

CONTROLLED MAINTENANCE -
SMALL OFFICE PLAN

1.0 GENERAL

1.01 The Controlled Maintenance (CM) Plan provides the first-line supervisor with an administrative tool that will help him run a more efficient, economical maintenance job. To be effective, the CM Plan must provide adequate information for sound management decisions, with a minimum of paper work.

1.02 This practice extends the application of the CM Plan to locations where:

- (a) Both switching and circuit equipment (toll-type) are under the direct supervision of the same first-line supervisor.
- (b) Circuit equipment (toll-type) is such a small part of a total office that daily summaries of troubles on Forms E-5841A, B, C, and D, Equipment Control Record, serve no useful purpose. Such offices should use this practice for control of circuit equipment troubles, using form E-5844, Trouble Tally Sheet, as a control record.
- (c) The first-line supervisor charged with the maintenance of small amounts of circuit equipment (manhole repeaters, for example) does not maintain other equipment under the Toll Controlled Maintenance Plan. This practice may be used with separate equipment locations identified on form E-5844, Trouble Tally Sheet, as an Equipment Control Record.

1.03 This practice is reissued to:

- (a) Update and simplify instructions for field administration. Some material has been deleted.
- (b) Revise Exhibit 1 - Summary of Forms.
- (c) Revise Exhibit 4 - Preventive Maintenance Flow Chart.

(d) Add instructions on use of Form SW-6498 (Exhibit 6).

(e) Add instructions on use of Form SW-6487 (Exhibit 7).

1.04 In the smaller offices where the supervisor is responsible for both central office and toll maintenance, he may find himself involved in the administration of the following CM Plans:

Step-by-Step Switching----BSP 226-001-010
No. 5 Crossbar Switching--BSP 218-001-010
Toll-Type Equipment-----BSP 010-300-010

While a common philosophy applies to all three plans, the forms and mechanics of administration differ. Since this is only a part of the total responsibility, some consolidation and simplification is needed if the plans are to be an aid to the supervisor.

1.05 This Small Office Plan is intended as an integrated application of the central office and toll-type equipment CM Plans. The Small Office Plan does not alter the philosophy of the CM Plans. The only alteration is in applying the forms used to administer the plans. The forms outlined in this section represent the minimum records that must be used to realize maximum equipment performance. If the need exists, more complete records, as described in the BSP's, may be used.

1.06 This Small Office Plan is applicable only in locations without specialized toll or central office supervision. Locations with specialized supervision will be expected to administer the separate CM Plans as outlined in the Bell System Practices.

2.0 CORRECTIVE MAINTENANCE

2.01 Equipment Trouble Tickets

The equipment trouble ticket is an essential part of each of the CM Plans. The practices specify the use of three different forms. Entries on each of the three tickets are basically peculiar to the type of equipment involved. It is not considered practicable to adopt any one ticket for common use in the three CM Plans.

A. Step-by-Step Plan

- Form E-5461 (SXS Trouble Ticket) shall be kept at each SXS office. Part 4 of BSP 226-001-010 describes the use of this form.

B. No. 5 Crossbar Plan

- Form E-5479 (No. 5XB Trouble Ticket) shall be kept at each No. 5XB office. Part 4 of BSP 218-001-010 describes the use of this form.

C. Toll-Type Equipment Plan

- Form E-5840 (Equipment Trouble Ticket) may be used at locations for toll-type equipment trouble. Part 5 of BSP 010-300-010 describes the use of this form. It is recommended that these tickets be prepared and summarized at a central location. When this is done, a log of equipment trouble shall be maintained on Form E-5457 (Central Office Log) at each remote location.

2.02 Trouble Summaries

Trouble summaries are required to detect trends and indicate the need for routine maintenance. Form E-5463 may be used for both switching and toll equipment trouble summaries. Exhibit 2 illustrates the dual use of this form.

A. Step-by-Step Plan

- Form E-5463 (Trouble Summary) shall be prepared for each SXS office. Part 8 of BSP 226-001-010 describes the use of this form. Toll-type equipment troubles in each office may be summarized on the same form if space permits.

