

## JOB SPECIFICATIONS

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#### 1. GENERAL

##### 1.1 Scope

1.1.1 This section covers practices, of particular interest to the installer, followed by the Equipment Department in the preparation of Job Specifications and Appendices. Due to the nature of the information covered, as affecting the installer, this section will be reissued only when it is considered that the cumulative changes in engineering practice warrant its reissue.

#### 2. JOB SPECIFICATION TITLE

2.1 The title of job specifications covers the type of equipment being ordered and the system to which the equipment belongs, the telephone company's name, division, area or territory and the office name, city and state. All specifications and appendices on an order show the same office name or names.

### 3. JOB SPECIFICATION HEADINGS

#### 3.01 General

3.011 The heading "General" is used in all job specifications including the installing specification and under this heading is shown a summary of the equipment covered by the particular specification. If it is necessary to use the words "This specification is incomplete" they are shown under this heading (a similar note is placed in the "B" section of the specification).

3.012 If equipment ordered in a specification does not apply to all offices or units described in the specification title, the particular office or unit for which the equipment is ordered is specified.

#### 3.02 Job Summary

3.021 The heading "Job Summary" is used only in the installing specifications. Under this heading a complete summary of the entire job is covered following the practices stated in Paragraph 4. On a one-specification job, however, the heading "Job Summary" is omitted where the complete information is shown under "General."

#### 3.03 Supplementary Specifications

3.031 The heading "Supplementary Specifications" is used only in the installing specifications. Under this heading a list of all specifications prepared for the job is shown following the practices covered in Paragraph 4.

#### 3.04 Engineering Reference Papers

3.041 Drawings and other papers listed under this heading are for reference only by the personnel of the engineering organization. They are not sent to the installer or customer and are therefore not described in this section.

#### 3.05 Work to be Done by The Installer

3.051 The installer shall add or make changes in the equipment ordered under "Summary of Material" and as specified herein in accordance with the drawings listed in this and associated specifications.

#### 3.06 Work to be Done by The Contractor (Turnkey Orders)

3.061 The contractor shall erect and install the material ordered under "Summary of Material," and shall make topographical terrain changes as specified herein in accordance with the drawings listed in this specification.

#### 3.07 Work to be Done by The Service Center

3.071 The Service Center shall add wiring and associated apparatus and make changes as covered under this heading and deliver to the installer on the job. The installer shall place the equipment and install the "Outside of Local Cable" or "Outside of Unit or Panel" wiring.

#### 3.08 General Notes for The Installer

3.081 The heading "General Notes for the Installer" shall be used in the installing specification, and in framework, cabling and power specifications if required. Notes applying to the Installer which are of a general nature, not associated with a specific item in the specification, shall be shown under this heading. When this is the case the notes shall not be duplicated under "Installer's Notes."

#### 3.09 General Notes for the Contractor (Turnkey Orders)

3.091 The heading "General Notes for the Contractor" shall be used in the O11 Specification for Turnkey Orders. Notes applying to the contractor which are of a general nature, not associated with a specific item in the specification, shall be shown under this heading. When this is the case, the notes shall not be duplicated under "Contractor's Notes."

#### 3.10 Installer's Notes

3.101 Notes applying only to the installer are shown under the heading "Installer's Notes" except that maintenance notes are shown only on the wiring list drawing when there is such a drawing.

3.102 Installer's notes are lettered, beginning with A for each specification with the following exception. When the maintenance notes are lettered on the wiring list drawings, as will be the case on some old drawings, the installer's notes will start with M.

#### 3.11 Contractor's Notes (Turnkey Orders)

3.111 Notes applying only to the contractor which pertain to a specific item in the specification shall be shown under this heading.

#### 3.12 Service Center

3.121 Notes applying only to the Service Center Shops are shown under the heading "Service Center Notes."

3.122 Service Center notes are numbered above 50 as numbers 1 to 50 are reserved for maintenance notes shown on the wiring list drawing.

### 3.13 Installer's Cable Running List

3.131 This heading shall cover the "Installer's Cable Running List" which is initiated with the preparation of the longhand cabling information by the line engineer.

### 3.14 Drawings

3.141 The drawings required for a job specification are listed under the general heading "Drawings" in four subsections as follows:

- (a) Installer's Equipment Drawings
- (b) Specification Drawings
- (c) Framework, Assembly and Equipment Drawings
- (d) Circuit and other Maintenance Drawings

3.142 The subdivisions listed in the preceding paragraph are explained respectively in Paragraphs 3.148 to 3.17. These drawings require supplements or change orders and reissues on changes and they make up what is commonly referred to as the "drawing list."

3.143 Issue numbers of drawings are listed in job specifications.

3.144 The symbols +, -, etc., and their associated notes are shown immediately following the general heading "Drawings" in job specifications and apply to drawings in the different subdivisions. These symbols which are explained in Paragraph 9.1 restrict the distribution of the drawings to various organizations.

3.145 The drawings listed under the heading "Installer's Reference Papers" are covered in Paragraph 5.

3.146 Telephone company drawings, including A.T. & T. Automatic Electric and similar drawings, used by the shop for manufacturing purposes, are listed in the same manner as other manufacturing drawings except the company's name is added.

### 3.147 Installers Equipment Drawings:

(a) This heading is for any drawing used only by the installer for which supplements or reissues are required on changes.

(b) Cable connecting charts and switchboard power cable drawings are listed under this heading.

### 3.148 Specification Drawings:

(a) All standard equipment specifications are listed under this heading regardless of whether material is being ordered from them or they are being furnished purely as an equipment drawing. Standard equipment specifications ordered or referred to in a major specification are also listed. This includes all "J" specification drawings and any other standard equipment specifications even though they are numbered in the "ED", "H", "T" or "C" series.

### 3.15 Combined Specification and Circuit Drawings

3.151 Under this heading, list all equipment manufacturing specifications which also contain the wiring diagram information (no associated circuit drawing has been prepared). Also list the associated schematic drawing here.

### 3.16 Framework, Assembly and Equipment Drawings

(a) Drawings are listed as follows under this heading:

(1) Framework and assembly drawings covering sections, desks, bays and frames even though they may be components of standard equipment specifications.

(2) Drawings with groups covering items ordered in the summary of material.

(3) Standard equipment drawings.

(4) Job equipment drawings.

(5) Switchboard cabling plans.

(6) Floor plans

(7) Job cabling plans.

(8) Detail Change (DCT) drawings.

(b) The issue number of all drawings under this heading is listed.

