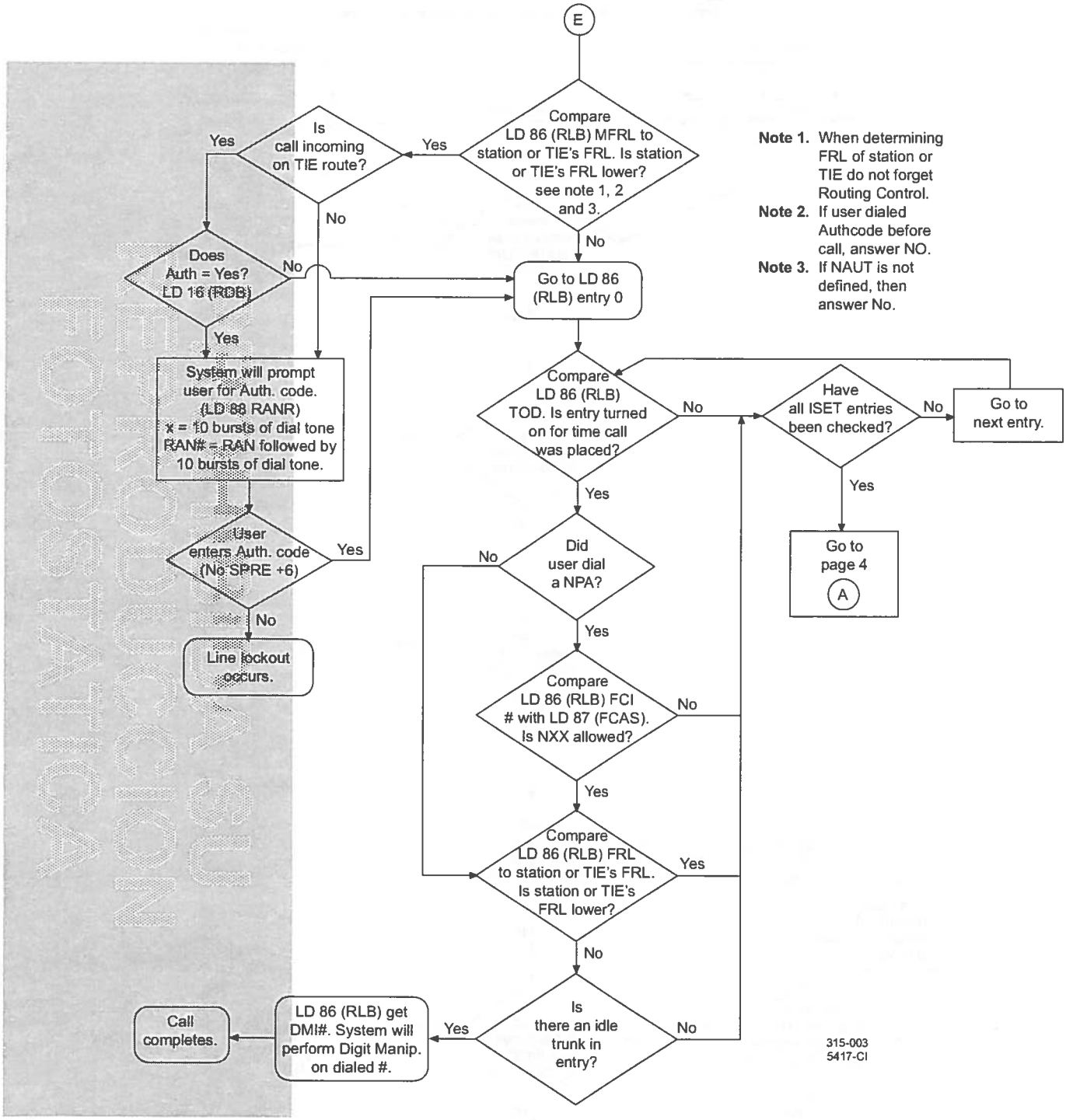


NARS Flow Chart - Page 2

Note: If HNPA has been programmed under AC2, go to opposite table.



