TRAFFIC REGISTER ASSIGNMENTS — REGISTER ORDERS NON-TUR ROUTE RELAYS FOR PEG COUNT AND OVERFLOW REGISTER ASSIGNMENTS NO. 5 CROSSBAR

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GENERAL

- 1.01 This appendix supplements Section 218-040-022. It provides:
 - A description of No. 5 Crossbar route relay and associated equipment component functions.
 - A guide for the assignment of peg count and overflow registers and the associated pin (pulse) jacks, for non-Engineering and Data Acquisition System (EADAS) offices.
 - A guide for the assignment of peg count and overflow Data Collection Devices (DCDs) for EADAS.
- 1.02 It is reissued to provide updated informa-

Note: Marginal arrows used to denote changes are omitted.

1.03 The route relays are associated with trunk groups requiring these measurements. The description of route relays and associated equipment is intended to provide an understanding of their function and the need for accurate and current assignment to peg count and overflow registers to provide valid trunking data.

2. RESPONSIBILITIES

- 2.01 Network Administration Center (NAC)/ Network Data Collection Center (NDCC): The NAC is responsible for the assignment of peg count, overflow registers and pin jacks for non-EADAS offices. In an EADAS environment, the NDCC has responsibility for the assignment of peg count, overflow DCDs and providing cross-connect information. Both work groups issue cross-connect assignments to Switching Maintenance.
- 2.02 The Area Trunk Assignment Bureau/Common Control Order Group (ATAB/CCOG) is responsible for route relay assignments, route relay cross-connects, preroute relays, trunk and sender allotter assignments, Individual Peg Count (IPC) relays, IPC cross-connects and other cross-connects. as required.
- 2.03 The NAC or the NDCC should reproduce two copies of Form F 829, TUR and Traffic Register Order (non-EADAS) or Form P 4344, EADAS-Peg Count, Overflow and TUR Assignments for cross-connects. These forms should reach Switching Maintenance no later than 10 business days prior to the due date. Western Electric (WE) job orders shall be forwarded to reach Switching Maintenance by the date established by the job committee or the equipment supervisor. Discrepancies noted by Switching Maintenance shall be discussed with the NAC or the NDCC before changes are made. Upon completion, Switching Maintenance will indicate any corrections in red, date and sign the order, and return one copy to ATAB and one copy to the NDCC or NAC. ATAB will reissue the order reflecting any changes.

NOTICE

Not for use or disclosure outside the Bell System except under written agreement

3. ROUTE RELAY FUNCTIONS

- 3.01 The operation of a route relay makes it possible to condition the completing or combined marker for the items of information listed below:
 - Trunk selection trunk block (TB) and trunk group (TG)

Note: The abbreviation TG will mean trunk group throughout this section. It should not be confused with the TG punching on the trunk link frame (see 3.09).

- Sender group selection
- Route advance
- Digit deletion
- · Prefixing of digits
- · Code conversion
- Called number structure
- Code pattern
- High 5, low 5 indications
- 3.02 In general, all calls which require identical treatment for all of these items are directed to the same route relay. Where there is a difference in any one of the items, additional route relays are required.
- 3.03 Route-Advance Traffic: When a TG has both first-route traffic offered to it and traffic which is route-advanced to it from another group, it is necessary to provide a separate route relay for handling the traffic which is route-advanced to the group.
- 3.04 Ground Supplies: Each route relay is assigned in one of six ground supplies. Route advancing may be from a relay in any ground supply (except six) to a relay in any other ground supply. Within a given route-advance chain, it is not permissible to return to a previously used ground supply. Ground supplies five and six are reserved for final-route or last-end route relays. Outgoing trunk groups are assigned to ground supplies one through four. See Sections 218-060-190 and 218-060-200 for more details on route relays and ground supplies.

- 3.05 Route-Advance Functions: The No. 5
 Crossbar completing marker is provided with a route-advance feature which enables it, when unable to complete a connection to the first route desired, to test up to three alternate routes in attempting to establish a connection to a trunk. The marker will route-advance whenever it finds any of the following conditions; there may be other conditions, however, these are the most common:
 - All trunks busy in selected trunk group.
 - All senders busy in selected sender group.
 - A second failure to match condition.
 - A double area code dialed by a customer.
 - Called station is busy on an intra-office call.
 - Call being processed is a reverting type call.
- 3.06 Route-Advance Conditions: Normal routeadvance cross-connections usually provide for the following conditions:
 - Intra-office overflow and reverting call trunk groups to the route relay for the combination tone trunks.
 - Permanent signal holding trunks to the route relay for the common overflow trunks.
 - Noncoin combination tone trunks to the route relay for the common overflow trunks.
 - Coin combination tone trunks and common overflow trunks, with none of these trunks available (the marker signals the originating register to return an overflow signal; 120 IPM tone).
- 3.07 Charge Condition: When route-advancing occurs, the charge condition is established by the route series relay to which the first route relay is connected. Therefore, the route relay to which the call is advanced need not discriminate for charge condition.
- 3.08 Additional Route Relay Requirement:

 When a TG has both first-route traffic offered to it and also traffic which is route-advanced to it from another group, it is necessary to provide a separate route relay for handling the route-advanced traffic.

- 3.09 Trunk Selection: Cross-connections of the TB and TG punchings furnish leads through the trunk link connector circuit. This causes the selection of a trunk in the desired TG on the trunk link frame. A minimum of one route relay is required for each outgoing TG.
- 3.10 Sender Group Selection: The outsender group (OSG) cross-connection causes selection of a sender in the sender group associated with the TG selected. The sender and trunk are connected via the outsender link (OSL) frame.
- 3.11 Allotted Trunk Groups: If any TG is allotted to two different TB relays on the trunk link frame, a statement should be included in the Traffic Equipment Order (TEO). If more than one group of outsenders is to be assigned to a particular route, a statement to that effect should also be included in the TEO.
 - (a) Wire Spring (WS) and Flat Spring (UY) relay markers are equipped with four allotter circuits so that four TGs may be assigned using the allotter.
 - (b) The groups must be assigned one group to a pair of route relays in each of ground supplies one through four.