B. No. 5 Crossbar Plan

- Form E-5463 (Trouble Summary) shall be prepared for each 5XB office. Part 8 of BSP 218-001-010 describes the use of this form. Toll-type equipment trouble in each office may be summarized on the same form if space permits. Form E-5480 (Control Record) shall be prepared for each 5XB office. Part 6 of BSP 218-001-010 describes the use of this form.

C. Toll-Type Equipment Plan

- Form E-5844 (Trouble Tally Sheet) shall be used as an overall Equipment Control Record in lieu of Forms E-5841A-D. Part 11 of BSP 010-300-010 describes this form. Exhibit 3 illustrates the recommended use of this form. Trouble codes and locations should be grouped to minimize the number of forms required to analyze the equipment performance for the entire maintenance territory. Normally, this form should be used as a monthly summary, but smaller offices may find it convenient to extend its use to a quarterly summary.
- Form E-5463 (Trouble Summary) shall be used to provide an annual trouble summary for each office. Part 9 of BSP 010-300-010 describes the use of this form. Switching trouble may be summarized on the same form if space permits.

- Form E-5842 (Equipment Performance Summary) shall be prepared on a quarterly basis to update and review the trouble expectancies. A combined summary for the entire maintenance territory is recommended. These summaries should be coordinated with the quarterly work unit inventory.

2.03 Miscellaneous Forms

A. Step-by-Step Plan

- Form E-5457 (Central Office Log) shall be used in each SXS office to log office activity. Recording SXS Trouble Tickets on the log is required (except for unattended offices - see 201-101-904SW). Combined switching and toll use of the log is recommended in small unattended office locations.

B. No. 5 Crossbar Plan

- Form E-5457 (Central Office Log) shall be used in each No. 5XB office to log office activity. Recording No. 5XB Trouble Tickets is required (except for unattended offices - see 201-101-904SW).
- Form E-5477 (Stuck Sender Tally) shall be used in each No. 5XB office. Part 14 of BSP 218-001-010 describes the use of this form.

C. Toll-Type Equipment Plan

- Form E-5457 (Central Office Log) shall be used at all remote locations to record equipment trouble when E-5840 Trouble Tickets or Local Switching Tickets are prepared at a centralized location. Part 6 of BSP 010-300-010 describes the use of the form. Combined switching and toll use of the log is recommended in unattended offices. Use of the log is not recommended at the Master Office where trouble tickets and summaries are available.

3.0 PREVENTIVE MAINTENANCE

3.01 The Preventive Maintenance portion of the Small Office Plan adopts the forms and mechanics of Local Switching Preventive Maintenance for common use in all three Plans. A flow chart of the preventive maintenance activities to be applied in Small Office locations for both switching and toll is shown in Exhibit 4.

3.02 Routine Schedule

Form E-5451, SW-6487, or E-5845 shall be used to schedule routine maintenance. Forms E-5451 or SW-6487 are recommended in smaller offices where jobs are scheduled by the month. In offices where weekly assignments are required, Form E-5845 shall be used. Exhibit 5 illustrates the use of E-5451. Form E-5845 and its use is described in Part 18 of BSP 010-300-010. Form SW-6487 (Exhibit 7) and its use is described in Part 2 of BSP 201-101-906SW.

3.03 Work Order

Form E-5452 (Test and Inspection Work Order and Record) shall be used by the craftsman to record the troubles encountered and the time required to perform the routine. There may be tests for which few or no troubles are expected and where the work can normally be completed in one tour. In these cases, Form E-5453 or E-5454 may be used as both the work order and the summary, and the test results may be posted directly on these forms.

3.04 Reports

Form SW-6498 (see Exhibit 6) shall be used as an information and control record, from the central office supervisor, to the second level or higher level supervisor. Form SW-6498 and its use is described in Part 3 of BSP 201-101-906SW.