NARS Flow Chart - Page 3

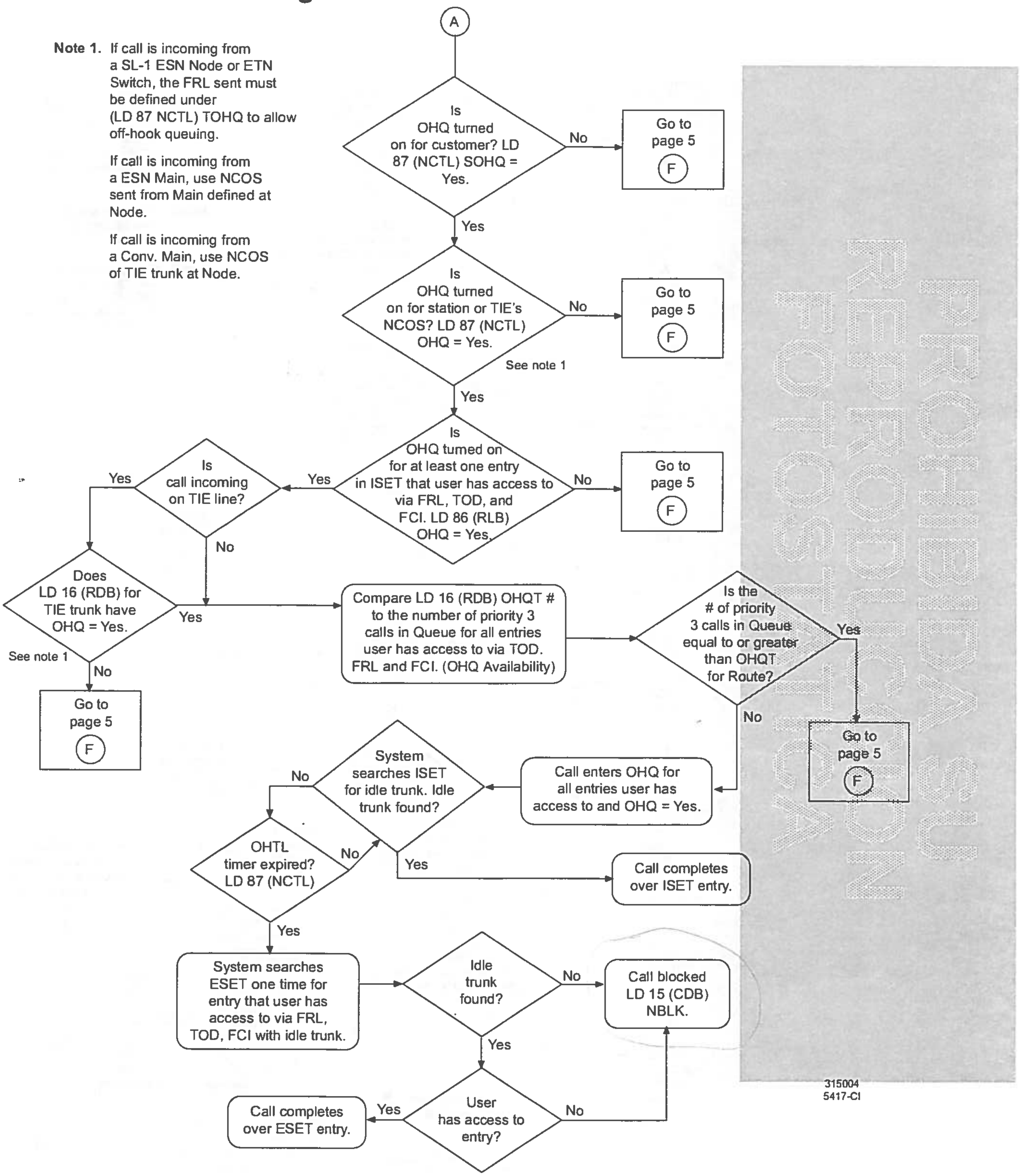


NARS Flow Chart - Page 4

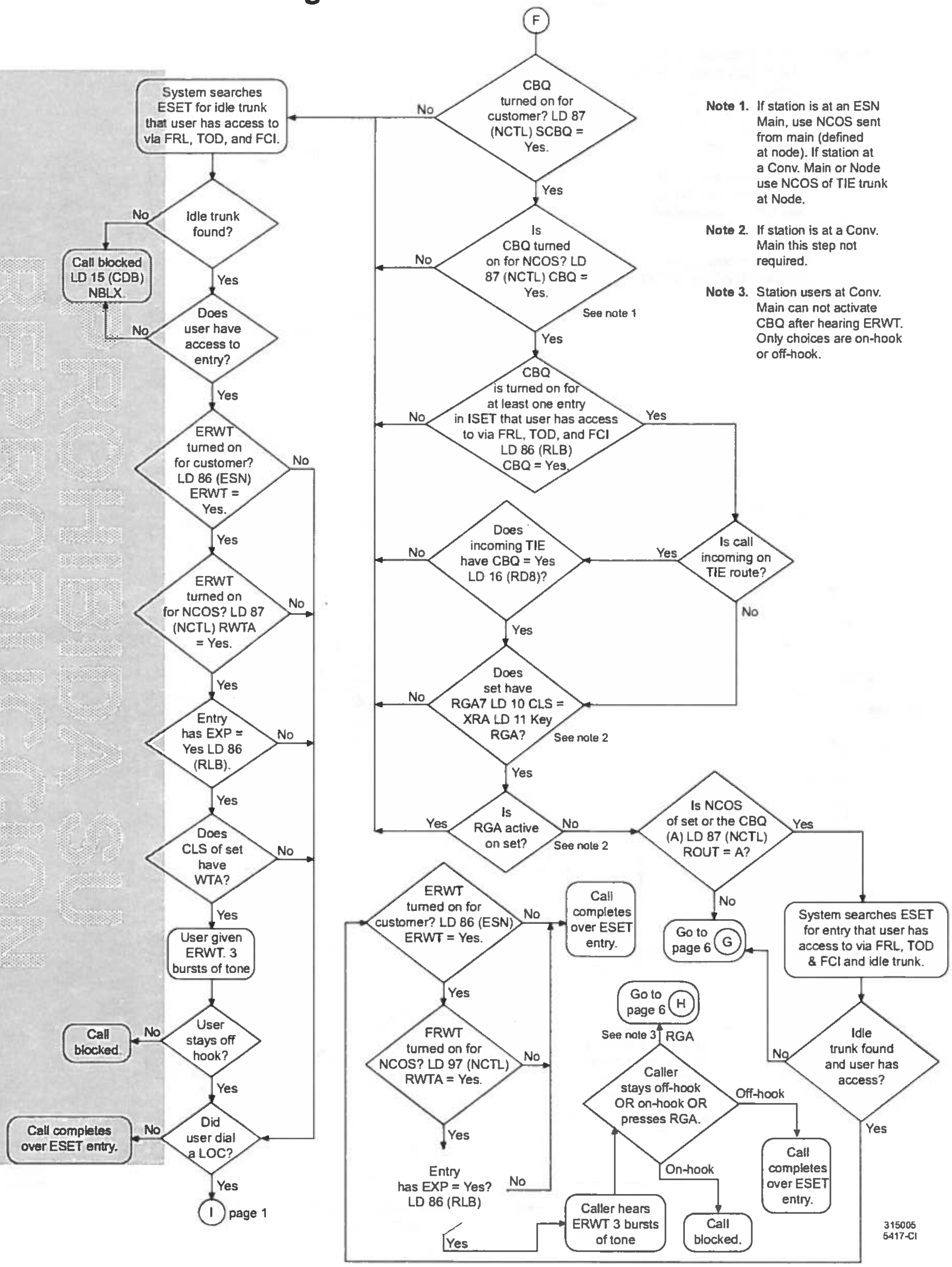
Note 1. If call is incoming from a SL-1 ESN Node or ETN Switch, the FRL sent must be defined under (LD 87 NCTL) TOHQ to allow off-hook queuing.

If call is incoming from a ESN Main, use NCOS sent from Main defined at Node.

If call is incoming from a Conv. Main, use NCOS of TIE trunk at Node.



NARS Flow Chart - Page 5

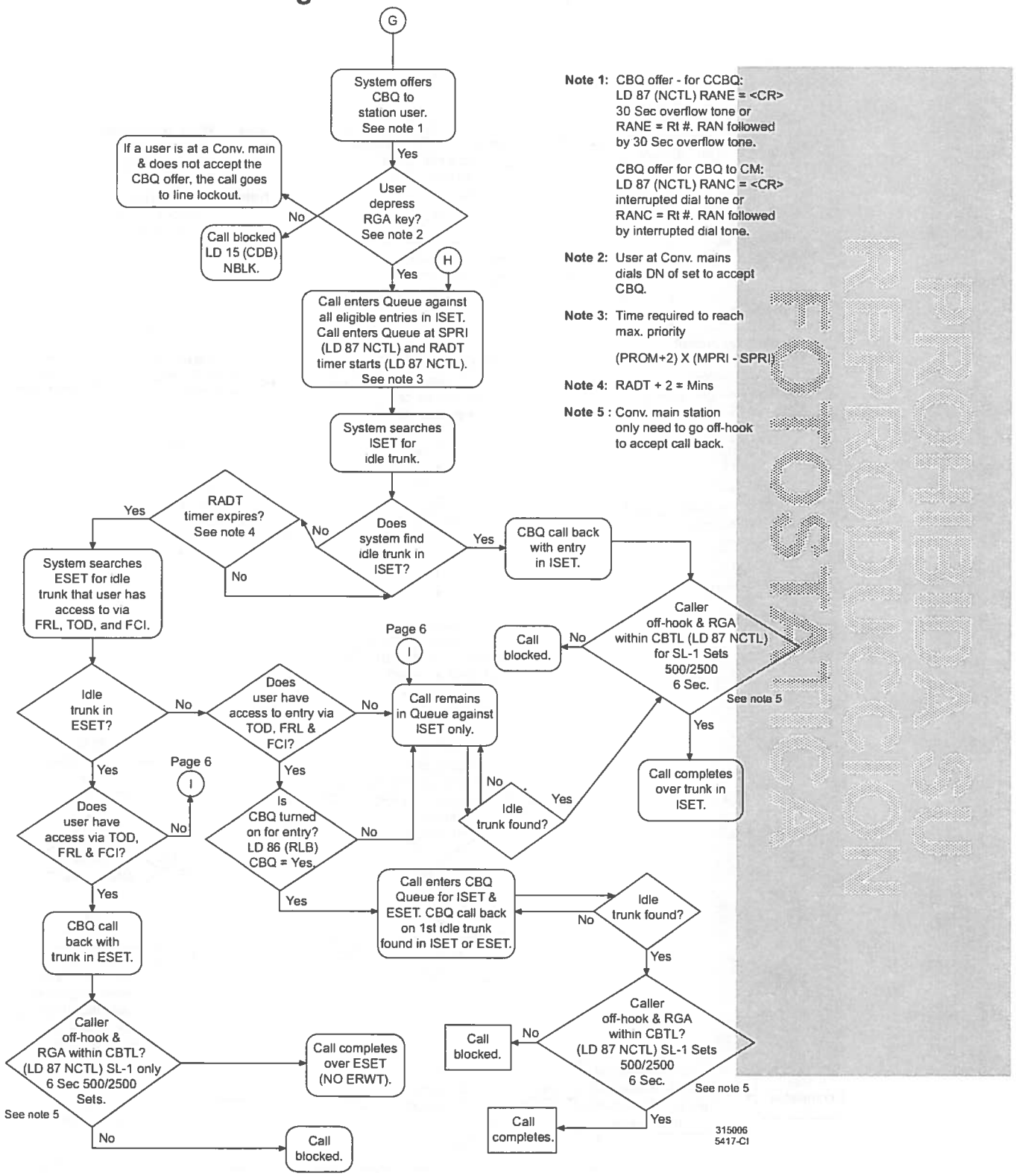


Note 1. If station is at an ESN Main, use NCOS sent from main (defined at node). If station at a Conv. Main or Node use NCOS of TIE trunk at Node.