Note: UY relay markers normally use route relays 10 through 19 in ground supply four.

(c) Four allotter circuits are provided, and their association with ground supplies should be as follows:

Allotter Circuit	Ground Supply
0	1
1	2
2	3
3	4

Notes:

- 1. In some offices there may be an option to cross-connect any allotter circuit to any ground supply (one through four).
- 2. See Sections 218-060-190 and 218-060-200 for further reference on allotted trunk groups.

- 3.12 Trunk Group Ground Supply Assignments:
 These assignments are handled as follows:
 - (a) The intra-office TGs may be assigned to any of the first four ground supplies. They must be in a different ground supply than the TG over which reverting calls are handled.
 - (b) Stuck coin trunks, permanent signal, noncoin combination tone trunks should be assigned to ground supply five.
 - (c) Coin combination tone trunks and common overflow trunks should be assigned to ground supply six.
 - (d) Outgoing routes which include interoffice, intermarker group, groups to tandem, toll switching, intertoll, service routes, etc, are assigned in ground supplies one through four.
- 3.13 Peg Count Register Provision and Operation: Peg count (PC) registers are handled as follows:
 - (a) PC registers should always be provided on operator, final and high usage groups, intermarker groups, intra-office, reverting, and miscellaneous groups.
 - (1) All TGs listed on the trunk forecast need PC, overflow, and usage register assignments. If the three measurements cannot be provided, the following guidelines are furnished to assist the NAC and NDCC in the assignment of peg count, overflow and usage registers (DCDs) for trunking:
 - Preferred: Usage, Peg Count, Overflow
 - 2nd choice: Usage
 - 3rd choice: Peg Count, Overflow
 - (2) All miscellaneous groups (ie, announcement trunks, tone trunks, centrex data, intercept trunks, etc) to be assigned PC, overflow, and usage registers are listed in Section 218-040-022 with Equipment Measurement Codes (EMCs).
 - (3) TEO will specify the amount of registers provided for each office. Table A indicates the registers required for various sized TGs.

TABLE A

TOTAL TRUNK GROUP SIZE	REGISTERS REQUIRED
1-60	ONE PER TG
61-100 (IPC REQUIRED)	TWO PER TG, ONE EACH FOR ODD AND EVEN NUMBERED MARKERS
MORE THAN 100 (IPC REQUIRED)	ONE REGISTER PER MARKER FOR EACH TG

- (b) PC registers are scored by the combined or completing marker circuit over the route relay PC or IPC lead when the marker offers a call to the TG. Hence, in addition to the completed calls, the scorings include attempts where all trunks or junctors are busy, all senders associated with the TG are busy, the called line is busy on an intra-office call, or a reverting call is involved. The latter two conditions score the register associated with the intra-office TG. The marker does not score on marker pulse conversion calls or on connections to originating registers.
- 3.14 Overflow Registers Provision and Operation: Overflow registers are handled as follows:
 - (a) One overflow register is provided per TG.

 These registers are provided on operator, final and high usage groups, intermarker, interoffice, and reverting groups.
 - (b) The overflow register is scored by the combined or completing marker circuit over the route relay OF lead. This occurs when it finds all trunks in the group busy while trying to set up a connection from a line equipment (customer or trunk) to a trunk.
- 3.15 Preroute Peg Count Feature: Preroute PCs are used for dynamic overload control, traffic to a specific code (or codes), and special studies (as requested).
 - (a) Where routes have the same trunk information but different charge patterns, a reduction in route relay requirements can be effected by utilizing the preroute PC circuit modification in the WS marker. A maximum of 40 circuits may

be equipped and requirements must be specified in TEO.

- (1) These preroute PC circuits in the WS marker are used to control operation of 40 preroute PC traffic registers which can provide a count by code destination as the outgoing calls are routed over specified trunk groups.
- (2) UY marker relays may also be equipped for a maximum of 20 of these circuits with the traffic register function only.
- (b) The ATAB/CCOG would assign a preroute relay on a cross-connect order, Form P 3169-ATAB.
- (c) The NAC assigns the pin jack and registers (DCDs) associated with preroute relays in a non-EADAS office, as shown in Exhibit 9.
- (d) In an EADAS environment, the NDCC assigns the DCDs, associated punchings, and EMCs.

4. ASSIGNMENT PROCEDURES FOR ROUTE RELAYS TO PEG COUNT AND OVER-FLOW REGISTERS

- 4.01 In order to provide accurate and valid trunk study data, it is important that the relationship of the route relay association with the traffic carried on each TG be understood and PC and overflow registers assigned accordingly. The preceding paragraphs described the use, operation, and assignment of route relays and associated equipment. The remainder of this appendix describes the following:
 - Trunk Order (TO) flow
 - Source of route relay assignment information
 - · Wiring lists
 - Examples of how to assign the proper route relays
 - TB and allotting circuits to PC and overflow registers
- 4.02 Trunk Orders: The NAC or the NDCC should receive a copy of the TO from the ATAB on all TG activity. Some offices have converted to a mechanized trunk order which replaces the

present manual form. (See Form P 3334-ATAB, Exhibit 12A). Exhibit 19 shows a sample of a mechanized trunk order that the NAC or NDCC may receive. The following actions will require a change in a PC and overflow assignment:

- · Change, disconnect, or add a route relay.
- Disconnect a TG.
- Establish a TG.
- 4.03 Source of Route Relay Assignment: The route relay can be obtained from the Trunk Record (Form P 3337-ATAB, Exhibits 1A, 1B or 1C) or from the cross-connect order (Form P 3141-A-ATAB, Exhibit 2, which includes a description of form entries). A minimum of one route relay is required for each outgoing trunk group, although there may be several route relays associated with one TG. The ATAB will identify on the Trunk Record those route relays that have initial and last access to the TG.
 - (a) The initial route relays are those operated from original route traffic (first route relay after the code) or alternate route traffic (routeadvancing from some other TG). These route relays will be associated with PC registers (DCDs).
 - (b) The last route relays are those having the last access to the TG prior to route-advancing to another trunk group. These route relays will be associated with overflow registers (DCDs).
 - (c) The majority of TGs will associate all route relays with PC and overflow registers (DCDs).
 - (d) Initial access will also include any test codes that are used to access TGs.
- 4.04 Register Assignments for Trunk Groups Having Less than 61 Trunks: The route relays will be obtained from the Trunk Record. Normally one register (DCD) each will be required for PC, overflow, and usage data. Examples of orders in a non-EADAS office are shown in Exhibit 3, 5 and 7 (Form F 829). Examples of orders for an EADAS office are shown in Exhibits 6 and 8. Exhibit 4 includes instructions for using Form LF 4771.

- 4.05 Register Assignments for Trunk Groups
 With 61 or More Trunks: A maximum of
 10 IPC relays per completing marker can be provided for TGs with 61 or more total trunks. The
 number of IPC relays provided will be specified on
 the TEO.
 - (a) The central office wiring list (ie, T27XX-5260) will list the IPC relays and other assignment information. See Exhibits 17A through 17C for examples of wiring lists (drawings).
 - (b) The ATAB/CCOG will assign the IPC relays and issue a cross-connect order (see Exhibit 18). See Exhibits 10, 11, 13 and 14 for examples of cross-connect orders for trunk groups associated with IPC relays.
 - (c) Whenever trunk groups are established with 61 to 100 trunks or 100 or more trunks, ATAB/CCOG will assign the IPC relays. Peg count and overflow assignments should be assigned by the NAC or NDCC as indicated in 4.06, Notes.
 - (d) Where more than 10 IPC relays are required, the NAC and Trunk Engineering will determine which TGs will be associated with IPC relays. In an EADAS environment, the NAC should notify the NDCC, via an Intra-Company Memorandum, regarding any IPC assignment changes. The NDCC will issue the cross-connect assignments to Switching Maintenance.
 - (e) Once the trunk group is established, there will be no notification from the ATAB on TGs adding or disconnecting trunks for groups over 100 trunks. If fewer or additional registers (DCDs) are required the NAC or the NDCC will be responsible for this assignment based on the guidelines in 4.06, Notes.
 - (f) Whenever a completing marker is installed at a Central Office in accordance with a WE job, Switching Maintenance should verify that the proper amount of IPC relays are provided and that they are wired properly.
- 4.06 Register Assignment for a TG with Two (Split) TBs: When there are more than two subgroups (or split TBs), an IPC relay would be required when the total TG is more than 60 trunks. Registers (DCDs) will be required as follows:
 - One PC register (see Notes)

SECTION 218-040-022PT APPENDIX 1

- One overflow register
- One usage register

Notes:

- For 61 to 100 trunks, one register each for odd and even numbered markers.
- When more than 100 trunks are in a TG, an IPC relay must be assigned with one register per marker.

Example: TB2 — 33 Trunks TB3 — 29 Trunks

Route Relays for TB2: 166, 167, 168, 121, and 122

Route Relays for TB3: 191, 178, 187, 190, and 186

Initial and Last Access Traffic Route Relays — TB3: 132, 133, 134, and 135

- (1) When all 33 trunks in TB2 are busy, the route relays will route-advance to a trunk in TB3 (29 trunks).
- (2) Peg count registers will be associated with route relays 166, 167, 168, 121, 122, 132, 133, 134, and 135.
- (3) An overflow register will be associated with route relays 191, 178, 187, 190, 186, 132, 133, 134, and 135. The overflow must be associated with the trunks in TB3 since that is the final route. If the associated route relays in TB2 were assigned to an overflow register, overflow peg count would be received on every call that route-advanced to TB3.
- (4) The Trunk Order (Form P 3334-ATAB) and Trunk Record (Form P 3337-ATAB) may specify the amount of trunks in each TB, as shown in Exhibits 12A and 12B. If information is not available, contact the ATAB/ Trunk Assignment Group (TAG) to get the amount of trunks assigned to each TB.
- (5) On the Traffic Usage Recorder (TUR) and Traffic Register Order (Form F 829), show the amount of trunks in each TB as shown in Exhibit 11.

- (6) In an EADAS environment, the NDCC assigns the DCDs for peg count and overflow data on Form LF 4771. This form is sent to Switching Maintenance for cross-connecting (see Exhibit 15).
- 4.07 Register Assignment for a Trunk Group with TB Allotting: When large TGs have split TBs, TB allotting should be used. Trunk groups such as intra-office, inter-marker group, or toll switching groups may require allotting. This information will be obtained from the ATAB/CCOG cross-connect order. Form P 3169-ATAB will provide this information (see Exhibit 18).
 - (a) When TB allotting is assigned, the allotter circuit number and IPC relay number should be the same as shown in Table B. It is recommended to use IPCs 04 through 09 for TGs not using allotter circuits.
 - (b) Registers for allotted TGs will be assigned using normal procedures as explained in 3.13 and 3.14 (see Exhibits 16A and 16B for an example of allotted TG assignment).