3.17 Circuit and Other Maintenance Drawings: Drawings are listed as follows under this heading.

(a) Wiring diagrams and schematic drawings.

**NOTE:** A note is placed immediately under the heading "Circuit and Other Maintenance Drawings" indicating that circuit descriptions are furnished with all circuit schematics except those marked \*.

(b) All other drawings required by the maintenance force such as:

- (1) Job wiring lists
- (2) Office record drawings (000)
- (3) Cross-connection charts or drawings
- (4) Particular circuit charts
- (5) Final selector locating charts.

### 3.18 Installer's Equipment Drawings

(a) Lists cable connecting drawings, cabling plan drawings, switchboard power cable connecting drawings, standard cross-connection drawings (other than wiring diagrams) and standard jumper assignment charts under this heading.

(b) Cable connecting drawings and cabling plan drawings shall be listed in the cabling specification. Switchboard power cable connecting drawings shall be listed in the specification in which the associated equipment is ordered.

### 3.19 Installer's Reference Papers

3.191 Refer to Paragraph 5 for a description of the information appearing under this heading.

### 3.20 Contractor's Reference Papers (Turnkey Orders)

3.201 Lists drawings, without issue numbers, which are required by the contractor only and of which he does not need copies of supplements or a later issue. Since he does not require later issues of the drawings, the issue numbers shall be omitted, and the drawings will not be posted against the job order.

### 3.21 Service Center Reference Papers

3.211 The heading "Service Center Reference Papers" serves the same purpose for the Service Center as the heading "Installer's Reference Papers" (Refer to Paragraph 5) serves for the installer and the same practices apply. These drawings are not prefixed with the § symbol.

### 3.22 Telephone Company Drawings

3.221 If telephone company drawings are required by the installer the following note appears under the heading "Telephone Company Drawings":

"The following drawings shall be obtained by the Installer from the telephone company at the time of installation."

3.222 The telephone company drawings are listed under the above note. The issue numbers, if known, are also listed.

### 3.23 Fuse Record Sheets

3.231 Fuse record sheets and books when required are listed under the heading "Fuse Records."

### 3.24 Floor Alarm and Interrupter Record Sheets

3.241 List of floor alarm and interrupter record sheets and books, when required, under this heading.

### 3.25 Trunk Group Assignment Charts

3.251 Where required for Step-by-Step trunk group usage equipment trunk group assignment charts are listed under the heading "Trunk Group Assignment Charts."

### 3.26 Traffic Usage Recorder Assignment Charts

3.261 List of traffic usage recorder assignment charts under this heading when required for Traffic Usage Register and Traffic Usage Recorder Frame.

### 3.27 Paper Mounting and Photostats

3.271 Orders for cardboard mountings and reproductions of designation cards, terminal assemblies, charging circuits, etc., are entered under the heading "Paper Mountings and Photostats."

### 3.28 Reproduced Tracings

3.281 If the telephone company requests tracings, the drawing numbers together with the shipping date specified in the telephone company specification are listed in the installing specification (-92 or other) under the heading "Reproduced Tracings."

## 4. INSTALLING INFORMATION IN JOB SPECIFICATIONS

### 4.1 -92 (or Other Installing) Specification

4.11 The installing specification under the heading "General" includes a summary of the equipment ordered therein. Under the heading "Job Summary" a narrative summarization of the whole job is given to provide the installer with a quick overall picture, i.e.:

(a) The extent and type of added equipment, or the changes in traffic to be affected by modifications being made.

(b) A list of the major items of equipment to be installed, and information as to any special conditions associated with the equipment.

4.111 The information given in accordance with (a) of Paragraph 4.11 is not apparent from the wiring lists and the material ordered and is usually obtained by the Engineer from the telephone company's specification.

4.112 The information given in accordance with (b) of Paragraph 4.11 for large new or addition jobs is usually given by showing in the list of "Supplementary Specifications" after each specification the number of sections, frames, desks, bays, etc. with their office location numbers. On smaller jobs a list of the major items of equipment is given under the heading "Job Summary" and only the number and names of the specifications are listed under the heading "Supplementary Specifications."

4.12 Special conditions are covered for both large and small jobs by narrative form notes, e.g. any special procedure of installation that may be required by the telephone company such as advance installations or a particular sequence of completion of portions of the job or of modification of equipment which must remain in service during alteration or relocation.

4.13 An example of a Step-by-Step Job Summary follows:

#### Switching Equipment

New step-by-step equipment arranged for 2-party selective and 4-party semiselective ringing which will replace existing manual ringing in same building.

8600 subscriber lines, 11,000 connector terminals and 48 repeaters.

Extended area service will be available to certain subscribers.

Intercepted calls will be routed to intercepting operator at No. 3 tollboard.

A new test center and a dial tandem unit for AB toll service in the \_\_\_\_\_ area will also be furnished.

#### Power Equipment

One 803C ringing tone and coin control power plant.

One 301C power plant.

#### 4.2 Framework or Assembly and Equipment Specifications

4.21 Each framework or assembly and equipment specification under the heading "General" includes a complete

summary of the equipment ordered therein requiring manufacturing and installing effort. Any information concerning an item in the specification that will aid the installer in understanding the reasons for the changes, especially any modification items, is given with an "Installer's Note" associated with the item. On a one-specification job the complete summary is covered under the heading "General" therefore the heading "Job Summary" is omitted.

#### 4.3 Power Specifications

4.31 The power specifications includes a complete detailed summary of the equipment being furnished. Sufficient information is given to make clear the service is to provide and briefly, the method of operation. The control and reserve equipment is listed.

#### 4.4 Appendices

4.41 An explanation of what is involved in the change and a brief summary of the equipment added is covered under "class" on the title page of Class "A" appendices. This information is covered on other classes of appendices if they are sufficiently involved and the original summarization does not give the installer a complete summary of the job.

#### 5. INSTALLERS REFERENCE PAPERS

5.1 The kinds of drawings described in Paragraph 5.11 which are required by the installer only and of which he does not need copies of supplements or a later issue are listed under the heading, "Installers Reference Papers." Since the installer does not require later issues, the issue numbers are omitted. Issue numbers of detail change sheets are listed.

5.11 The kinds of drawings (and papers) listed under the heading "Installers Reference Papers" are:

- (a) Drawings for Equipment Modified:  
If wiring is to be changed to agree with another drawing, the existing drawing and also drawings connecting with this drawing are listed.
- (b) Drawings for Equipment Relocated:  
If equipment is to be relocated, the wiring diagrams covering the "outside of local cable" wiring which will be reconnected are listed.
- (c) Drawings for Equipment Removed:  
For equipment being removed, drawings are listed as follows:
  - (1) Drawings referred to in the removal note.