Note 2. If station is at a Conv. Main this step not required.

Note 3. Station users at Conv. Main can not activate CBQ after hearing ERWT. Only choices are on-hook or off-hook.

NARS Flow Chart - Page 6



Note 1: CBQ offer - for CCBQ:
LD 87 (NCTL) RANE = <CR>
30 Sec overflow tone or
RANE = Rt #. RAN followed
by 30 Sec overflow tone.

CBQ offer for CBQ to CM:
LD 87 (NCTL) RANC = <CR>
interrupted dial tone or
RANC = Rt #. RAN followed
by interrupted dial tone.

Note 2: User at Conv. mains dials DN of set to accept CBQ.

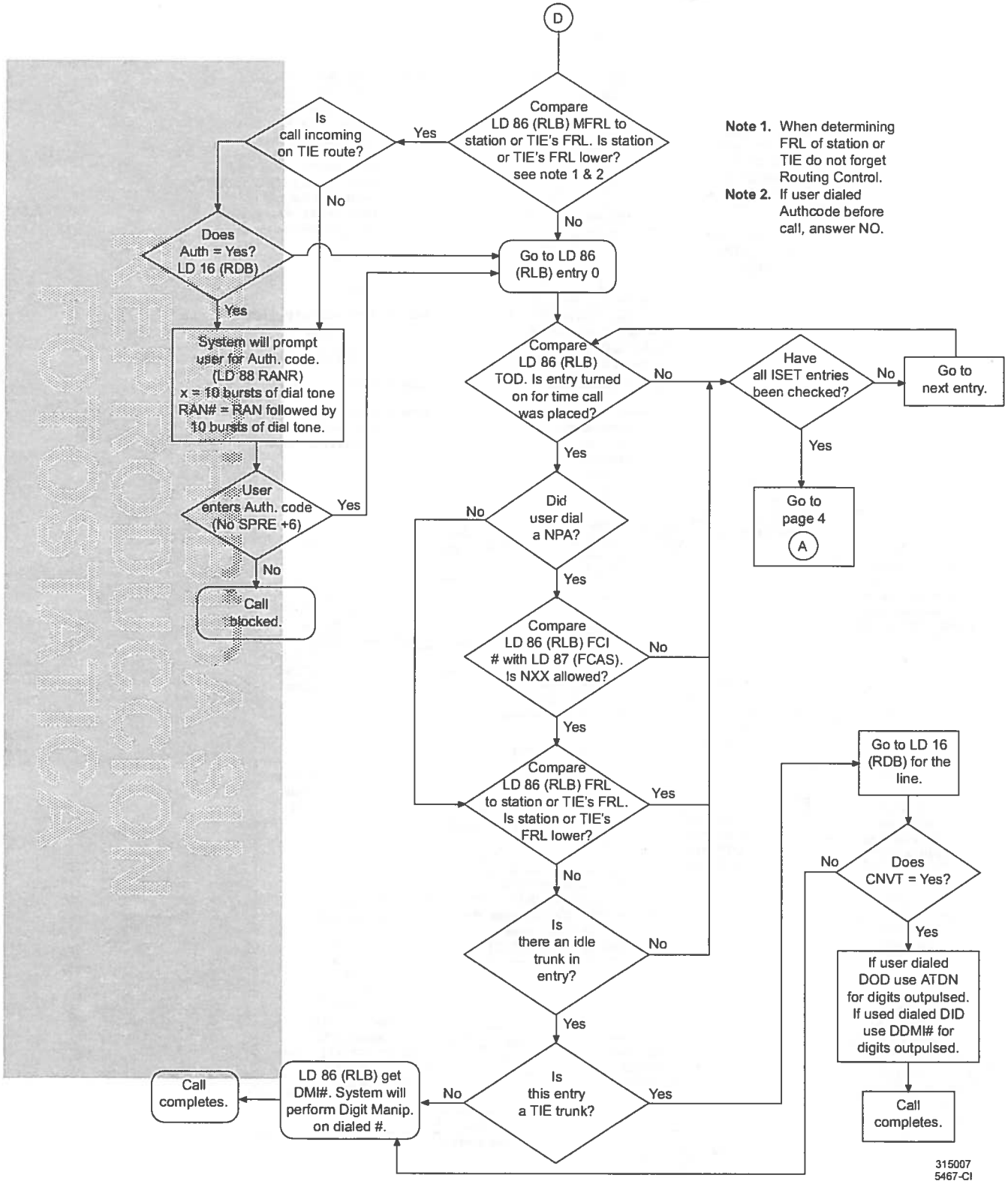
Note 3: Time required to reach max. priority

(PROM+2) X (MPRI - SPRI)

Note 4: RADT + 2 = Mins

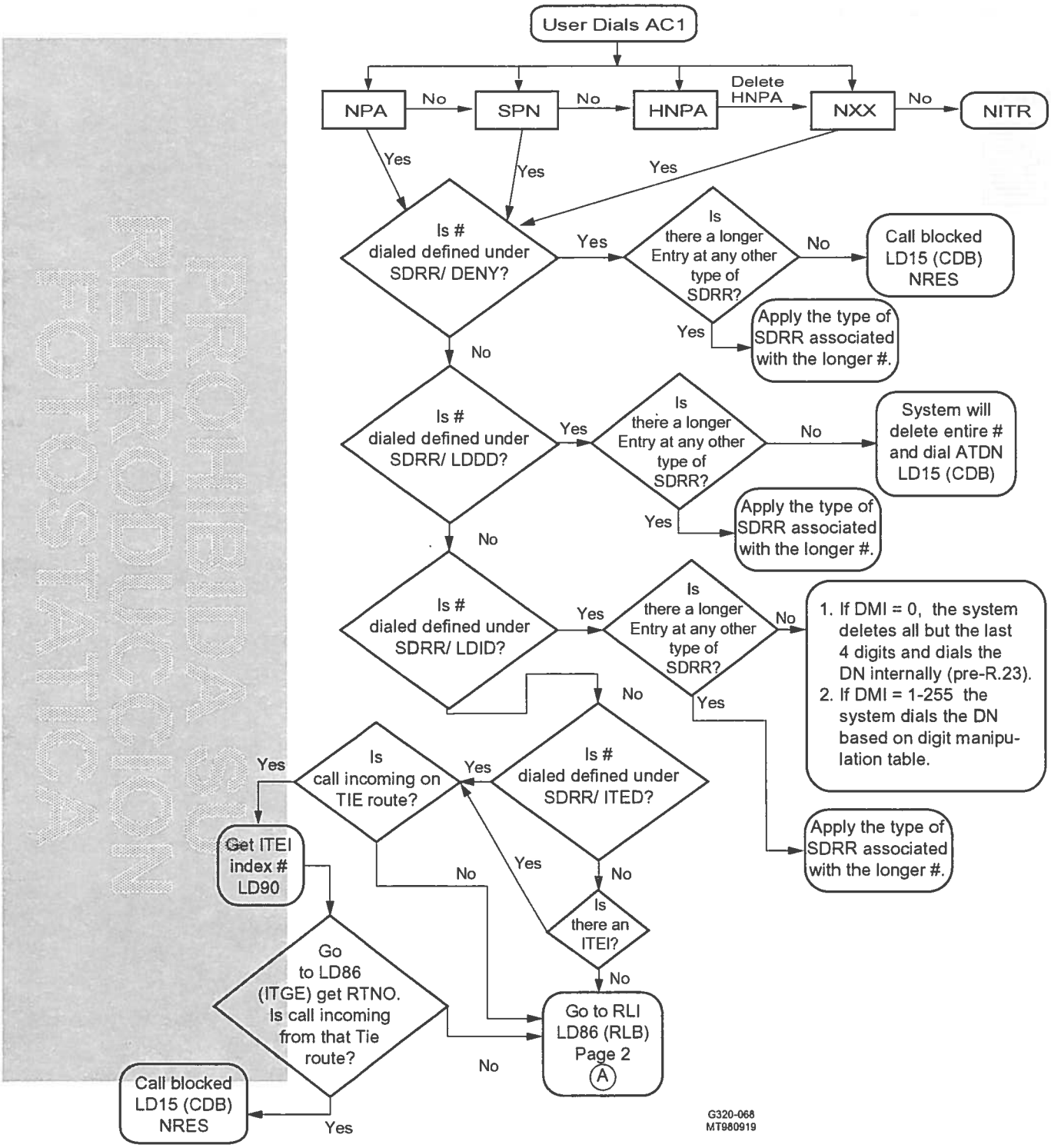
Note 5 : Conv. main station only need to go off-hook to accept call back.

NARS Flow Chart - Page 7

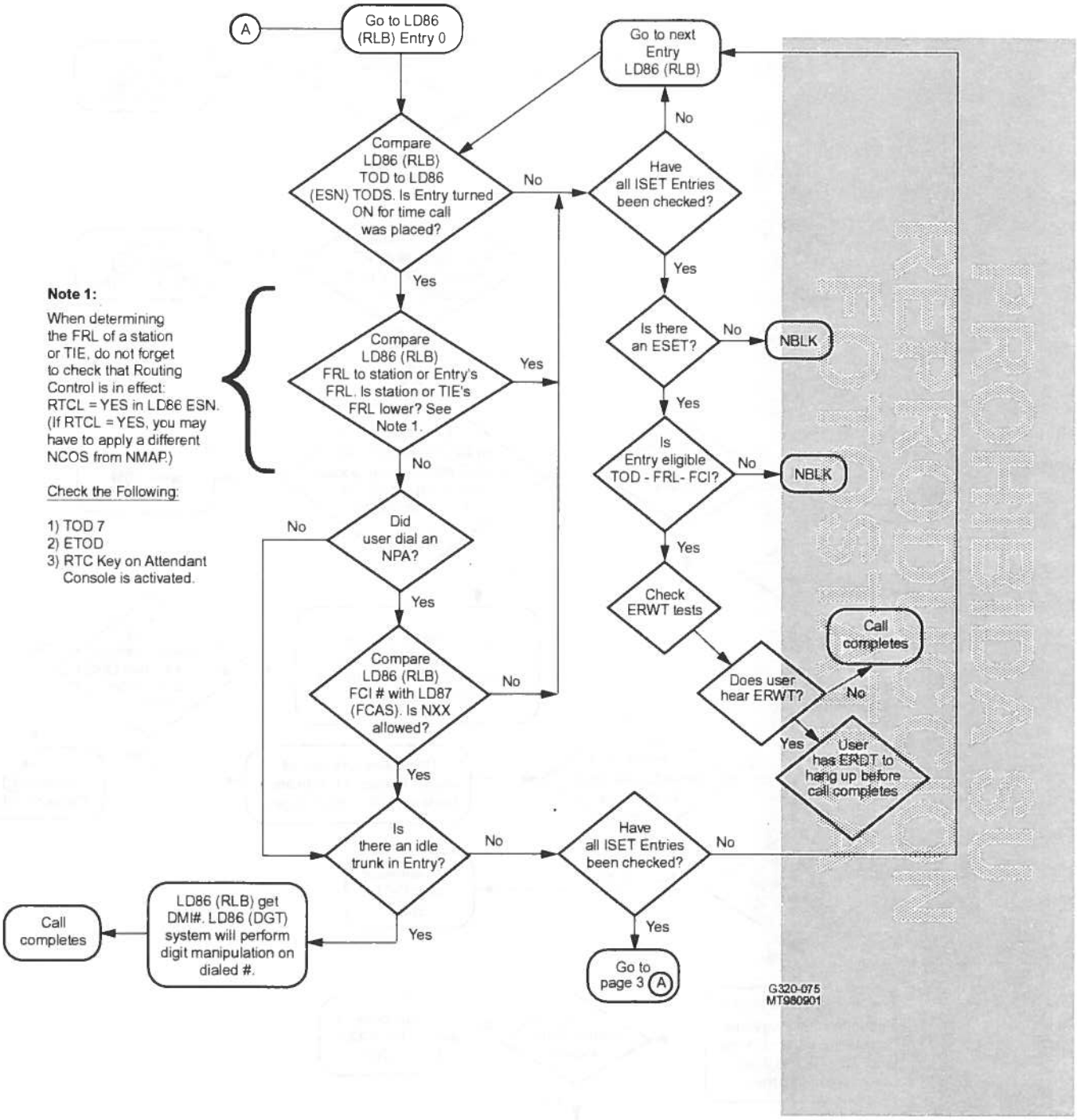


Notes

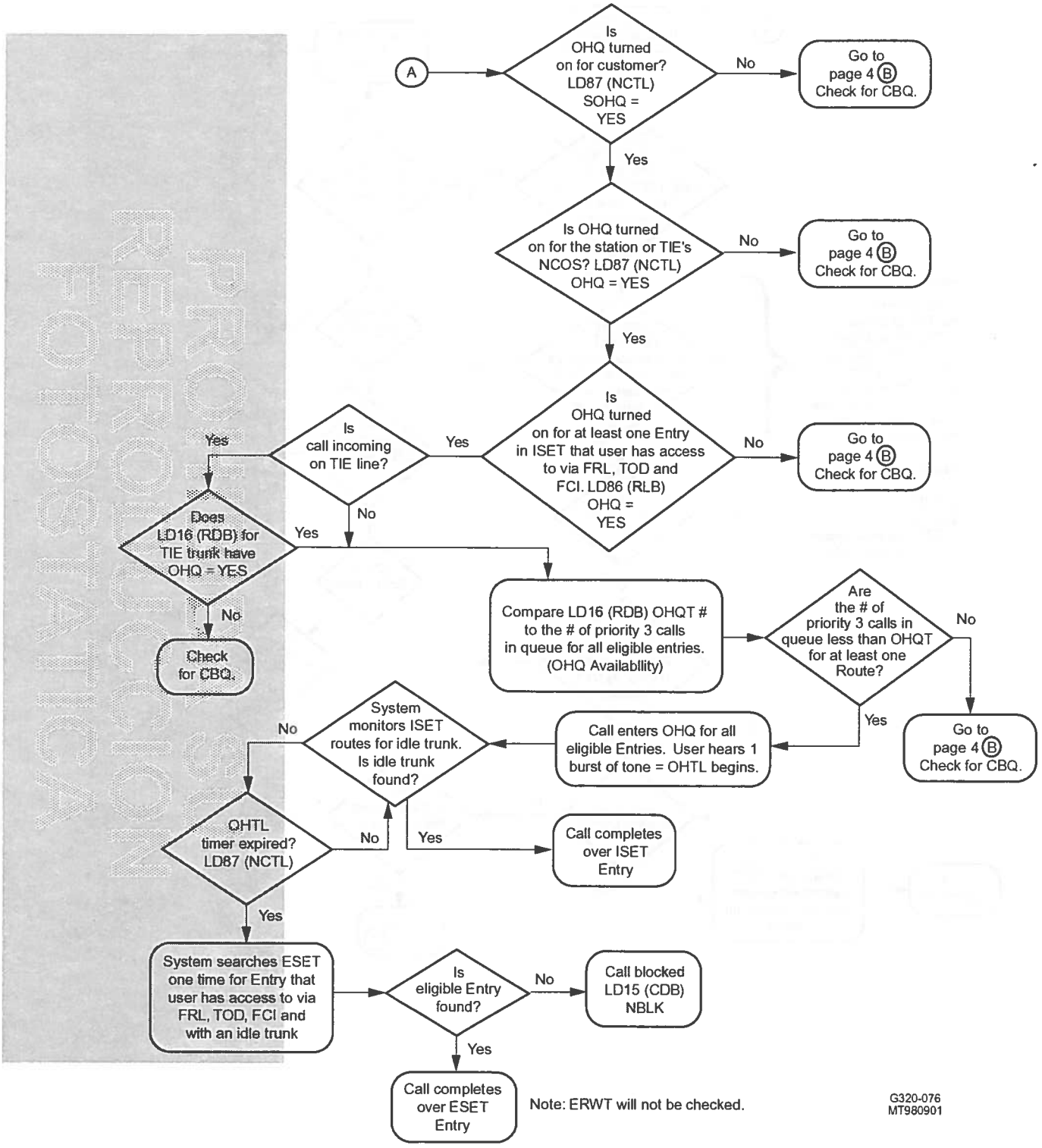
BARS Flowchart - Page 1