TABLE B

GROUND SUPPLY	ALLOTTER CIRCUIT	IPC NO.
1	0	00
2 -	1 1	01
3	. 2	02
4	3	03

- 4.08 Trunk Order Completion: When a completion notice is received from Switching Maintenance on a Trunk Order or cross-connect order, the NAC or NDCC should enter the completion date on the Order Activity Log (Form F 830) or the Trunk Order Activity Log (Form LF 4708) and on the trunk order itself. At this time, the NAC or NDCC should update the appropriate Total Network Data System (TNDS) data bases to reflect any changes.
- 4.09 Trunking data should be obtained for a few days to analyze results on that group for the following:
 - (a) Detector test should agree with number of trunks connected.

- (b) Disconnected groups should have zero peg count, overflow, and usage.
- (c) New groups should have some peg count and usage as soon as the Trunk Order is completed.
- (d) Trunk usage may increase when additional trunks are added, especially an overloaded trunk group.
- (e) If TUR data is zero and peg count is greater than zero, the TUR data may be invalid.
- (f) If overflow exceeds the PC, one or both sources of data may be invalid.
- (g) PC and overflow scorings can be reasonably validated by using assumed holding times when overflow has been reached.
- (h) Using PC and assumed holding times, determination can be made whether overflow should occur.
- (i) Total calls per hundred seconds (CCS) should be no higher than the number of trunks in the group times 36 CCS.

Note: Any of the above items would indicate a data problem. There may be other conditions that would indicate invalid data, however, the ones listed above are the most common.

- 4.10 The cross-connect order pages should be interfiled so an up-to-date record is available to the NAC or NDCC. The common control orders will be sent to the NAC in offices without EADAS. In an EADAS office, the NDCC will receive common control orders.
- 4.11 Trunk Order Check List: The Trunk Order Check List (Table C) may be used by the NAC or NDCC to ensure that all necessary forms are updated when TOs are completed. Forms F 826, F 827, F 829, F 830 and F 831 are to be utilized by the NAC for non-EADAS offices. Forms LF 3486, LF 4708, P 3799, P 4253 and LF 4771 are to be utilized by the NDCC for EADAS offices.

TABLE C
TRUNK ORDER CHECK LIST

	1	1	
FORM NUMBER	DESCRIPTION	DATE COMPLETED	OFFICE CLERK
F 826	REGISTER LAYOUT		
F 827	TUR SCAN SWITCH		
F 829	TUR & TRAFFIC REGISTER ORDER		
F 830	ORDER ACTIVITY LOG		
F 831	PIN JACK FIELD		
LF 3486	RELAY RACK TO TUR ASSIGNMENT CHART		
LF 4708	TRUNK ORDER ACTIVITY LOG		
P 3799	EADAS/ICUR CIRCUIT GROUPING UPDATE		
P 4253	ETDC INPUT ASSIGNMENT CARD		
LF 4771	EADAS-PEG COUNT, OVERFLOW AND TUR ASSIGNMENTS		
*OS RECORD	RECORD OF TRUNKS PER SENDER GROUP		
*IR RECORD	RECORD OF TRUNKS PER INC. REG. GROUP.		
TUR DET. TEST	TUR DETECTOR TEST		
TDAS	SOURCE DOCU- MENTS		

^{*}INFORMATION MAY BE OBTAINED FROM ATAB IN SOME AREAS.

4.12 Bell System Practice (BSP) References:

Section 218-020-040	Section 218-060-150
Section 216-020-040	Section 218-000-190
Section 218-040-020	Section 218-060-190
Section 218-040-022	Section 218-060-200
Section 218-060-140	Section 252-122-105
	Section 780-400-355

	TRUNK RECORD	(F 1295)
Control Office	Allon "Z" Tic-Cis Otc-Zis Use Modifier Octas Number	Page /
SNJS CA 14 26G (25×MO) M- MLPS	Cidel Indiane	1861
Trunk Off TL OSL AMA	TRK EQUIP TRK EQUIP IRL	TL O
No. Act. FR SL FR TS SV RCDRCI	AISLE FR CKT LOC AISLE FR CKT LOC FR SV F	RSL
1 25 A64 9 4-2 1 20	0 107 16 16 144.45 106 08 06 M.29 1 1-06 C	06 865
2 14 464 5 6-5 6 61	117 12 34 157-58 106 12 06 1-30 1 2-26	07 862
3 09 A54 3 6-11 4 4°	7 107 13 09 W21-22 103 09 08 M-61 3 0-38 1	12 884
H 10 A44 4 0-9 5 2	3 107 04 08 13940 107 00 16 1-17 0 1-25 0	3 863
5 07 804 2 8-15 3 48	7 106 12 10 L30 103 09 12 M-61 3 1-32 1	3 823
6 08 444 3 2-17 4 12	1 107 05 06 M29-30 108 01 26 L-1 0 2-02 0	00 869
7 13 14 5 2-17 4 79	1 117 04 30 159-60 108 23 46 217 0 0-22 6	D) B64
8 07 A64 0 8-0 3 OR	106 12 06 130-32 106 12 07 130 1 2-27 0	7 872
9 02 444 0 8-9 2 83	105 06 32 2-6 107 01 16 234 0 2-33 0	
10 01 444 0 4-0 1 22	1 /05 43 31 /27-28 /06 20 11 /29 / 3-31	
Trunk On INITIAL ELAST ACC.	والمناز والمنا	
Ommon Assign	IRLCL 71-	·CL
0 2 06 95	4 2	5A -