(2) Any wiring diagram which the installer will need to disconnect and care for the "outside of local cable" wiring.

(3) Where circuits from the equipment being removed are connected to other frames, etc., it will often be necessary to furnish the installer the wiring diagrams involved at the other end of the cable in order for him to disconnect wires at that end of the cable.

(4) Any other drawing needed to remove the equipment.

(d) Drawings Listed on Other Drawings: If framework or equipment is ordered from a drawing and that drawing in turn lists other drawings in the stock list or notes, only such of these drawings required by the installer are listed. Drawing covering stamping, drilling, mounting and assembly information and installers notes are especially required.

(e) Local Cable Plans: If a local cable is to be placed by the installer, the local cable plan drawing is listed.

(f) "N" Drawings: "N" drawings which are being furnished to show existing wiring or equipment arrangement.

(g) Apparatus drawings: If apparatus is modified or drilled for by the installer. Apparatus drawings which cover "layout of holes," mounting or assembly information required by the installer are also listed. On Engineer and Furnish orders apparatus is not modified in the field since apparatus drawings are not sent to the telephone company. The apparatus is replaced unless the modification is covered by a "KS" specification, "ED" drawing or similar information.

(h) "KS" Specifications: If equipment is to be modified in the field by a "KS" specification, the "KS" specification is listed. "KS" specifications which cover mounting or assembly information required by the installer are also listed.

(i) Detail Change Sheets

NOTE: Detail change drawings (DCT) are listed under the heading "Framework, Assembly and Equipment Drawing."

(j) Installer's Running and Connecting Sheets.

(k) Floor Alarm Frame Work Sheets: Listed in the floor alarm frame specification on original installation of crossbar equipment.

(l) Wiring Diagrams Removed from an Office: The office base number is shown with a blanket wiring list dash number (4000 for Panel and 7000 for Step-by-Step) and the symbol "RE" opposite the wiring diagram involved thus

RE  
T-9141-7000 T-317703-11  
Iss. 2 Inc. Trk. From  
Toll Swbd.

(m) Drawing for Locating Apparatus on Mounting Plates with 1/16" Centers: Drawing H-224-000 is listed whenever the installer is to add apparatus on D-48928 or D-48930 mounting plates in order to aid in locating the different apparatus positions involved.

## 6. EQUIPMENT MODIFIED BY SERVICE CENTER

6.1 Individual specifications for modifications of equipment are usually prepared by the Service Center. However, when complete information can be furnished in the summary of material item, such information is included under that heading.

6.11 The remaining portion of the job, necessary for the installation of the equipment is covered in the regular specification. The equipment modified by the Service Center, however, is referred to under "General" but is not included in the summary of material of the regular specification. All material not required for making the modifications at the Service Center is covered in the regular specification, even though such material may be furnished by the Service Center.

## 7. DRAWINGS REQUIRED BY INSTALLER

7.1 The following drawings are furnished for the installer's use:

(a) All drawings covering material assembled or mounted by the installer or which specify drilling, stamping or other work done by the installer.

(b) Standard equipment specifications and standard equipment drawings.

(c) Wiring diagrams, schematic drawings and "CD" sheets.

(d) Switchboard cabling plans for new or additional frames, racks, sections and desks.

(e) Switchboard power cabling drawings.

(f) Cable connecting drawings.

(g) Local cable plans for cables placed by installer.

## 8. ADDITIONAL DRAWINGS FOR WIRE CHIEF'S USE

8.1 The installer is instructed by a note in the installing specification to order any set of papers requested by the telephone company for the Wire Chief's use. A list of the drawings and other papers involved is furnished.

## 9. SYMBOLS USED IN DRAWING LIST

9.1 Symbols Used in Drawing List are as follows:

- (a) Drawings designated "F" are not required by the installer.
- (b) Drawings designated "G" require the supplying organization to show restrictive legend stamp.
- (c) Drawings designated "M" are common to more than one specification. Issue will be found in the 092 specification.

## 10. WIRING LISTS IN JOB SPECIFICATIONS

### 10.1 General Requirements

10.11 In general, the record of the wiring of equipment is maintained on drawings. In the case of equipment approaching their ultimate, old offices soon to be replaced and equipment on which the records are poor, the records have not been put on drawings and are maintained in the job specifications. The information in Paragraphs 10.12 to 10.147 applies to wiring lists on drawings or job specifications.

10.12 Shop and Installer's Wiring Combined: If a wiring diagram has separate figures for "inside" and "outside" of local cable wiring, all of the information is listed together in the wiring list under one heading.

10.13 Wiring Only: For wired only circuits it is the general practice to furnish both the local cable and "outside of local cable" wiring. If the wiring or cables for wired only circuits are furnished contrary to these practices, the fact is indicated on the wiring list.

10.14 Optional Wiring, Apparatus or Adjustments are handled as follows:

10.141 If certain options depend on information to be furnished by the telephone company and the information cannot be obtained before installation, the installer is informed by a note in the specification that the information will be furnished by the telephone company.

10.142 The modifications of equipment or the cutting or disconnecting, by the installer, of wiring furnished by the shop (as in the case of stocked equipment) to meet job requirements. Such changes which are furnished automatically but which are changed to meet a particular job condition will be covered under "Work to be done by Installer. However, these changes will not be covered under this heading when instructions are given to the installer on standard drawings. (i.e., Maintenance notes shown on drawing and marked with an "X" in Installer's Column.)

10.143 Automatic circuit figures and options, such as "To Figures A or B, To Figure A unless otherwise specified," are listed in the wiring list.

10.144 Optional Relay Adjustment: For relays that have more than one adjustment shown on the schematic drawing, the adjustment to be used is covered as a maintenance note on the wiring list drawing.

10.145 Universal Wiring: In the case of associated wiring diagrams one of which shows complete (i.e. universal) wiring for all of the drawings, the "universal" drawing is specified to cover the complete wiring and the particular wiring diagram that fits the job is specified to cover the apparatus. If a wiring diagram shows universal wiring for two or three figures the cable is wired universally and the figure required is equipped.

10.146 Office Circuit Numbering: For circuits that are numbered on the equipment, the office circuit numbering of both the equipped and wired only circuit is shown in the wiring list. Arbitrary numbers are not assigned in the wiring list to miscellaneous circuits that are actually not numbered on the equipment.