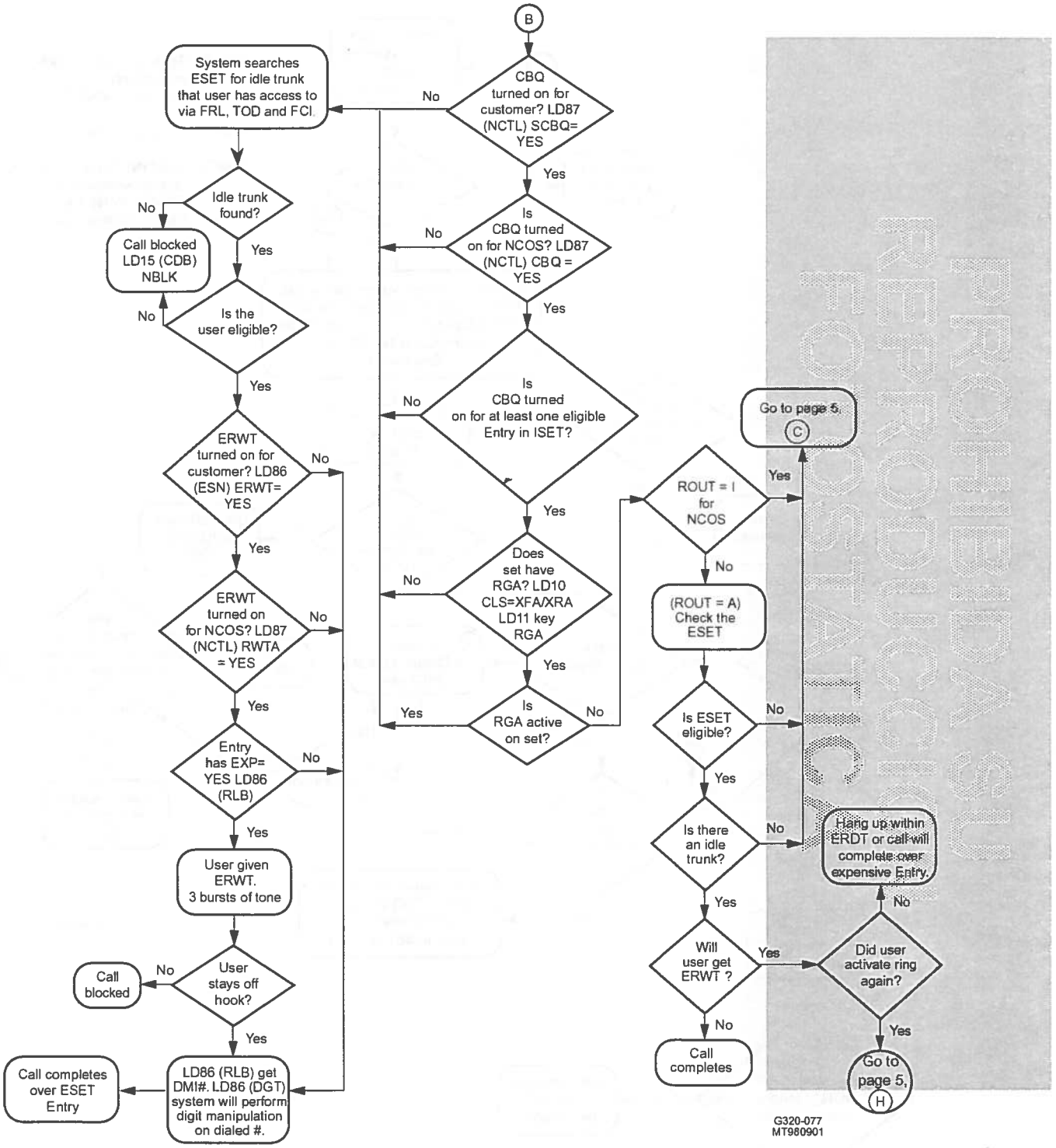
BARS Flowchart - Page 2



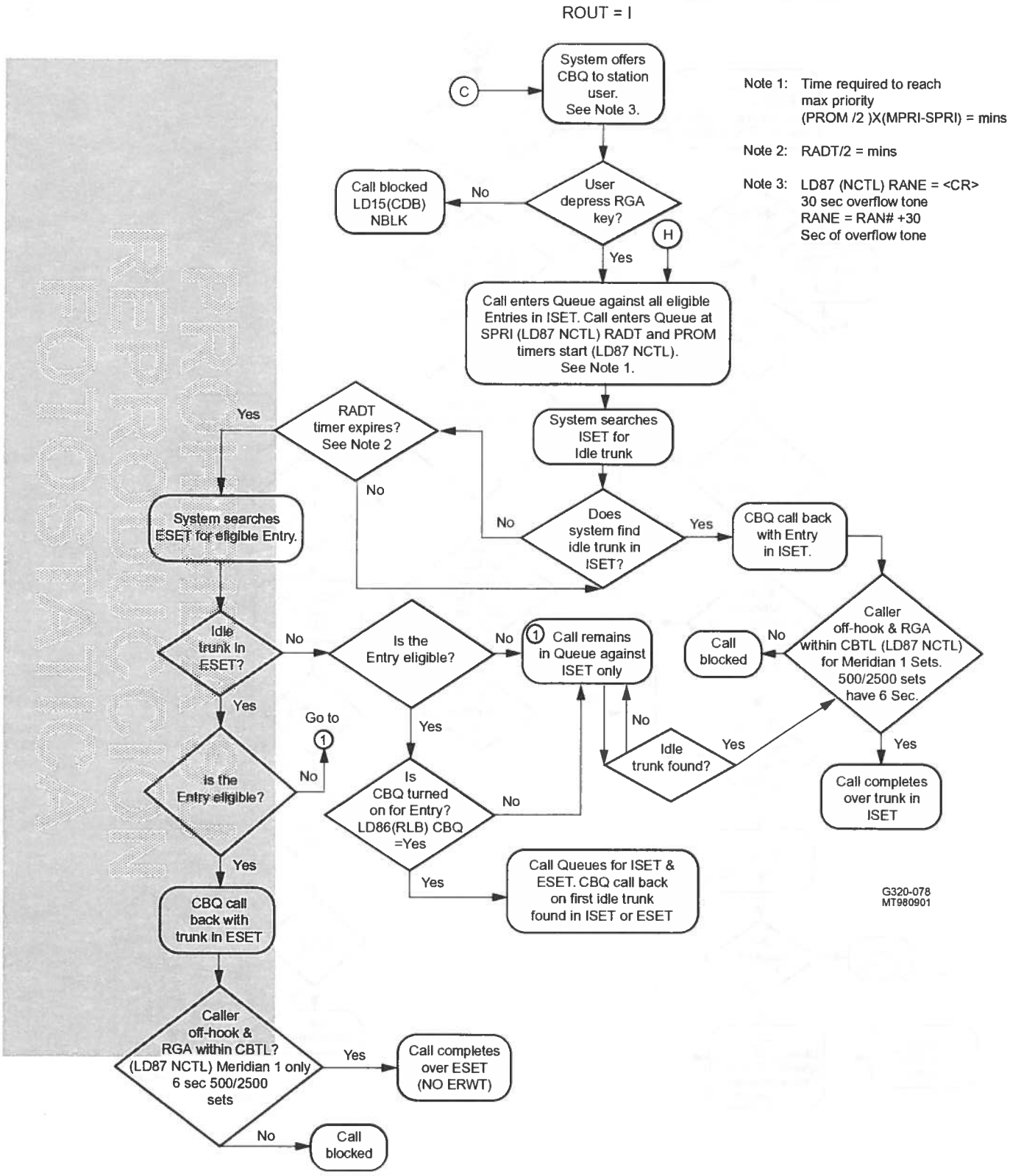
BARS Flowchart - Page 3



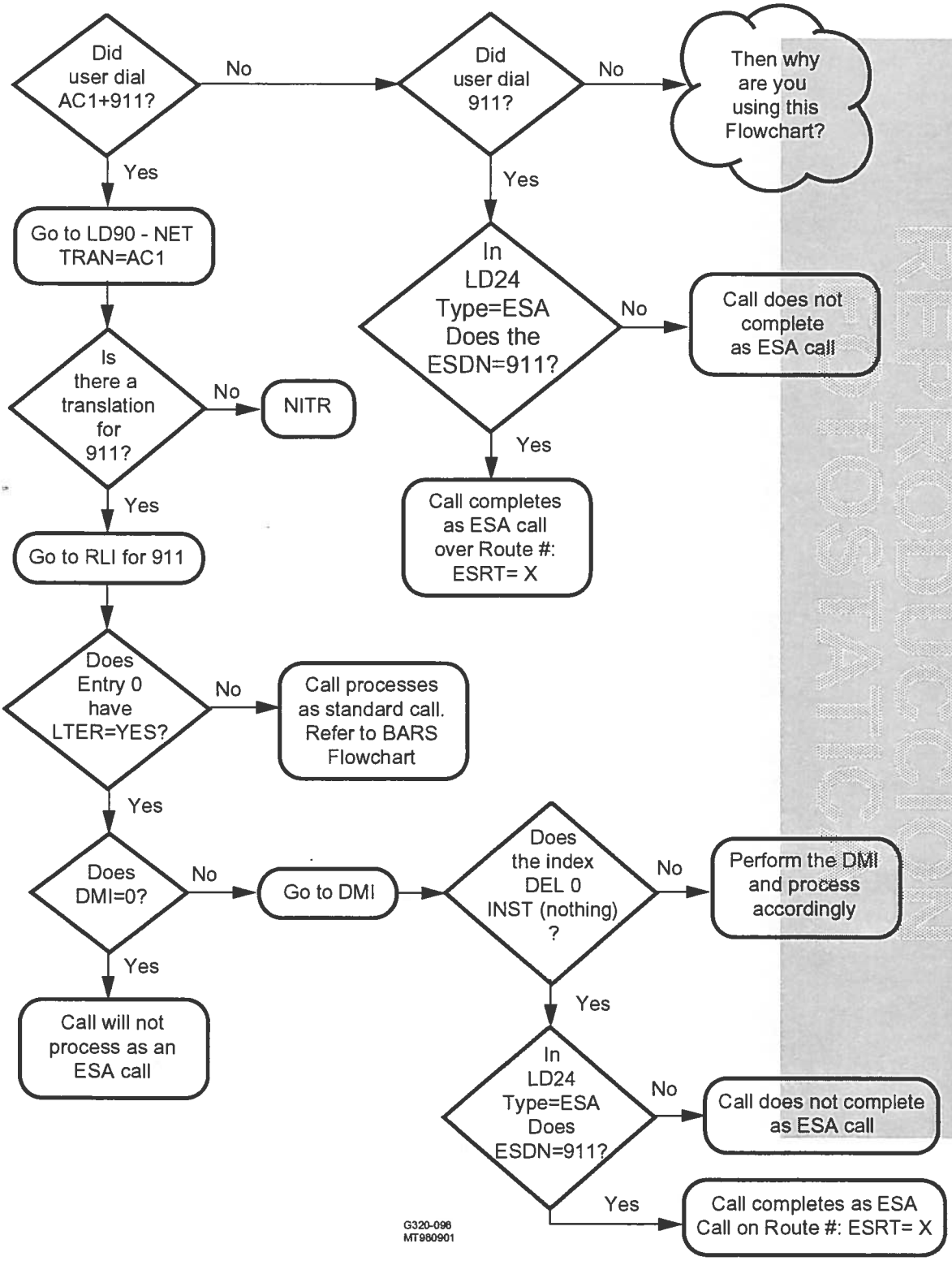
BARS Flowchart - Page 4



BARS Flowchart - Page 5

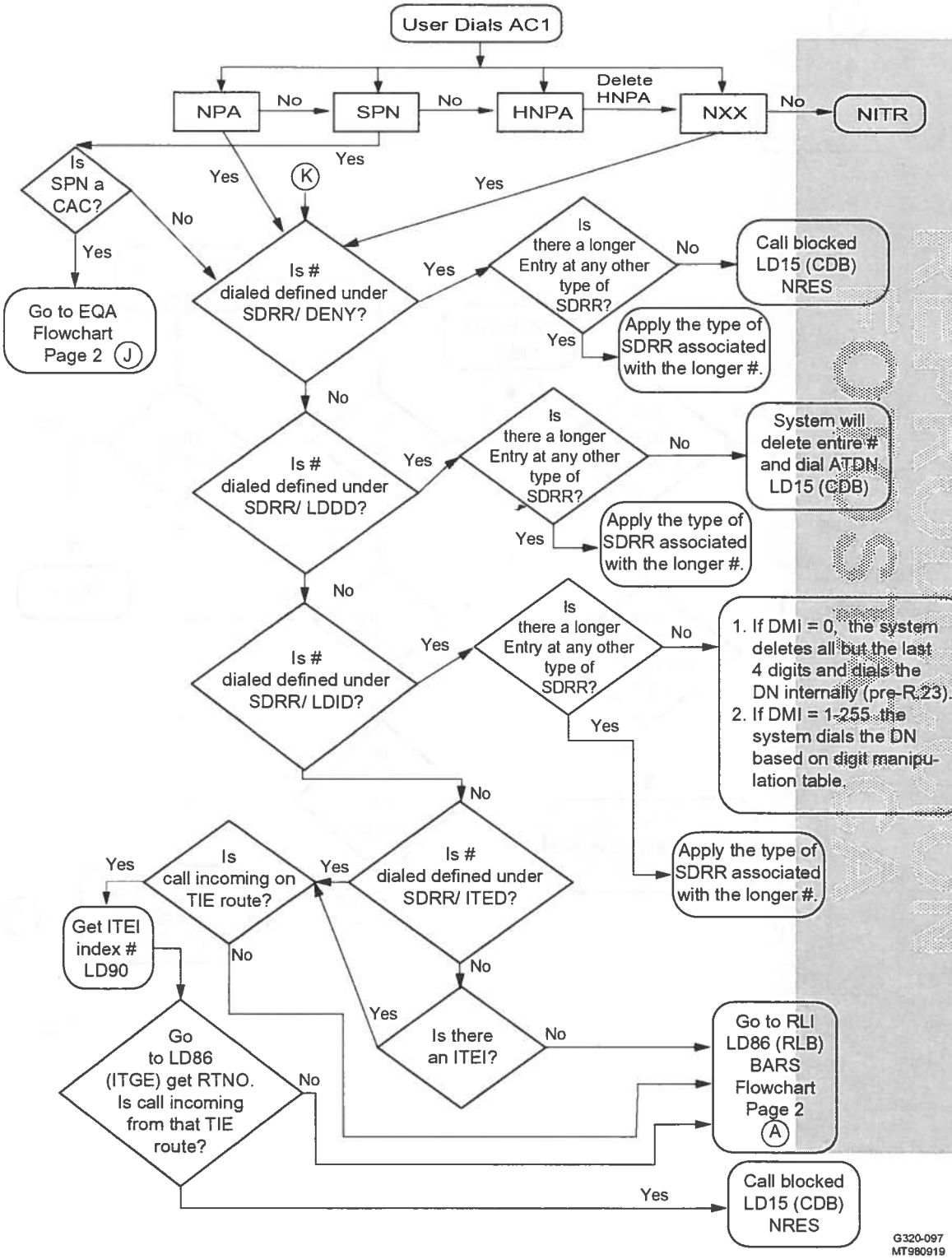


Emergency Services Access Flowchart for 911