Ph Trunk Group Exhibit 1A

Pacific Te Nevada B					TRUNK I	RECORD						P 3337 (F 129	7-ATAB (1: 95)
N 8/6		23	SNJS C	A 13 X O						•		·	Page /
<u> </u>	CA 1	3 22C	M-	HYWR CA	02 46T	Itc.·Cis.	5-3	TO 1	LAMA	Order A4	Number 4D4 - /	4486	2
Office H Trunk	On Off	TLF	05L	AMA	TRK. EQU	IIP. 206	M-T26	085					
L No.	Act.	FR SL			C. AISLE FR	CKT LOC							
4	ON OFF	00 A27 18 A65	7 3-4	12 00 17	140 148 28 - 128 19	00 P130 23 M10	3			_			
	ON_ OF F	00 A37 21 A85	6 0-12 8 5-8	12 10 17	41 /48 28 - /28 27	01 P130 28 M104				_	<u> </u>		
<u>-ā</u>	OFF	04 A57 21 A95	6 2-13 8 5-9	12 12 17	42 148 28 - 128 27	24 P/31 29 M/0			_	_			
-# -	ON OFF	04 A47 22 A65	9 0-6	9 65	+3 +8 28 - 128 31	23 P131 26 M111							
-5-	ON_ OFF	06 A37 22 A95	6 3-11 9 0-9	9 95	144 148 30 - 128 31	07 P133 29 M111							
6	OFF	23 A66 23 A35	9 9-13	10 96	45 148 17 - 128 43	13 M/19) ·		-	_			
7-	OFF	23 A76 23 A85	9 9-14	13 - 72 17	46 148 17 - 128 43	27 M134 18 M119			- -	-			
-8-	ON_ OFF	23 A 95	9 9-15		147 148 17 - 128 43	28 W134 19 W114							
<u> </u>	OF F	10 A31 24 A25	6 5-12	10 21	48 148 19 - 128 37	04 P135 12 M117			-	_			<u></u>
10	OFF	08 A47 24 A35	6 4-12 10 1-3	12 24 17	149 148 30 - 128 37	22 P/35 13 M/17			- -			-	
					- A 40 F 5 5								
Trunk Group Common		SDR TB	T6 FTC		ST ACCESS							<u> </u>	<u> </u>
Assign	OFF	MF3 4 MF2 3	18 109	185 186 1 185 186 1	08 159 160		<u> </u>				<u> </u>		

Pacific Telephone Nevada Bell		TRUNK RECORD	P 3337-ATAB (1-7 (F 1295)
N 8/00 - /32 Location "A"	Control Office SNJS CA /3 X O Pulse Loca	lon "Z" Tic.Cis Ote Cis Usa	Page /
SNJS CA 13 22C	M- SNTC	1	Modiffer Order Number A 4 D 4 - 145751
Office On Trunk Off No. Act.			
I ON 18 ALL	13 189 9-11 17 0-5	120 127 13 18 W157 120 127 01 09 J151	
2 OFF 01 A21 2 OFF 01 A21	13 190 9-12 17 1-5 13 - 0-12 15 0-1		
3 OI A31	13 0-13 15 1-1	122 127 01 11 5/51	
-4 - OI A41	13 0-14 15 2-1	123 127 01 12 7151	
5 01 A51	13 0-15 15 3-1	124 127 01 13 7/52	
6 01 A61		125 127 01 14 7152	
		126 127 01 15 J153	
9 01 481		127 127 01 16 7/53	
7 01 A41		128 127 01 17 1153	-+
Trunk Group Common	TG FTC NITIAL \$	LAST ACCESS <	
Assign 5- 9-	02 131 132 125 126	127 128 129 140 150 151	
		ROUTE RELAYS FOR PEG COUNT	AND OVERFLOW

Final Trunk Group Exhibit 1C

0	To "RC";	Every installed rou	te relay in	numerical sequence.	The '	TEO	shows	amount of	,
_	route relays	installed.							

- GRD. SUP: Ground supply next to each route relay. TEO shows ground supply arrangement
- Marker Type: Wire Spring or Flat Spring.
- TB: Trunk block relay number to which trunks are assigned.
- TG: Trunk group relay number to which trunks are assigned.
- 6 Trunk Grp No.: Trunk group ID number.
- Trunk Group Name: Common language trunk group name.
- Trk Group Class: Type of trunk equipment assigned to a TLF (trunk line frame).
- 9 Trk Group Usage: Type of trunk group (PH, IH, CF, FG, etc).
- Alt Rte: Route relay number to which this route relay will route advance.
- Sender Group and Pulsing Type: Type of sender and sender group number the trunks are assigned.
- Digita Out: Quantity of digits to be actually outpulsed.
- Order No.: Last completed common control order number associated with the route relay.
- Due Date: Completion date of common control order.

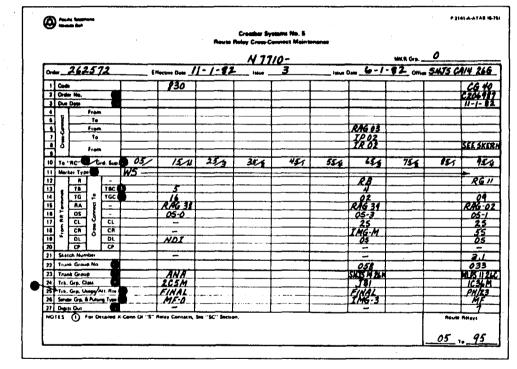


Exhibit 2

SSI

ক :.