10.147 Modification Wiring Diagrams are not specified for new or additional equipment unless authorized in the title of the drawing or by the standards engineer. The reason is that they are prepared for modification of present wiring and may contain unsatisfactory wiring conditions if used for new or additional equipment, such as splices, obsolete wire colors and awkward wiring arrangements.

### 10.2 Modification of Local Cables

10.21 Detail Change Sheets: If cables are to be modified, the installer is provided with detail sheets for conditions covered in Section 40A.

**10.22 Supplementary Local Cable:**

Where modifying or adding features to existing equipment that require extensive changes and it is not practicable to have the installer modify the existing cable a supplementary (or new) cable is furnished.

**10.3 Equipment Transferred**

10.31 For equipment which is to be transferred bodily from one exchange to another the wiring is covered on the wiring list drawing for the office to which the equipment will be transferred. If wiring modifications are to be made they are covered in the specification under the heading "Wiring and Apparatus to be Placed by the Installer."

**10.4 Notes in Job Specifications**

10.41 Nonmaintenance notes are placed in the specification in all cases. Notes affecting shop design are assigned numbers from 51 up. Other notes are assigned letters A to Z, AA to AZ, etc., except on additions, if lettered notes are shown on the wiring list drawing the letters M to Z, etc. are used. Notes pertaining to the substitution of cable and wire are considered as nonmaintenance notes and as such appear on the wiring list drawing.

10.42 Note References are handled as follows:

10.421 For new offices or new units a reference in the specification to all wiring list notes is omitted as the wiring is covered only on the wiring list drawing which shows a reference to all notes.

10.422 Present Offices:

(1) For new equipment being ordered for present offices references in the specification are omitted to all notes that affect the wiring list as the wiring is covered in detail only on the wiring list drawing which shows a reference to all notes.

**11. SUMMARY OF MATERIAL NOTES**

11.1 All notes required to show the source and disposition of material are placed under the heading "Summary of Material Notes" and the associated items in the summary are designated accordingly. If any of the notes, listed and defined in the following paragraph are required on job stock list drawings the wording is modified to fit its use on the drawing, but the exact symbols are used.

11.11 The following notes are commonly used:

Note  
Desig.

**Standard Wording of Notes**

A Material designated "A" has been ordered in advance on original memorandum of (date) and change memorandum of (date). This material is subject to change by appendices written to this specification.

(2) For present equipment a reference is shown in the specification opposite the item to all notes that affect the wiring list.

(3) For other notes, such as those covering framework modifications or the location of nonwired material, a reference is shown in the specification opposite the heading covering the equipment affected.

**10.5 Wiring List Changes on Open Orders**

10.51 If a wiring list drawing exists and changes are required on an open order, the supplement or the changed wiring list drawing will provide sufficient information to the field regarding the change.

**EXCEPTION A:** When a job specification is completed which had been issued as incomplete due to engineering or manufacturing information not being available at the time the specification was prepared, the additional wiring list changes are covered in the Class "M" appendix in addition to changing the wiring list drawing.

**EXCEPTION B:** When changes in wiring list information are necessary due to engineering omissions which are billable, the additional wiring changes are covered by a Class "A" appendix in addition to changing the wiring list drawing.

**Explanatory Use of Notes**

Note "A" is required in the specification to avoid a duplicate order.

Note  
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Standard Wording of Notes

Explanatory Use of Notes

**AB** Material designated "AB" shall be shipped (1) with material ordered in the first cabling specification, or (2) with the first shipment, or (3) with material ordered in the O6 specification when scheduled, otherwise in the O5 specification.

This note is used on dial jobs for cable clips and insulators which are ordered in the last cabling specification so that the clips and insulators will be available for use on the cables received with the first shipment. In this case the AB note shall be worded as indicated by (1). This note is also used on step-by-step jobs for battery and ground feeders ordered in switch frame specifications so that the feeders will be available on the job in advance of the frames. In this case the AB note shall be worded as indicated by (2). This note is also used on dial jobs for conduit clamps when they are a part of the ladder track assembly. In this case the note shall be worded as indicated by (3).

**AC** Material designated "AC" at the end of items will be owned by - - - - - Co. (Show name of local operating company.)

Notes "AC", "JT", and "LL" are used only at the request of the telephone company to enable the customer to allocate the cost of the equipment between the local operating company and the A.T. & T. Company for plant valuation purposes.

**BE** Material designated "BE" will be (or may have been) delivered by the telephone company to the distributing house Class "C" stock to be reused for modifying or supplementing items designated, "CE", as authorized by letter (date) or Spec. - - - - -.

This procedure is authorized by correspondence or the telephone company specification. Unless so authorized, all material required to modify "CE" items is ordered as "TM" items.

**CE** Material designated "CE" will be (or may have been) delivered by the telephone company to the Service Center Class "C" stock to be reused on the job, as authorized by letter (date) or Spec. - - - - -. This material shall be (1) shipped to the job by the Service Center or (2) modified as directed in the specification and shipped to the job by the Service Center.

This procedure is authorized by correspondence or the telephone company specification. The material thus delivered is considered as Class "C" material.

**E** Material designated "E" shall be furnished by the Service Center authorized by letter (date) or Spec. - - - - -.

This note is used for material to be obtained or furnished by the Service Center and shipped to the job, excluding "BE" and "CE" items. Generally this procedure will be authorized in the telephone company's specification or correspondence or in local instructions applying to specific material.

**F** Material designated "F" is for transition purposes.

This note is used on remodeled jobs on which additional material is needed for transition purposes.

**FS** Material designated "FS" is listed for service purposes only.

This note applies only to orders for terminal assignment lists and "priced" copies of job specifications which are ordered in the specification summary to enable field service to "service" the item.

Note  
Desig.

Standard Wording of Notes

Explanatory Use of Notes

J	Material designated "J" shall be taken from Order No. - - - - held in Dept. - - - -.	The note is used to designate canceled or stored material which is the property of the telephone company and which is being disposed of at their request. Normally such requests are in the telephone company specification but they may be originated by the merchandise department. Before the specification is prepared the merchandise department is informed of the items to be applied so they may advise whether the material and the associated subitems will be available. The order, specification, item and subitem from which the material is taken is shown at the end of the item in the specification summary in a note (Take from Sepec. - - - - Item - - - -).
JT	Material designated "JT" at the end of items will be owned jointly by A.T. & T. Co. and - - - - Co. (Show name of local operating company.)	See "AC" note.
LL	Material designated "LL" at the end of items will be owned by A.T. & T. Co.	See "AC" note.
M	Material designated "M" is to be mounted on relay rack frameworks ordered in the -70 specification.	This note applies only to material to be mounted on crossbar relay racks in the shop.
MD	Material designated "MD" will be shipped "no charge to the - - - - Service Center to be modified as directed in this specification and then reforwarded direct to the job.	This note applies to equipment modified by the Service Center instead of by the local shops. In such cases the merchandise department or the job scheduling department will have authorized the procedure called for by Note "MD". The term "no charge" indicates that the Service Center will not be billed since the merchandise department will bill the telephone company in the contract for all "MD" items.
MOD	Material designated "MOD" at the end of items is to be used for modifying equipment, the designation "MOD" being listed for the telephone company's information.	The material associated with the "MOD" note is used for converting out of date equipment into a later type. The "MOD" note is used only if requested by the telephone company.
Q	Material designated "Q" is being furnished on Miscellaneous Order - - - - from Dept. - - - - (here mention the merchandise dept. which is holding the equipment.)	The material associated with the "Q" note will have been ordered on a miscellaneous order for application on a specific engineer, furnish and install order. For example, previous to placing the regular switchboard order the telephone company will have entered a miscellaneous order to have the items manufactured and made available to apply on a particular short interval job without delay. The "Q" note is used if the foregoing procedure has been authorized by the telephone company, the merchandise department or job scheduling department.

Note  
Desig.

Standard Wording of Notes

Explanatory Use of Notes

R Material designated "R" shall be reused from the present equipment by the installer authorized by letter of (date) or Spec. - - - -

This note applies to apparatus which is to be relocated or rearranged in a new location in the same exchange. In certain cases such as reused step-by-step shelves, switches and banks for which the locating information can be covered to better advantage by an installer's note, the "R" note is not required. The "R" note is not used for a complete unit of equipment which is to be moved bodily in the same exchange since such items are not listed in the specification summary.

S (Used only in longhand specification)

- - - - -

T Material designated "T" will be furnished by the telephone company in accordance with letter (date) or Spec. - - - -

The note is used for material which is to be furnished by the telephone company to the installer, from its own stock or from another exchange, excluding "BE" and "CE" items. If the equipment consists of an equipped frame or section which is to be moved bodily, the component parts are not listed, as fuse panels, keyshelves and apparatus. The item is edited similar to the following:

T1 J - - - - - 14L Operating Room Desk completely equipped.

See the "R" note for material reused from the same office.

TM Material designated "TM" will be shipped "no charge" to the - - - Service Center for use on "CE", "E" or "MD" items (as specified).

All apparatus, wire or other material required by the Service Center for modifying or supplementing major units of equipment is ordered as "TM" items, unless "BE" material has been authorized for this purpose in the telephone company specification or correspondence. "TM" material is shipped from the factory in time for the Service Center to complete their work and meet the installation schedule. The term "no charge" indicates that the Service Center will not be billed since the merchandise department will bill the telephone company in the contract for all "TM" items.

TTY Material designated "TTY" at the end of items is manufactured by the Teletypewriter Corporation.

This note aids central editing in "sourcing" these items.

W

See Paragraph 11.13

Y Items designated "Y" confirm longhand information on form - - - - (List complaint form number and date) to shop order department.

This note is used in appendices affecting the specification summary to indicate that corrective action has already been taken on the change.

Z Items designated "Z" confirm information to the local cable layout department.

This note is used in appendices affecting job-made local cables to indicate that corrective action has already been taken on the change.

11.12 Other summary notes required for the modification of items, such as finish, moisture proofing, etc., are shown immediately adjacent to each item affected. Where practical summary notes are omitted and the necessary information included as part of the item.

11.13 "W" Note: Sometimes it is necessary to dispose of surplus material at one office and apply it in some other office, the material being the property of the Western Electric Company. In these cases a summary note is placed in the specification on which the material is to be applied in order to inform the installer where the material should be obtained. For this purpose a "W" note is used, worded to fit the condition involved.

## 12. DETAIL ENGINEERED JOBS - EDITING OF SUMMARY

12.1 On detail engineered jobs covering major units of equipment, as frames or sections, the shop mounted material is edited so that it can be associated with the major equipment, by specifying the major equipment equipped with the component parts. This does not mean that each piece of apparatus is necessarily listed as applying to its own unit. On the contrary, the total quantity of material which applies to a group of major equipment is listed from which the shop selects the quantity required for each unit. The following is observed:

12.11 The major units of equipment are listed first, followed by E/W and the material to be mounted in the shop.

12.12 Similar major equipment and like material are combined into as few items as possible to shorten the length of the specification. For example, if a lineup of switchboard requires more than one assembly drawing or group number, they are grouped with a bracket and the group designated E/W to avoid having several shop orders calling for the same piece of apparatus.

12.13 If a small wired unit is shop mounted on a wired bay or frame and requires additional apparatus or lists, the small unit is edited as an equipped item in with the other items of apparatus which mount on the bay itself.

## 13. FRAMEWORK ITEMS

13.1 Combining Groups on Same Drawing: Such items as rolling ladder material, distributing frames, relay racks, cable racks and auxiliary framing which are ordered by different groups on the same drawing are edited as illustrated below:

-ED Rolling Ladder Material  
Consisting of:

1 G-1  
2 G-2  
3 G-4

-ED-61753-73 Duct Type Framework, Consisting of:

-ED-61753-73 G-1 Bay Framework (Bays \_\_\_\_\_)  
-ED-61753-73 G-2 Bay Framework (Bays \_\_\_\_\_)

-ED-61753-73 G-3 Cable Duct Separators (Between Bays \_\_\_\_\_)  
-ED-61753-73 G-6 Guard Rail Closing Details (Bays \_\_\_\_\_)

13.2 Ordering Details Only: If a detail is ordered as a loose item, the assembly drawing on which the detail is specified is referred to rather than the detail drawing, as follows:

1 Det. 15 per ED-00000-10.

However, if there is more than one detail in a stock list with the same detail number but made from different detail drawings the shop order calls for both the assembly and detail drawing number.

13.3 If only "S" material on a stock list drawing is required the item is edited similar to the following:

1 - Set of Loose Material marked "S" on T-408308 G-1.

13.4 If fuse panels and ground bars are shop wired, the equipment drawing is not specified in the summary but is listed in the drawing list.

13.5 Ironwork Located on More Than One Floor of Exchange: Framework assemblies: such as IDF vertical or fuse boards, located on more than one floor of the exchange are not included in the same item. For example, if groups 1 and 2 order a fuse board for the first and second floor respectively, each group is edited as a separate item; or if group 1 orders verticals for frames located on two or more floors G-1 for each floor is edited as a separate item. The floor location is indicated as part of the items in all cases.

## 14. SUMMARY OF MATERIAL

NOTE: The terms "X" and "None X" material, mean respectively, material assembled into an equipment before shipment and material shipped to the installer or Service Center for assembly into an equipment or to be turned over to the customer by installer.

### 14.01 Designating Equipment Locations for Material Items in "B" Summary

14.011 All material ordered in equipment specifications is designated so that its office location will be readily apparent to the installer. This is accomplished by designating the equipment location of the material listed in each main item or by grouping related main items under suitable general headings which convey similar information. The equipment location designation is in terms of a specific frame, bay, position, section, desk, fuse board, charging unit, ringing unit, etc., except where a suitable general heading is used for designating a group of main items whose usage is common to an office or a group of related items whose usage applies to a line of frames or a line of switchboards.

14.0111 Following are a typical example showing how a general heading is applied for designating the equipment location of a group of items rather than designating a location for each item.

#### Switchboard Specifications

##### Face Equipment material

(This includes all equipment mounted in the face of the switchboard between the keyshelf and crown moulding.)

##### Cable Turning Section Material

##### Switchboard Lighting Material

##### Pneumatic Tube Equipment Material

##### Relay Rack Material - Relay Rack \_\_\_\_\_

#### Power Equipment Specifications

##### Machine Bus Bar Material

##### Battery Bus Bar Material

##### Power Board Bus Bar Material

##### Frame and Aisle Lighting Material

(The wire applying to this heading is included as a part of the wire ordered under power wire.)

##### Conduit and Conduit Fitting Material

other than for Frame and Aisle Lighting Storage Battery Material

#### Frame and Rack Specifications

Framework specifications ordering distributing frames, relay racks, message register racks, mezzanine platforms, etc. are edited so that the items associated with particular frames or racks appear under specific headings which identify the type of frame, floor location and bay or vertical numbers involved.

Such items as cable racks, auxiliary framing, rolling ladders, cable hole sheathing and end guards are grouped under specific headings which identifies the usage of the material.

Typical examples of such headings are:

##### Frame Anchor Bolts

##### Auxiliary Framing

##### Frame Supports

##### Frame Junctioning Material

##### End Guards

##### D.P.T.S. Aisle Sign and Aisle Pilot

##### Lamp Supports

Items ordering cable hole sheathings, end guard, floor and top angles, D.P.T.S. and similar supports, and frame junctioning material show the location where they are used. Similarly any miscellaneous framework items which cannot be properly included under a specific heading contains references to the locations where used.

14.0112 Following are typical examples showing equipment locations designated on summary items. Also illustrated are examples showing where the material will be used. In the case of circuit apparatus, the wiring diagrams are also listed. This is done even though the item is specified as a list or group of a standard specification or drawing in order that the installer may associate the item with the wiring diagram specified in the wiring list.

- 1 7A Bell (T-70352-30) (Bay 310)
- 1 209 FG Relay (T-70268-32) (Bay 11.1)
- 7 36 Term. Strips (3-4W Term.) (H.I.D.F.)
- 3 90 Amp. 250V Non-Ind. Cartridge Fuses (2 - T-8150-500) (1 - Spare)
- 1 ED-90185-50 G-8 Rep. Coil Mtg. Bars (Bay 12.11)
- 1 SK24 Cable Terminal (Mtd. on Wall)
- 50 P-353446 Screws (Form Bracing)

#### 14.02 Equipment Ordered from Standard Equipment Specifications

14.021 Standard equipment specifications (including equipment stock list ED drawings) are not specified unless they, together with all component drawings ordering apparatus, framework or material are available at an established point in the engineering interval.

14.022 Orders for standard equipment specifications (J, ED, H) are edited so that each list will appear on a separate line in the summary of material similar to the following examples.

- 48 J91107C-1 List 1, 3, 9, 11, 13, 26, 28, WA, WC, No. 3CL outward toll lower units Pos. 102 to 149 (keyshelves on right side of odd Pos. 103 to 149 and left side of even Pos. 102 to 148) No optional drilling E/W
- 16 List 24 (Pos. 102, 105, 108, 111, 114, 117, 120, 123, 126, 129, 132, 135, 138, 141, 144, 147)
- 5 List 38 (Pos. 105, 109, 113, 117, 121)
- 1 List 41, 42 (Pos. 149)
- 172 List A Ticket boxes (160 located between cords 1 and 2, 3 and 4, 5 and 6, 7 and 8, Pos. 102 to 141; 12 located between Cords 1 and 2, 3 and 4, 5 and 6, Pos. 142 to 145)

14.023 "Equipped With": On lettered lists (such as List A below) which supplements a numbered list the total quantity of each list required, the frame and circuit position numbers and the quantity that applies to each frame are shown as follows:

4 J List 1 Frames 1 and 2 E/W  
 16 List A (Fr. 1) (6) (Ckt. Pos. 1 to 6)  
 (Fr. 2) (10) (Ckt. Pos. 1 to 4 and 6 to 11)  
 4 List WA

14.024 Two or more equipment units or panels covered by lists or groups on J, H or ED specifications that are not assembled together are ordered as separate main items. Units or panels that are exactly alike except for job numbering are ordered in the same item.

14.025 Minor modifications are sometimes made in standard equipment specifications. In general wording similar to the following is used when editing modified "J" specifications.

(a) 200 J27701A-3 List CA Sets of App. modified to

Omit: 200 E644 Rel. Pos. 3  
 (Sk. A)  
 200 114EB Rel.  
 Pos. 5

Add:

200 25B Term. Pchgs. Pos. 2  
 200 114AK Rel. Pos. 5

(b) 2 J21601B-2 List 1 Test Selector Frames (Fr. 1 & 2) with Frwk. ED-20373-13 G1 modified to omit 2 P-421153 and 2 P-421154 Guard Rail, E/W

30 T-21355-11 G-1 Test Selector Eqpt.

12 T-21354-11 G-2 Test Selector Eqpt.

12 T-21354-12 G-1 Test Selector Eqpt.

14.0251 Modification of Finishes:

If a specification drawing calls for a definite finish and a different finish is required, the latter is specified in the edited item. If several items are concerned and a "finish" note is put at the head of the summary list, the finish note is referred to immediately adjacent to each item affected.

14.026 When J, (ED or H) specification units are ordered, the name of the unit represented by the abbreviated title stamped on the equipment and shown on the specification drawing is used.

#### 14.03 Equipment Relocated - Anchor Bolts

14.031 If a complete unit of equipment is to be moved bodily from one location to another in the same exchange or is furnished by the telephone company from another exchange or class "C" stock, anchor bolts are furnished from drawing H555-120 as required for fastening the relocated equipment to the floor.

#### 14.04 Numbering of Frames

14.041 In order that the shop will stamp the frame number on the frame, the frame number is included as part of the item. This is applied even though only one frame, as a test frame, is ordered.

#### 14.05 Relay Rack Locations

14.051 To assist the installer in determining the bays on which units and other items are mounted the following practices are applied.

The relay rack and bay number (in parenthesis) is included as part of the item ordering these equipments, on both new jobs and additions.

#### 14.06 Joint Ownership of Equipment

14.061 Sometimes a single job order is issued for equipment that will serve more than one telephone company. If a note is shown in the telephone company specification that the ownership of the material be designated for billing or other purposes, the ownership designations are covered in summary notes and the designations are shown (enclosed in parenthesis) at the end of each item. The letters "AC", "JT" and "LL" are used for the designations. Editing examples are as follows:

1 J68732B-3 List 3 Jack and Key Panel (LL) (Bay 101)

18 J68622A-3 List 1 and 10 Rep. Coil Units (Bay 101)

5 J6822A-3 List 1 and 10 (LL)

13 J68622A-3 List 1 and 10 (AC)

#### 14.07 Stock Equipment Modified

14.071 If stock equipment is to be modified in the factory the "M" order number is shown, but is omitted if the equipment is to be modified by the installer or Service Center.

14.072 If stocked equipment is modified by the shop and shipped under a different code number, the order gives the old as well as the new code number.

EXAMPLE:

1 700 PBX Swbd. made from std. No. 550B section per Spec. C-43016 drawn from merchandise stock M-654321 and modified by the shop.

14.08 Standard Drawings Modified Or Supplemented by Job Drawings

14.081 On orders that modify a standard drawing by a figure on a job drawing, the job drawing and figure is listed as part of the item to be modified. If additional material is required, the group number is also listed.

EXAMPLE:

10 ED-90541-12 G-1 Sets of Equipment modified by T-9120-237 G-1, Fig. 1

14.082 When power equipment is ordered from standard drawings on which optional features, such as shunt sizes, stamping etc. are shown on job drawings a reference to the job drawing is included as part of the item.

EXAMPLE:

1 J86315A-2 List 2 see T-5632-532 for size of shunt.

14.09 Stamping Quadrants on Message Register Caps

14.091 In areas where the telephone company's practice is to photograph message register readings the type of camera used is specified by a note in the specification. If the message registers are mounted on the message register frame in the shop, the note is placed under the heading "General Notes." If mounted by the installer the note is placed in the "Summary of Material" immediately following the message register item.

14.10 Drilling Per Front Equipment Drawings

14.101 Certain framework drawings show drillings for optional apparatus with the notation "to be drilled when specified." These drillings are known as "Optional" drillings. Drillings known as "Special" are not provided for on framework drawings but are required for mounting apparatus needed for a particular order.

14.1011 "Optional" drillings are made automatically by the shop if the apparatus is shown on the front equipment drawing; consequently, they are not specified in the specification summary item or summary note.

14.1012 "Optional" drillings are made by the shop as specified in the specification summary item. These drillings are assigned lettered options A, B, C, etc., on the framework drawing affected. The summary item is edited similar to the following:

1 T-490310 G-2 7-8-1/2"  
Pan. No. 1 Trunk Section 1 (Pos. 1 & 2) A and B drillings.

In case "Optional" drillings are not required, the item states as follows:

1 T-49310 G-2 7-8-1/2"  
Pan. No. 1 Trunk Section 1 (Pos. 1 & 2) No optional drillings required.

14.1013 "Special" drillings are made by the shop if the apparatus is shown on the front equipment drawing and the special drillings are specified in the specification summary item.

EXAMPLE:

1 T-490310G-2 7-8-1/2"  
Pan. No. 1 Trunk Sect. Sect. 1 (Pos. 1 & 2) special drilling in piling rail per Front Equip. T-3384-113

14.1014 "Special" drillings are made by the shop as specified in the specification summary item.

These drillings are shown on a job framework modification sketch drawing which is specified in the summary item.

EXAMPLE:

1 T-49010-G-2 7-8-1/2"  
Pan. No. 1 Trunk Sect. Sect. 1 (Pos. 1 & 2) special drilling in piling rail per T-3384-238

14.1015 Any drillings to be made by the installer are specified in an installer's note.

#### 14.11 Terminal Assignment Lists

14.111 Terminal Assignment Lists required for local cables being ordered in a specification are also listed as an item in the specification. The terminal lists are ordered in a Class "B" appendix. The items are edited as follows:

FS- Sets Terminal Assignment Lists

and a summary note is added reading

"Material designated "FS" is listed for service purposes only."

#### 15. EQUIPMENT SHIPPED IN ADVANCE

15.1 If the regular specifications have not been issued and equipment is to be shipped in advance of the regular shipping date of the order, all items to be shipped in advance for the entire order are covered by an advance specification as follows:

<u>System</u>	<u>Advance Specification No.</u>
Manual, Toll, Toll Crossbar and Panel	300
Step-by-Step	800
Local Crossbar	600

All like items are grouped together in the advance specification.

15.2 If the specifications have been issued and equipment is to be shipped in advance of the regular shipping date of the order, a typed memorandum is prepared referring to the various classes of equipment to be shipped in advance, as power and cabling. This memorandum covers the wiring list (or wiring list drawing), equipment (by reference to item numbers), notes (by reference to note letters), and drawing (by actual reference) as required. Cabling is referred to either by items in the cabling specification or by reference to cabling appendices. Three copies of this memorandum are sent to the Installation Planning Organization involved (1 for planner, 2 for installer).

15.21 If conditions warrant furnishing the total amount of certain items of equipment required for the complete order (even though only a portion is to be used for the advance installation) the memorandum will state that the balance of the equipment not used shall be held by the installer for the complete job and not returned for credit.

15.22 If the requirements of an advance installation also involve changes in the original engineering of the order, the specifications already completed are changed by appendices before the memorandum is written.

#### 16. MIXED SWITCHBOARD AND POWER MATERIAL

16.1 Such switchboard material as fuse panels which mount on power equipment are ordered in the power specification (except coded apparatus).

16.11 The switchboard engineer orders coded switchboard apparatus which mounts on power equipment. The power engineer shows this apparatus on the drawing affected and marks it "Mounted by installer, ordered in Spec. \_\_\_\_\_."

16.2 Power material (except coded apparatus) that mounts on switchboard equipment is ordered in the switchboard specification.

16.21 Coded power apparatus that mounts on switchboard is ordered in the power specification.

#### 17. INCOMPLETE TELEPHONE COMPANY INFORMATION

17.1 If certain information cannot be obtained from the telephone company for inclusion in the specification, a note is included in the affected specification under the special heading "Information Obtained from Telephone Company by Installer" informing the installer that the telephone company will provide the information at the time of installation. The note also mentions the telephone company's letter on which it is stated that the missing information will be supplied by the telephone company to the installers.

17.2 In the absence of necessary information the installer is not asked.

(a) To check any equipment in an office for the purpose of bringing job drawings up to date. This does not apply to marking prints at the end of the job.

(b) To determine the type and quantity of circuits to be modified.

(c) To make up modification details, wherever it is possible to avoid it. If the modification can be made from a standard detail, such as a piece part, and the modification involves little effort, it is permissible to furnish the standard details and request the installer to make the necessary changes to fit the job.

(d) To select a location for mounting apparatus or equipment. All apparatus and equipment is assigned a location by the engineer.

17.3 Instructions to the installer to purchase material locally is limited to the following material:

- (a) Exhaust pipe and fittings for gas engine in multifloor buildings only.
- (b) Asbestos lumber or sheet metal for closing cable holes.
- (c) Extension ring and cover of proper size and type to fit the outlet box provided by the telephone company in the building.

## 18. APPENDICES TO JOB SPECIFICATIONS

### 18.1 Listing Raised Issue Numbers of Drawings

18.11 The issue of drawings changed by Class "A" or "B" supplements is not raised in an appendix. In the case of job drawings changed after an established period of the engineering interval, it is standard practice to make changes by Class A supplements; therefore these issues are not raised in an appendix. However, the issue of standard drawings, changed on a Class "B" future or "D" basis (such as to add new figures, groups or lists), is raised in an appendix if the change is applied.

### 18.2 Classes of Appendices

18.21 The classes of appendices are as follows:

**Class A:** Issued to cover changes made in a job specification due to a request of the telephone company or Service Center. A class "A" appendix is required on all telephone company changes involving material added or canceled regardless of whether or not the job is shipped.

**Class B:** Due to Western Electric engineering or clerical reasons.

**Class D:** Due to requests from other departments within the manufacturing division from the merchandise department to facilitate manufacturing or to permit the use of stock or standard equipment.

**Class E:** Due to the result of Bell Telephone Laboratories development work which is billable to the customer.

**Class F:** Due to the result of Bell Telephone Laboratories development work which is nonbillable.

**Class M:** Due to information not being available for completing the specification at the time it was originally prepared. Class "M" appendices are written

only when a specification has a note stating that it is incomplete. However, if such an appendix necessitates changes in other specifications, these appendices are also designated Class "M" and refer to the appendix of the specification containing the incomplete note.

## 19. SPARE PARTS FOR CROSSBAR OFFICES

19.1 Spare parts, if required, are ordered in detail by the telephone company. The equipment engineer is not involved in furnishing editing information or in editing blanket orders for spare parts.

## 20. TRANSMISSION TESTING

20.1 It is a standard requirement for the installer to make transmission tests on toll equipment and not to make these tests on panel, crossbar, step-by-step and local manual equipment. If the telephone company, however, desires an exception to this practice, the exception is covered in a note in the installing specification.

20.11 The note appears only in case the telephone company specifies that transmission testing shall not be made on toll installations, or in case transmission testing shall be made on panel, crossbar, step-by-step, or local manual installations.

## 21. GENERAL INSTALLATION REQUIREMENTS

21.1 General Installation Requirements which are followed by the Western Electric Company in the installation of central office equipment and the general conditions to be met by the telephone company in connection with such installation work are covered in Handbook 3. These requirements are not included in job specifications. However, all notes in the telephone company specifications which specify conditions differing from those shown are included in the job specification.

## 22. LOCAL CROSSBAR RELAY RACKS

22.1 Units which mount on channel type bays are mounted by the installer as the shops are not equipped to do this work. Crossbar units which mount on bulb angle or formed sheet steel box type framework, however, are ordered as follows:

22.11 In cases where all units, mounting plates, etc. in one bay (excluding "I" and "R" items) appear in one specification, the associated framework for such bays is ordered in the same specification with the units, separate items for each major group assembly are used and the single bay are separated from the double bay relay rack framework

assemblies. The items are worded as follows (typical example for double bay partially shown):

Relay Rack 100, Bays 0 to 17, Floor 1

9 ED-91183-30 G-3 Bays 0 to 17 per  
T-1570-170 & T-1570-171 E/W  
18 ED-91205-50 G-7 Cable Brackets  
9 ED-91210-51 G-2 Grd. Material  
6 ED-91210-51 G-10 Conn. Blk. Mtg.  
6 ED-91210-51 G-11 Talk Jk. Mtg.  
etc.

NOTE: Items of the nature cited above are not marked "M".

22.12 In cases where items from several specifications to be mounted in the shop appear in a bay, the associated frameworks for such bays are ordered in the -70 specification as follows:

3 ED-91183 G-1 Bays E/W "M" items in this and other specifications

22.13 All items of units or other materials which mount on relay racks before shipment are designated with the letter "M" in the individual specifications and the following note added:

"Material designated M is to be mounted by the shop on relay rack frameworks ordered in the -70 specifications."

→ Arrowed lined indicate new or changed information

22.14 The relay rack equipment drawing is listed in each specification under "Framework, Assembly and Equipment" drawings and the associated specification number is shown on the drawing order or under "jobs affected" on the change supplement. Since a lineup of relay rack (covered by one equipment drawing) will have bays of equipment ordered in different specifications a drawing order or change supplement is issued to cover the location of equipment for each specification involved.

→ 23. "96" ORDERS

23.1 "96" orders are of two types those providing a specification (see Sec 21E), and those not providing a specification but are instead composed of Job Memoranda and Installers Requisitions (see Sec 40).

→ 24. "98" ORDERS

24.1 "98" Orders are six digit orders which are detailed engineered by the telephone company. They consist of more than 19 items after merchandise editing is complete and on which a "Summary of Material" has been requested.

Manager, Engineering Practices

Reason for Reissue:  
Information on "96" orders expanded and reference to "97" orders deleted.