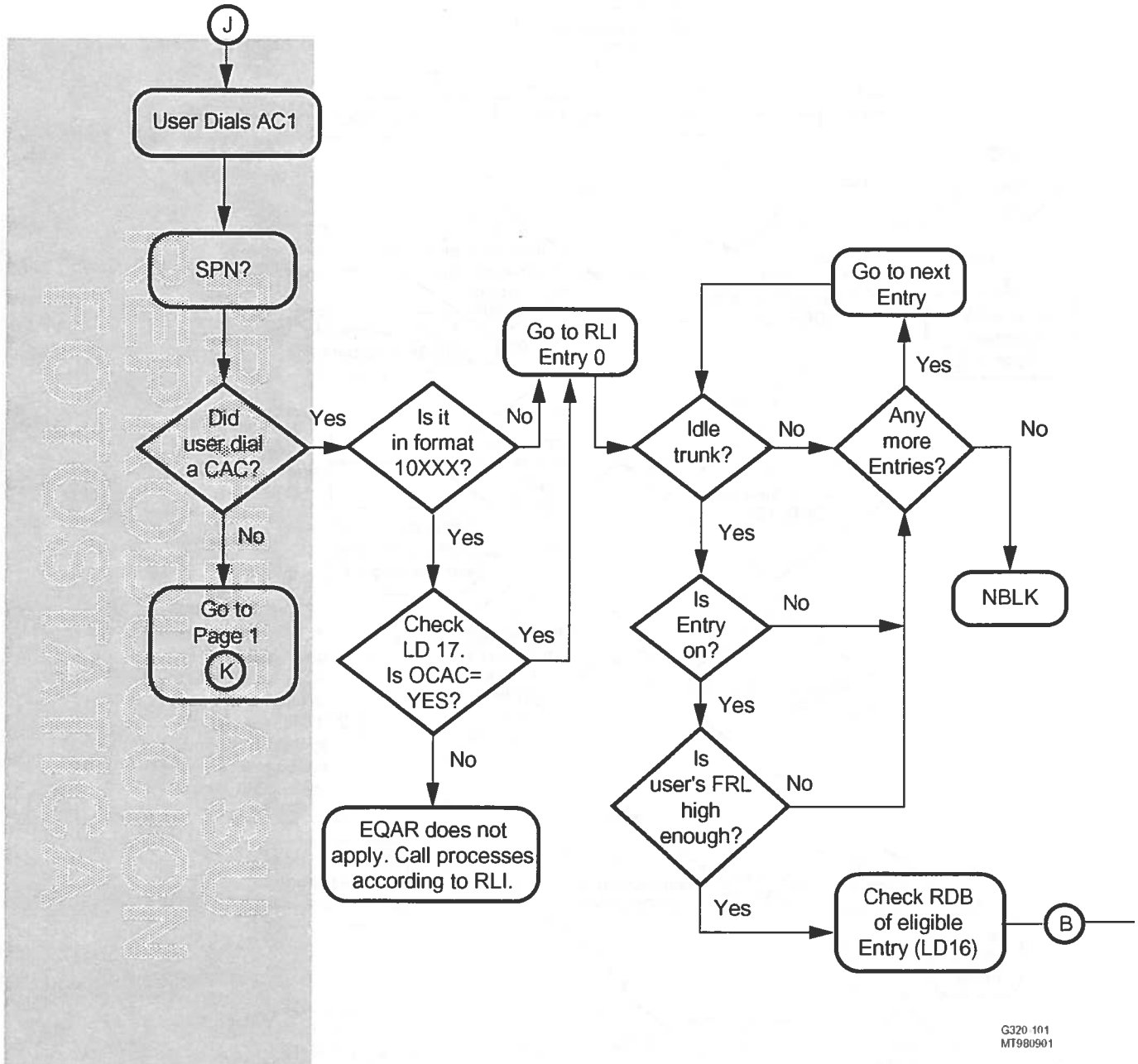


Notes

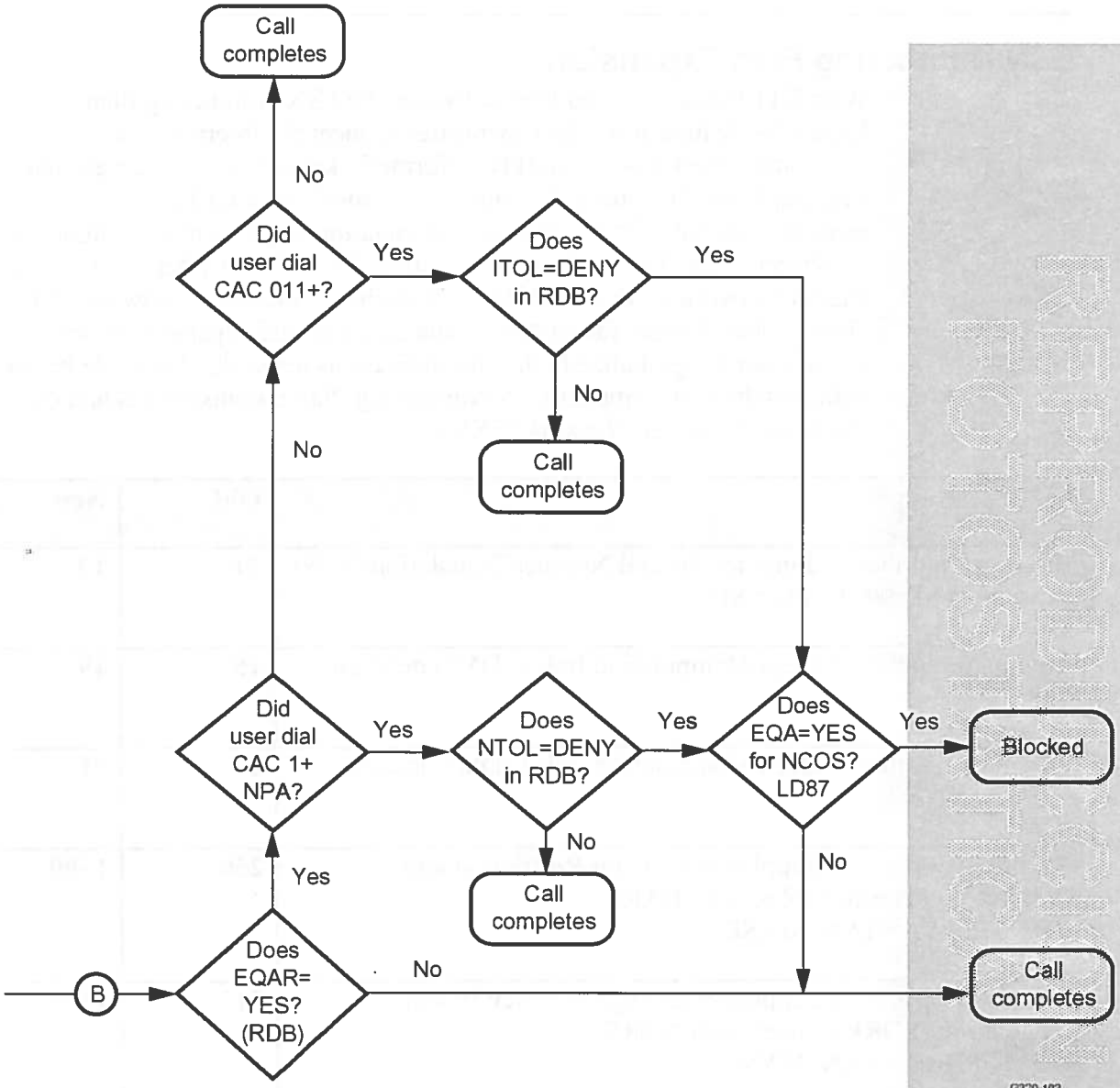
Equal Access Restrictions Flowchart - Page 1



Equal Access Restrictions Flowchart - Page 2



Equal Access Restrictions Flowchart - Page 3



Appendix

ESN Numbering Plan Expansion

With X11 Release 22 and later software, the ESN Numbering Plan Expansion feature provides capabilities to meet the International Telecommunications Union (ITU) (formerly known as the International Telegraph and Telephone Consultative Committee or CCITT) recommendation E.164. This recommendation required that 15 digit global numbering plans be in effect on December 31, 1996 for Integrated Services Digital Network (ISDN) and Public Switching Telephone Network (PSTN) dialing. This feature facilitates the introduction and expansion of services in an increasingly globalized telecommunications network. The table below indicates the major impact ESN Numbering Plan Expansion has had on Electronic Switched Network (ESN):

ESN Component	Old	New
Maximum number of digits for Special Number Translation (SPN) screening (LD 90 TYPE = SPN)	11	19
Maximum number of Digit Manipulation Index (DMI) deletion digits	15	19
Maximum number of Digit Manipulation Index (DMI) insertion digits	24	31
Maximum number of Supplemental Digit Restriction and Recognition (SDRR) tables, with BARS (LD 90 FEAT = ESN MXSD)	256	1500
Maximum number of Supplemental Digit Restriction and Recognition (SDRR) tables, with NARS (LD 90 FEAT = ESN MXSD)	512	1500
Maximum number of words in each Supplemental Digit Restriction and Recognition (SDRR) entry	3	4
Maximum number of digits in each Supplemental Digit Restriction and Recognition (SDRR) entry	7	10
Maximum length of Flexible Numbering Plan (FNP) Flexible Digit Number Length (FLEN) numbers for Trunk Steering Codes	16	24

Maximum number of digits per Free Special Number Screening (FSNS) Special Number	**11**	**19**
Maximum number of possible Supplemental Digit Restriction and Recognition (SDRR) entry types	**8**	**9** (ALOW is added as a new entry type in LD 90.) Allows a call to go through, as if the dialed digits did not match any entry within the SDRR table.
Restriction imposed on Supplemental Digit Restriction and Recognition (SDRR) entry codes	**Leftwise Unique**	**None.** The leftwise-unique restriction, imposed on SDRR entry codes, is removed. For example, if 555 is an existing entry, a new entry of either 55 or 5551212 can be entered.

NARS QRC #37

Intercept Treatment — X11 Release 20 and earlier

Description

When the station user dials AC1 followed by a phone number, the system references the appropriate tables and attempts to complete the call. If the system cannot find a match on the digits dialed or for any reason the call cannot complete, the call will be routed immediately to a customer defined Intercept Treatment.

Provisioning

- The system provides three intercept treatments: Overflow, Route to the attendant, or a Recorded Announcement.
- The Intercept treatment provided will be based on the call originator.
- The Intercept treatments are defined in the Customer Data Block, LD 15.

Programming information

PROMPTS	RESPONSES	COMMENTS
>	LD 15	*X11 Release 20 or earlier*
REQ	NEW, CHG, OUT	Create, modify or delete data
TYPE	CDB	Customer Data Block
CUST	0 - 99	Customer number
INTR	YES (NO)	Gate opener to modify Intercept treatments
NINV	(OVF) (OVF) (OVF) (ATN)	Network Invalid BARS/NARS call intercept treatment. 4 entries are required. For each entry, select from: OVF (Overflow Tone); ATN (Route to the Attendant); or RAN (Recorded Announcement).
RANR	0 - 511	RAN Route number

PROMPTS	RESPONSES	COMMENTS
(LD 15 continued from previous page)		
NITR	(OVF) (OVF) (OVF) (ATN)	Network BARS/NARS Invalid Translation intercept treatment. 4 entries are required. For each entry, select from: OVF (Overflow Tone); ATN (Route to the Attendant); or RAN (Recorded Announcement).
RANR	0 - 511	RAN Route number
NRES	(OVF) (OVF) (OVF) (ATN)	BARS/NARS calls restricted by SDRR intercept treatment. 4 entries are required. For each entry, select from: OVF (Overflow Tone); ATN (Route to Attendant); or RAN (Recorded Announcement).
RANR	0 - 511	RAN Route number
NBLK	(OVF) (OVF) (OVF) (ATN)	Network Blocked Calls intercept treatment. 4 entries are required. For each entry, select from: OVF (Overflow Tone); ATN (Route to Attendant); or RAN (Recorded Announcement).
RANR	0 - 511	RAN Route number

Recording Information on Worksheets for an Existing Customer

The recommended order for filling out **BARS** worksheets for an EXISTING customer is:

- Determine the Route Lists required.
- Record the following prompts on the Route List Data Block in LD 86: RLI, ENTR, ROUT, EXP, ISET.
- Determine Digit Manipulation tables needed.
- Complete the Digit Manipulation Data Block in LD 86.
- Record Digit Manipulation Indexes on the Route List Data Block in LD 86.
- Determine Time of Day Schedules in ESN Data Block in LD 86.
- Record Time of Day Schedule numbers on the Route List Data Block in LD 86.
- Determine the Free Calling Area Screening tables.
- Complete the Free Calling Area Screening tables in LD 87.
- Record Free Calling Area Indexes on the Route List Data Block in LD 86.
- Determine NCOS levels needed.
- Record the following prompts on the Network Control Data Block in LD 87: NCOS, FRL.
- Record FRLs on the Route List Data Block in LD 86.
- Assign Attendant's NCOS level in LD 15: Customer Data Block.
- Assign the NCOS levels to Digital/Multiline Sets in LD 11 and to Analog Sets in LD 10.
- Assign NCOS levels to incoming trunks in LD 14: Trunk Data Block.
- Assign NCOS levels in LD 24: Direct Inward System Access.
- Complete the Network Translation Data Block in LD 90.
- Complete the AUB and AUT Data Blocks in LD 88.
- Determine Queuing needed.
- Complete the Network Control Data Block in LD 87.
- Complete the Route List Data Block in LD 86.

Recording Information for an Existing (BARS) Customer cont'd

- Allow incoming TIE calls to access Queuing in LD 16: Route Data Block.
- Determine Incoming Trunk Group Exclusion Indexes required.
- Complete the ITGE Data Block in LD 86.
- Assign ITED and ITEI to Network Translation Tables, LD 90.
- Complete the ESN Data Block in LD 86.

Meridian 1 Entry Order for a New Customer

Information on Overlay (LD) forms and database sheets is entered in the following order for a NEW customer:

- LD 17, CFN Data Block.
- LD 15, CDB Data Block.
- LD 16, RDB Data Block.
- LD 14, TRK Data Block.
- LD 12, ATT Data Block
- LD 86, ESN Data Block.
- LD 86, DGT Data Block.
- LD 87, FCAS Data Block.
- LD 87, NCTL Data Block.
- LD 86, RLB Data Block.
- LD 86, ITGE Data Block.
- LD 90, NET Data Block.
- LD 88, AUB Data Block.
- LD 88, AUT Data Block
- LD 10, Analog (500/2500) Telephone Administration.
- LD 11, Meridian Digital Telephone Administration
- LD 24, DISA Data Block