Exhibits:

- | | |
|---------------------------------|--------------------------------------|
| 1. Summary of Forms | 4. Preventive Maintenance Flow Chart |
| 2. Example - Use of Form E-5463 | 5. Example - Use of Form E-5451 |
| 3. Example - Use of Form E-5844 | 6. Foreman's Report SW-6498 |
| | 7. Schedule Work Sheet SW-6487 |

EXHIBIT 1

CONTROLLED MAINTENANCE
SMALL OFFICE PLAN
FORMS

	CM PLAN	SXS	5XB	TOLL
CORRECTIVE	1. Equipment Trouble Ticket E-5461 E-5479 E-5840	X	X	X (Note 1)
	2. Trouble Control Records E-5480 Control Record E-5844 Trouble Tally Sheet E-5463 Trouble Summary E-5842 Equipment Performance Summary	X	X X	X X X
	3. Miscellaneous Forms E-5457 Central Office Log E-5477 Stuck Sender Tally	X	X X	(Note 1)
PREVENTIVE	4. Routine Schedule E-5451, E-5845, or SW-6487	X	X	X
	5. Work Order or Trouble Summary E-5452 or E-5453, E-5454	X	X	X
	6. Reports SW-6498	X	X	X

Note:

1. Central Office Log, (Form E-5457), may be kept at unattended offices and repeater stations, provided equipment trouble tickets (Form E-5840) are kept at the master office.

5463 (6-67)

TROUBLE SUMMARY

Office Marion, KansasPeriod Covered 1969

EQUIPMENT	AVG PREV. YEAR	CUR OBJ	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
(Switching)															
Line Finders	5/12	1/4	0	1	0	0	0	1							
1st Selectors	2/12	1/4	0	0	0	1	0	0							
5th Selectors	3/12	1/4	0	0	0	0	0	0							
Connectors	8/12	1/2	1	0	2	0	0	0							
Trunks	5/12	1/3	0	1	1	0	3	0							
Miscellaneous	0	0	0	0	0	0	0	0							
(Toll)															
1VR (VF Rept.)	0	0	0	0	0	0	0	0							
1M (VF Misc.)	0	0	0	0	0	0	0	0							
3CX (CX Sig)	1/12	1/12	0	0	0	0	0	0							
5ONG (O & ON GRP)	4/12	1/3	1	0	2	0	0	1							
5ONC (O & ON Chan)	9/12	1/2	1	1	1	0	4	1							
8M (Misc. CXR)	1/12	0	0	0	0	0	0	1							
13M (Frame)	0	0	0	0	0	1	0	0							

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EXHIBIT 3

BSP 010-300-010

E-5844
(1-69)

TROUBLE TALLY SHEET

OFFICE Newton & CDO's

PERIOD October 1969

	1VR	1M	3CX	SONG	SONC	8M	13M	NTF
Newton	0			'	"		1	
Florence	0		'					"
Halstead			'	'				

Marion					'			
Peabody								'
Goessel								

Hesston				"		'		"
Hillsboro			'	'				
Lincolnville								

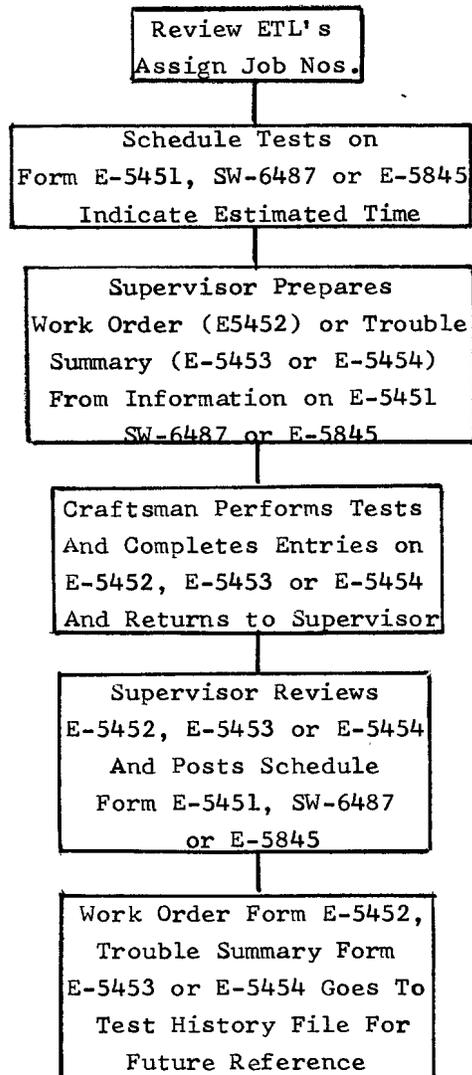
Moundridge		'						'
Tampa					'			
Walton			'					