Non-EADAS Office — PH Trunk Group
Exhibit 3

DESCRIPTION OF ENTRIES FOR FORM LF 4771

- OFFICE NAME: Enter the office name.
- ISSUED BY: Name of the dial office clerk preparing the assignments.
- TEL NO: Telephone number of the dial office clerk preparing the assignments.
- DATE ISSUED: Date cross-connect assignments are issued to Switching Maintenance.
- **6** TRUNK GROUP: Enter the trunk group name.
- 6 TGID: Enter the trunk group identification number as shown on the trunk order
- CGSN: Enter the circuit group serial number as shown on the trunk order.
- B ORDER NO: Enter the order number of the trunk order.
- DUE DATE: Enter the date that the cross-connect order is due to complete.
- COMPLETED BY: The name of the Switching Maintenance personnel completing the work.
- TEL NO: The telephone number of the Switching Maintenance personnel completing the work.
- COMP. DATE: Enter the date the work is completed.
- PAGE OF: Enter the individual page and total page numbers.
- RETURN TO: Enter the address of the Dial Office Clerk preparing the assignments.
- ITEM: Enter the item number in sequential order.
- ACTION: Enter ON or OFF. Lower portion of each space should contain the OFF action and the upper portion should contain the ON.
- MEAS, TYPE/PCHG: Enter the type of data measurement
 - PC Peg Count • OVF - Overflow
 - ·USG = Usage
- B CARD #: Enter the ETDC card number that contains the DCD.
- POS #: Enter the position number of the DCD on the ETDC card.
- DCD: Enter the assigned DCD number.
- FTC (RR): Enter the route relays as indicated on the Trunk Record. Initial access route relays are used for peg count. Last access route relays are used for overflow.
- 22 DIST. FRAME: Enter the TUR distributing frame location assignment.
- AISLE, FRAME, CKT: Enter the aisle, frame and circuit TUR assignment.
- TUR: Enter the TUR frame, switch, contact, horizontal and vertical assignment.
- REMARKS: Self-explanatory.

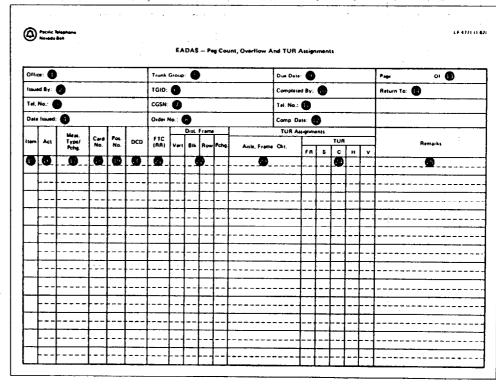


Exhibit 4

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Non-EADAS Office — Final Trunk Group Exhibit 7



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F 1847 (3-72)

TRAFFIC REGISTER ORDER

PIN JACK TYPE

TRF.	REG.	ORDER	NO	<u>73 </u>	ITEM		
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OFFICE LSAN CAOT 64C DESCRIPTION CONNECT THE FOLLOWING REGISTERS TO THE PREROUTES ASSOCIATED WITH THE DYNAMIC OVERLOAD CONTROL CODE GROUPS. CONNECT TO PIN JACK PATCH TO REGISTER TYPE Y TURDE OFF OFF ON PCHG MEASURE-FR PJ TRF REG. PJ TRF REG. PJ MENT REG. REG. PREROUTE C.G. ROUTE RELAY TRK. GRP. 160 GRDN CAOZ 21T 0342 0343 12 100 0344 /3 0345 101 14 0346 102 103 15 0347 16 0348 104 17

TEL. NO. 670-0003	DATE 2-6-82
DUE DATE WITH MARKER C	ROSS CONN ORDER
(DUE 9-8-82)	XG 44-9521.14

ASSIGNED BY ANN MILLER

COMPLETED BY ANN MILLER TEL. NO. 670-0003 DATE 2-6-82

WIRE CHIEF: PLEASE NOTIFY TRAFFIC EQUIP./DIAL SERVS. MANAGER AS SOON AS WORK HAS BEEN COMPLETED. PLEASE CHANGE YOUR RECORDS AS RE-QUIRED.



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Non-EADAS Office — IPC Assignments (More Than 100 Trunks)
Exhibit 11

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@	Pacific T Nevada i									т	RUNK	RECO	RD									3337-AT/ 1295)	AB (1-75)
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_					UNKS	106	7.	1/68 183-2	9 120	1/2/2 WK5	177 5	TB	12 2 R.A	171	<u> 178</u> TB3	/87	140	186	/32	/33	1/34	135	

Exhibit 12B

Offic	:e: RV	SD CA	01 6	58H	·	Trunk (Group	: C	LTA	v c	A01 78C	Due Date	:	7-7	'- 8	2		Page	1	Of /	
Issue	d By:	D. O. C	LE	RK		TGID:	T	94	100	> - (206	Complete	d By:					Return	To: 147	709 VANOV	NB
Tel. l	No.:	786 -	014	3		CGSN:	A	B	\$0	106	6	Tel. No.:							R~	1 203	
Date	Issued:	7-7-	82			Order N	lo.:	SH	50	- 71	3594	Comp. D	ate:						VAN	Nuys	
		Meas.		١			<u> </u>	Dist.	Frame			TUR A	ssignme	ents							
Item	Act	Type/	Card No.	Pos. No.	DCD	FTC (RR)	.,,,,	011		Pchg.	4:1 5	~			TUR			1	R	emarks	
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SAUS CA 13
REGISTER NO.

Non-EADAS Office — IPC Assignments (61 to 100 Trunks)
Exhibit 14

Office	: .5/	HOK CA	101	78 H	/ ·	Trunk (Group	: 51	HOK	CA	01 207	Due Date	: 9	·- 7-	- 82	2		Page / C	of (
Issued	By:	D.O. C	LER	K.		TGID:	H	74	68	16	3	Complete	ed By:					Return To: /4709	VANOWE	
Tel. N	lo.: (786-0	143	3	-	CGSN: ABOS1470 Tel. No.:						O Tel. No.:					RM 2	RM 203		
Date	Issued:	7-7-	-82			Order N	S	H3	M-6	706	5/A	Comp. D	ate:					VAN NUYS		
							Ī	Dist.	Frame			TUR A	ssignm	ents					-	
tem	Act	Meas, Type/	Card		DCD	FTC									TUR			Remar	ks	
		Pchg.	No.	No.	:	(RR)	Vert	BIK	How	Pchg.	Aisle, Frame	, Cikt.	FR	s	С	н	V			
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GI	HOK (946	8	7	6 5	Co	ntrol	Office		P/	AC Reporting	Office		Project Coo	rdination	Office		Control Numb	oer .		Cni
G	SN No. A	905/	470			2	HO	OK CA	101 X2	<u></u>				<u> </u>				5-1-12	7 0	651	110
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0)rder		Resch	hedu	le Not	lice	. i	Cor	npletion Note	:e		1	igits Out	Canc	Held	Decline Da	ite	Date to Plant			

Assigning Allotter Exhibit 16A

lu	NE	CLASS	REGISTRATION FOR	co	ONNECTING CIRCUIT	TO 7:25692:11 R :13 FIG NO AS SPEC'D	QUANTITY	OF JACKS	- AEMARKS
				LEAD	NAME OF CIRCUIT			CABLED	TOWNERS.
2	<u> </u>	A	DIR BAT JK	S		4	60	60	DIR BAT SUPPLY
L	_	8	CONT BAT JK	SI		2	60	60	CONT BAT SUP (SI)
\perp	┙	С		Ι		-			
\perp	_	٥							
2	15	£	LC IDENT ALL TRKS BUSY	PB		35			
L	_	F							
L	_	G	CLOCK REGISTER	P	CLOCK	6	2	2	
L	_1	н	LINE LINK ORIG	LCB	LLL & CONN	1			
	-1		ORIG REG TT	PCO	DTMKR	1	4	4	
123	ю	<u> </u>	TOTAL INC PC	TIP	CPL MKR 7		8	8	
\vdash	4		TOTAL ORIG PC DP	TOR	1	1,A	8	- 8 - -	COMM TO MAG CIR UNITS TRC
\vdash	4	M	ORIG REG TT	PCMF	DTMKR	1			
-	4	N	INTRA OFFICE TRK GRP, OGT, GRP,	PC	MKR	24(VIF 26)	75	15	1-60 TRK IN GRP
L	4		INTER-MKR GRP TPK GRF, FOMB TONE	IPC		23141A221	:6	16	61-100 TRK IN GRP
28	5		TRK GRP & COMMON OF LTRK GRP	1PC	1	20(VIA22)	16	16	101-UP TRK IN GRP
1	\perp	R.	INC TRK GRP TERM CALLS	PC-10CI	TRKT	35			

Central Office Drawing — Office Without TUR-DF or TRDF Exhibit 17A

5	⊢			T	FIELOS SEE TABLES A,	т			
200	LINE	CLASS	REGISTRATION FOR	C	ONNECTING CIRCUIT	CONN FIG ON TRAF	TITMAUD	OF JACKS	REMARKS
280				LEAD	NAME OF CIRCUIT	REG CKT	ASSIGNED	CABLED	NEMARKS
	176	Α				1			-DIR BAT SUPPLY
	177	В				2			-CONT BAT SUP (S1)
	178	.c		Ι		2			(\$2)
	179	0							
	180	€							
	181	F							1
	182	G	CLOCK REGISTER	144	CLOCK	30			1
	183	н	LLDAIG	LCB	LL CONN	1			1
	184	1	CAMA IMG TRK GR, CAMA JTR GR, JTR GR,	PC	MKRT	24			- 1-60 TRK IN GR
	185	K	IMG TAK GR. IAO TAK GR. OGT GR.	IPC	1	23			- 160 TRX IN GR - SEE NOTE 11 - 61 TOO TRX IN GR - SEE NOTE 11 - 101-UP TRK IN GR
	186	7	COME TONE TRK GR & COM OVFL TRK GR *	IPC	1	20			- SEE NOTE !! - 101-UP TRK IN GR
	187	M	INC TRK GR TERM & TOM DR THRU CALLS	SEE RMK	INC TRK	35			HE BE PET FOR TOWN
	188	N	AMA RCOR SEIZURE	TPC	ACDA	11	21	21	THRU
į	189	P	ABANDONED PARTIAL DIAL	APO	ORIG REG	1		1	*
_	190		DRIG CLASS OF SERVICE	S	MKR7	1	100	100	٠.
	_	•	ng sne ge	OSG			90	90	1

Central Office Drawing — Office With TUR-DF Exhibit 17B

			w	TRING LIST OF LEADS CABL				ASSIGNI	MENTS	
	CLASS			CONNECTING CIRCUIT	CONN. FIG	QUANTITY	OF LEADS	<u> </u>	VTROF LOCATIO	N
	LLRSS	REGISTRATION FOR	LEAD	NAME OF CIRCUIT	ON TRAF. REG. CKT,	REQUIRED	CABLED TO TROF-06	TERM	ROW	PCHG
176	A	INTERFACE UNIT	DI-32			32	32	4.0	12-16/17	1-6/1-
177	8	DELAY UNIT	01.32			32	32	4.0	17/18-22	34/14
178	С							1		
179	0						1			-
80	£						· · · · · · · · · · · · · · · · · · ·			
181	F							1	1	
182	G	CLK REG	М	CLK	39	VTTC	2	10 C	50	1.6
183	Н	LL ORIG	118	LL CONN	1 1	1/LL	50	10 0	1-10	1-6
184	1	CAMA IMG TRK GR, CAMA JTR GR, JTR GR, IMG TRK GR,	PC	MKR	26	1/RTE REL	200	10 A	1-17	1.6
85	K	IAO TRK GR, OGT GR, COMB TONE TRK GR & COM OVEL	IPC /	1	22	10/MKR	80	10A.12A	35-50/35-42	1.6
86	Ļ	TRK GR						1		
187	M							-		\rightarrow
188	N	RECORDER SEIZURE	TPC	ACD UNIT	1	I/RCD UNIT	12	10 C	45, 46, 47	1-6
189	P/PI	ABANDONED PARTIAL DIAL	APD/APP8	ORIG REG	1	1/OR GR	3	10 C	30	1.6
90	a	ORIG CLASS OF SERVICE	S	MKR	- T - T	10/MKR	80	108/12A		1.6

Central Office Drawing — Office With TRDF Exhibit 17C

CROSSBAR SYSTEM NO. 5 CROSS-CONNECTIONS PREROUTE RELAY AND ALLOTTERS

P 3169-ATAB (1-75	P	31	69-	ATA	٩B	(1-75)
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Office SNJS CA 14 26K				_	
Miss UNUS UNIT ABO	O4:	SNJS	CA	14	26K

MKR Group /00

Order <u>C 392907</u> Effective Date <u>4-29-82</u> Issue <u>3</u> Issue Date <u>4-/3-82</u>

Pre-	Cr	oss-Cor	nect				Pre-	L	Cr	oss-C	onnect					
Route	RP	PR	PC	Refe	rence	1	Route	Ι,	RP	Pf	۱ ،	PC			eference	
Relay	Pchg.	Pchg	. Pchg.	1.0.0	101100		Relay	Po	tg.	Pch	g. F	chg.		•		
No.	То	То	То				No.		Го	To	>	То				
00	828829	RC4	b SC 27	MMU-CNCA	CAOLOOT		28									
01	837 839	RC4	6 SC 28	TOLL-CNCR	CADIDOT		29									
02						[30									
03] [31									•
04				<u> </u>			32	\perp								
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09] [37									-
10							38									
11							39									
12						1 [
13								\prod								
14																
15										Trk. 8	Sdr.	Allottin	g Rel	ays		
16							AL-0			AL	-1		AL	·2	<u> </u>	AL-3
17				·		Ge	n. Sup	oly	G	en. Su	ipplγ	G	ien. S	upply	Gen	. Supply
18					·	AL-1		L24	+	-16	AL-2	7 AL	17	AL-2	AL-18	AL
19						AL-1		L-22	AL	-12	AL2	3 AL	\rightarrow		# AL-14	AL-
20			<u> </u>			RCL	0 2	<u>65</u>	RC	L-1	RG-0:	S RC	L-2	RG-0	RCL-	
21						RL-0	RG	-04	RL	-1	RG 05	RL-	2	RG O	RL-3	
22						LA-0	RC	•71	LA	-1	RC 5	LA	2	RC64	LA-3	
23						LB-0		- 70	LB	-1	RC 5	3 LB-	2	RC-25	LB-3	
24						RAL	O RA	G-/9	RA	L-1	RAG-3	q RA	L-2	RAG:	2 RAL	3 .
25						SAL	0 2	SG	SA	L-1	25G	SA	L-2	<u> 256</u>	SAL-3	
26			-	ļ		ت: اما د	cated o	n trk	. grp.	allott	ter terr	n. strip				
	l			India	ridual Peg Co				Cro	:s-Cor	nec†			-		
PC-No	IP-To	T	IR-To	1	Reference	-	IPC	1	(P.		1	≀-To			Reference	
00	<u> </u>		RC 71	TAN	FLAT		0:			C-30	┼—		1			
01	SEE SC		RC 51		FLAT		01			: 26 : 26		052	5	LPS VJC	CA 11 CA 13	221
02		25	RC 64		MSG		0		<u>, ~ v!</u>	ن میں	T ^	<u> </u>	-\ U /	,,,,	<u> </u>	446
03			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	- /		01	\rightarrow			 		†-			
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Exhibit 18

SECTION 218-040-022PT APPENDIX 1

MECHANIZED TRUNK ORDER

DATE 10-01-81						SEN	T TO PRINTER P3270123
			INTRA	REGIONAL			
LOCATION A	PS	LOCATION Z	TFC-CLS OFC-	CLS USE	MODIFIER	•	CONTROL TAB
CNPKCA0134J	M-	NHLICA0147T	PH 54	4 DD			LAG
TGID		CGSN	ORDER NUME	BER	UNDERTKG		CONTROL NO
H229470	9	AB044231	ALA6.98071	0			980710
•			ORD-ACTION:CRG /_	_ /	ORD-CLS N		
TRK QUANTITY		TRUNK NUMB	ERS ITEMS	RESC	HEDULE DATES		DATES
WKG: 000 PDA: PDD: TOT: _006 CW-NOTE: REAR W/W XLDA-9820		1_6	01-06 	0, SDR2 TO	ACTUAL COMP		12-01-81 06-01-82 05-28-82
CONTROL OFC		PAC RPT OFC	PROJ COOR OFC	PROJECT	D/O	INSEP	RETURN CODE
CNPKCA0170				 	5	130	LA6
LAST ORD DUE		A/O		R/EST			•
ALA9- 994500 1 07-03			TR PGS AFFECTEI) :	LOC#1		LOC Z
TELEPHONE					LA6		<u> </u>
CONTACT		• •	PREPARED BY	: -	P. DIX		· ·
	975-59		TELEPHONE NO	:	975-59		
COM		•	DATE WRITTEN	: 1	10-2-6		
213 -	<u>956-50</u>	<u> </u>	APPROVED BY	•	pd 10-2	-81	

Exhibit 19

TO REPRO 10-9-81