Combined Objective	1	2	1	3	3	0.5	0.5	
Total Troubles	0	1	4	6	4	0	1	8

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EXHIBIT 4 (REVISED)

PREVENTIVE MAINTENANCE



E-3450
(1-69)

EQUIPMENT TEST LIST						
B.S.P.	I S S	TEST OR REQT.	EQUIPMENT AND WORK DESCRIPTION	CLASS	FREQ.	JOB NO.
065-105-501	7		LADDERS AND LADDER SEATS—TESTS AND INSPECTIONS	MW	12M	86
065-110-501	2		EXTENSION LAMPS AND CORDS—TESTS AND INSPECTIONS	MW	12M	87
103-327-500	4		J94071C (71C) AND J94071F (71F) MILLIWATT REFERENCE GENERATORS—OUTPUT ADJUSTMENT AT MAINTENANCE OUTLET JACK	MW	M	102
365			T1 CARRIER SYSTEM			
365-1			TERMINAL D1 CHANNEL BANK EQUIPMENT			
365-101-500	5		POWER SUPPLY TEST AND ADJUSTMENTS	MW	3M	121
365-110-500	4		MAINTENANCE AND TROUBLE LOCATION PROCEDURES			
ADDENDUM	1	(1)	Single Channel Maintenance (Routine Maintenance Should Be Performed On One Channel In Each Group. This Sample Will Show The Need For Further Maintenance.)	MW	3M	122
365-2			REPEATERED LINE			
365-225-500	2		MAINTENANCE TESTS			
		A	In-Service Line Testing	MR	M	123
		B	Spare Line Testing	MR	M	124

E-3481
(5-68)

SCHEDULE												
JOB NO.	OFFICE ALPHA				SHIFT DAY				YEAR 1969			
	JAN.	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
86	X											
87		X										
102	X	X	X	X	X	X	X	X	X	X	X	X
121	X			X								
122	X			X								
123	X	X	X	X	X	X	X	X	X	X	X	X
124	X	X	X	X	X	X	X	X	X	X	X	X

EXHIBIT 6

FORM SW-6498

201-101-906SW

**CENTRAL OFFICE
FOREMAN'S REPORT**

SW-6498
(4-71)

FOREMAN _____ OFFICE _____ PERIOD _____

SERVICE	EST.	ACT.	COST	HOURS
"T" TICKETS			"T" TICKET HOURS	
FRAME CODES			TOTAL UPKEEP (R) HRS. - C. O. ACCTS.	*
WORK ERRORS			PREVENTIVE HRS.-PERFORMED	
INTERCEPT ERRORS			CORRECTIVE MAINT. HRS.	*
BILLING FAILURES			TOTAL "M" HRS.	*
WORK EVALUATIONS-TOTAL			EST. & R. O. "M" HRS.	*
NUMBER WITH DEFECTS.			UNMEASURED "M" HRS.	*
TOTAL EMPLOYEES			ALL OTHER "M" HRS.	*
EMPLOYEES EVALUATED			TOTAL OTHER MAINTENANCE HRS.	*
W. E. Co. CAUSED TROUBLES	X		TESTING ACCTS.	*
			CABLE MAINT. ACCTS.	*
			ALL OTHER ACCTS.	*
			TOTAL "C" & "X" ACCT. HRS.	*
			TOTAL TRAINING (-99) HRS.	*
			TOTAL UNDISTRIBUTED HRS.	*
			TOTAL HOURS EXPENDED	*
			OVERTIME HOURS	*
			PREVENTIVE MAINT. HRS. BACK LOG:	X
			CURRENT MONTH	
			CURRENT MONTH RESCHEDULED	
			PREVIOUS MONTH(S) PERFORMED	
			CUMULATIVE-CURRENT YEAR	
			FRAME "M" HRS.-BY SWITCHMEN	*

REMARKS:

