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 AT&T Section 790-100-310

ENGINEERING DEPARTMENT  
 SPECIFIC ESTIMATE, ROUTINE ORDER,  
 KEEP COST ORDER AND CUSTOM WORK ORDER PREPARATION

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1. GENERAL

1.01 This section outlines the procedures for preparing and obtaining the approval of specific estimates, supplemental estimates, routine orders, keep cost orders, and custom work orders for undertakings handled by the Engineering Department, excluding outside plant projects. This engineering practice complements Joint Practice 46, Estimate Routine.

1.02 The Engineering Department is responsible for the preparation of the following types of estimates:

- (a) Purchases and sales of real estate, including improvements located thereon,

and the retirement of real estate from telephone use as prescribed in Part 4A of Joint Practice 46.

- (b) Construction of new buildings, additions to, or changes in, existing buildings, and all retirements of buildings or portions thereof.

- (c) Construction and removal of special radio towers chargeable to Accounts 212 and 241.

- (d) Additions and retirements of switching central office equipment, including major items of associated tools, test sets and special central office furniture kept and used in the central office.

- (e) Point-to-point radio systems and land, maritime and coastal harbor radio-telephone service and paging service. (Mobile sets used in automobiles, boats, etc., and on persons and portable sets used for plant maintenance are the responsibility of the Plant Department.)

- (f) Additions and retirements of circuit equipment including intermediate repeaters and major items of associated tools and test sets used and kept in central offices or repeater stations. (Excluding customer premise subscriber type carrier terminals and associated items.)

- (g) Large dial private branch exchanges, teletypewriter switching systems, and other large installations of specialized types of equipment requiring detailed engineering (Account 234).

- (h) Additions and retirements of all power plant equipment serving switching central office, circuit, and large PBX (Account 234) equipment, including major items of associated tools, test sets and special furniture.

- (i) Installation and retirement of line concentrators and subscriber's carrier equipment including the central office and remote units (all items chargeable to the central office plant accounts.) The Plant Department shall furnish complete information, data, drawing, etc., required to prepare estimates for subscriber line concentrators or subscriber's carrier equipment.

- (j) Addition and retirement of mini-computer systems used with central office equipment such as EADAS, TDR, etc., that are included in Account Code 70C.

1.03 Refer to the Schedule of Authorizations for monetary limits within which undertakings may be carried out on approval by various levels of authority.

## 2. PURPOSE

2.01 The purpose of this section is to provide a system of management control whereby an undertaking involving the addition to, or retirement of, Telephone Plant will be properly authorized prior to the undertaking. The primary objective of such control is the optimum utilization of the company's resources, but it is very important that the mechanics of the control system not be allowed to impede the company's ability to furnish prompt service to its customers in keeping with service concepts.

## 3. DEFINITIONS

3.01 The following are definitions of basic terms used in this section.

3.02 Undertaking: The operations necessary to accomplish a desired objective affecting the company's investment in physical property. For example, an undertaking may include a combination of purchasing land, erecting a building, and installing central office equipment; or it may cover only one class of plant.

3.03 Estimate: A formal set of documents, covering an undertaking which serves to present an explanation and reason for the proposed work, is used to convey authority for proceeding with the work and provides a record of the costs and the results accomplished upon completion of the undertaking. Various types of authorization further defined within this section are: Specific Estimates (Job, Major and Purchase & Sale), Routine Estimates, Supplemental Estimates, Keep Cost Orders, Custom Work Orders, and Routine Orders.

3.04 Supplemental Estimate: A formal set of documents conveying additional approval required when it is anticipated that the Gross Expenditures or Plant Retirements will exceed the approved estimated amounts by specific estimate proportions or 15 percent, whichever is greater.

3.05 Authorization: Signifies the recorded favorable action taken by the Board of Directors or its Executive Committee with respect to an undertaking.

3.06 Approval: Signifies the recorded favorable action taken by management personnel delegated final approval authority by the Board of Directors, Executive Committee, or President with respect to an undertaking.

3.07 Gross Additions: Construction Costs charged to Accounts 100.1, 100.2,

100.3, 100.4, or 103 less reclassifications and before consideration of the deferred tax credit. These accounts are:

- (a) Account 100.1 Telephone Plant in Service (excluding accounts 201 Organization, 202 Franchises, and 203 Patent Rights)
- (b) Account 100.2 Telephone Plant Under Construction
- (c) Account 100.3 Property Held for Future Telephone Use
- (d) Account 100.4 Telephone Plant Acquisition Adjustment
- (e) Account 103 Miscellaneous Physical Property

3.08 Cost of Removal: Cost of demolishing, dismantling, removing, tearing down, or otherwise disposing of plant and recovering the salvage. Includes transportation and handling costs, and cost of removing from service (disconnecting), even where plant is not physically removed. It does not include value of plant retired or value of salvage. Care should be taken to charge the appropriate refurbishing expenses, if involved, to maintenance.

3.09 Gross Expenditure: The sum of the amounts representing gross additions and cost of removing. This excludes amounts billed to others.

3.10 Plant Retirement: The removal, sale, abandonment, destruction, or other withdrawal of plant from telephone service. Retirements are calculated at the book cost at which plant is carried in the company accounts. The original cost, minus the Western Electric Tax Credit for those companies included in the Consolidated Federal Income Tax Return, represents the book cost. See Section 790-100-520 SW.

3.11 Net Additions: Equals gross additions less amounts retired.

3.12 Net Capital Requirements: Equals gross expenditures less reused material. This represents the new monies necessary to finance an undertaking.

3.13 Book Cost: The value of property as recorded to Account 100.1 (i.e., original cost less WE deferred tax) on the books of the company (i.e., capitalized without reduction of its original installed cost by depreciation).

3.14 Location Code: A geographical location code that is unique within an operating company, as it is designed to fully identify a specific location or entity of telephone plant.

3.15 Routine Order: A routine order is a formal written authorization to perform certain work on an undertaking chargeable to a Routine Estimate and which is not authorized by a custom work order, service order, or keep cost order.

3.16 Custom Work Order: A custom work order covers work for which it is expected all of the costs or a portion thereof will be billed to others.

3.17 Service Order: A service order is an order issued by the Commercial or Marketing Department authorizing the connection, disconnection, or change of equipment or wiring directly associated with a customer's service, including the associated installation, removal, and change work at a customer's premises.

3.18 Keep Cost Order: A keep cost order is an order to be used for the purpose of assembling job cost data which could not otherwise be segregated, e.g., submarine cable, or any other plant for which actual cost records by locations are required. Keep cost orders shall be used to authorize all purchases and sales which involve gross expenditures of less than specific estimate proportions. Keep cost orders may be used as a work authorization in lieu of a routine order or to identify costs of portions of work provided for under authorizations, i.e., a specific estimate or service order. Keep cost orders may also be issued to authorize other work of less than specific estimate proportions where records of cost are desired, e.g., replacements of plant units on jointly-owned plant in connection with routine maintenance work performed by the Telephone Company.

3.19 Classes of Plant: Classes of plant refer to the various groupings of plant for which separate accounts, sub-accounts, or field codes are provided.

3.20 Completed Ready for Service: Plant is completed ready for service and therefore includable in Account 100.1 under the following conditions:

- (a) When placed in actual use in telephone service.
- (b) When regularly assigned as completed spare or stand-by facilities.

NOTE: The conditions under which expenditures for various classes of plant should be transferred to Account 100.1 are outlined in Section 790-100-570.

3.21 Start of Physical Construction: Physical construction should be considered as starting when construction work (exclusive of removals and maintenance work) is begun by installation, construction, or

contract forces. This excludes engineering, advance delivery of material, and other preliminary construction activity. The determination of the start of construction under a specific estimate or order is the responsibility of the department in charge of the work.

3.22 Work Authorization: As used in this section, work authorization refers to the proper approval of a formal set of documents (Routine Order, Keep Cost Order, or Custom Work Order) approving expenditures of monies which have been authorized under the Routine Estimate.

3.23 Under Construction: In connection with construction work, a specific estimate or order shall be classified as under construction if it is expected that construction work on any class of plant provided for thereunder will not be completed ready for service within two months after the date physical construction work on the undertaking begins and if the authorized gross additions for the undertaking are \$10,000 or more. Estimates and orders shall be reclassified as under construction if it is determined during the progress of the undertaking that plant will not be completed ready for service by the end of the second full calendar month after the date physical work on the undertaking began except where the gross additions are less than \$10,000. Readiness for service of a particular class of plant may depend upon the completion of other plant associated with the undertaking, whether covered by the same or another specific estimate or order.

3.24 Currently Ready for Service: A specific estimate or order should be classified as currently ready for service if it is expected that construction work on all classes of plant provided for thereunder will be completed ready for service within two months after the date physical construction work on the undertaking begins, or if the authorized gross additions for the undertaking are less than \$10,000. Readiness for service of a particular class of plant may depend upon the completion of other plant associated with the undertaking, whether covered by the same or another specific estimate or order.

NOTE: In those cases where the actual gross additions exceed \$10,000 and the work has taken longer than two months, reclassification to "Under Construction" should be made and the estimate handled as provided in Paragraph 3.23. Refer also to Joint Practice 46, Part 2D, Paragraph 2.04, covering SW-2525 card processing.

#### 4. ESTIMATE REQUEST

4.01 Each undertaking of specific estimate proportions shall be assigned an

estimate request number prior to proceeding with the engineering work. These numbers shall be obtained in accordance with Joint Practice 46, Part 1E.

4.02 All charges for engineering work on active undertakings prior to estimate approval shall be charged against the estimate request numbers. Upon approval of the estimate, the Accounting Department will prorate these charges over the various locations and accounts contained in the estimate.

4.03 When it is decided not to proceed with the work under an estimate request, a letter shall be sent to the Accounting Department with instructions for clearing any engineering charges made against the estimate request number as covered in Part 2F of Joint Practice 46.

## 5. EQUIPMENT RECOMMENDATIONS

5.01 Requirements on which to base an estimate for Central Office equipment are generally furnished by the Traffic and/or Plant Departments in the form of Traffic Orders and Equipment Recommendations. In some cases the requirements are established within the Engineering Department, such as requirements for carrier and/or associated equipment.

5.02 The engineer responsible for preparing the estimate shall insure that all contributing factors which may account for additional requirements related to the equipment recommendation have been considered. Factors for consideration include reviewing floor space requirements, power drains, traffic schematic office drawings, and maintenance items and office review and retirement of obsolete equipment.

## 6. SPECIFIC ESTIMATES

### GENERAL

6.01 A specific estimate is an estimate covering a specific undertaking or a portion thereof, if it is expected that the gross expenditures or plant retirements for the undertaking or that portion of the undertaking covered by the estimate will be more than \$15,000. Specific estimates are divided into three classes, job estimates, major estimates and purchase and sales estimates. A job estimate is a specific estimate of more than \$15,000 but not in excess of \$100,000. A major estimate is a specific estimate in excess of \$100,000. A specific estimate for a purchase and sale shall be handled as outlined in Joint Practice 46, Part 4A or 4B as appropriate.

6.02 Refer to Joint Practice 46, Part 2B, Section 3, for guidelines on the scope of specific estimates.

### SPECIFIC ESTIMATES PREPARATION

6.03 Preparation of the estimate should begin sufficiently early in the undertaking schedule to insure that approval is obtained before any commitments have to be made.

6.04 The engineer responsible for the preparation of the estimate for a particular job is required to estimate costs, segregated into the proper accounts, for all items listed on the detail estimate sheets. Care should be taken to open all accounts which may be required. Accounting classifications shall be made using the Accounting Handbook for Telephone Plant.

6.05 The engineer responsible for writing the estimate assumes responsibility for everything in the estimate. He cannot merely provide equipment or building space on the basis of a request but must evaluate the request and be assured the quantities required are reasonable, current, and in line with system, company, and area guidelines. The engineer must exercise his managerial responsibility to be sure that the expenditures provided for in his estimate are in the best Corporate interest.

6.06 The engineer should assure himself that in the "Nature and Necessity of Work" on the "Authorization Sheet" he has answered the following questions, sometimes referred to as the four "Ws" of equipment engineering:

- (a) Where are the monies being spent?
- (b) What does the undertaking entail and accomplish?
- (c) Why do the work at all and in this way?
- (d) When is the proper time to expend money for the desired result?

6.07 Each Specific Estimate shall contain the following parts assembled in the following order:

- (a) Authorization Sheet, SN-4. (Part A)
- (b) Outline of Plan. (Part B)
- (c) Accounts Chargeable Sheet(s), SN-4A or SN-4C and SN-4E if appropriate. (Pt.C)

6.08 In addition, each Specific Estimate Request shall contain such of the following parts as the particular request may require to present a complete and self-contained package which will help to sell the job with minimal need for oral support, in the following order:

- (a) FCC authorization, SN-4D. (Part D)

(b) Supplemental Information. (Part E)

- (1) Supplemental information, exhibits and other data.
- (2) All estimates covering exchange switching equipment in major offices shall include a copy of Forms SW-9517A and SW-9518A, Facility Report, and the corresponding issue of Form SW-9051, Demand and Facilities Charts, which will be obtained from the Plant Extension Engineer. Provide Forms SW-9517A and SW-9518A, Facility Report, only for estimates covering switching equipment in minor offices (under 2,000 main telephones). These forms should reflect the latest forecast. All data on these forms and that on which the estimate is based shall be in agreement. Include also "Wire Center Area Forecast," Form SW-8017b if the estimate covers central office equipment for exchange growth. An "Annual Gain Trend" should be included with major estimates.
- (3) Study Map.
- (4) Approved Recommendations, Studies, and Fundamental Plans.
- (5) Correspondence and C.O.E.R.s.
- (6) Supplementary data for memorandum records (as an SN-4C in Part C).
- (7) COEES Printout.
- (8) Plot plans.
- (9) Building Study Plans (VP-Engineering copy).

6.09 The first sheets normally filled out when preparing an estimate request are the Accounts Chargeable Sheets. The cost figures shown on these sheets should reflect, as closely as possible, the actual costs that are expected to be incurred, by location (and by requisition number where Western Electric billing is expected) and account code. The next sheet in order of preparation (for more than one location) is usually the Summary Accounts Chargeable Sheet, which summarizes the costs estimated on the Individual Sheets. The Authorization Sheet is usually completed last and contains the information upon which the Officers of the Company and others base their judgments as to the justification for the authorization of the estimate request.

6.10 Some of the sources for developing estimates of Western Electric Material, Engineering, and Labor Charges are:

- (a) Broad Gauge Price Estimating Guide

(b) Central Office Equipment Estimation System (COEES).

6.11 Other sources for pricing material costs are:

- (a) Western Electric Company's published price lists.
- (b) Outside Supplier's published price lists.
- (c) Western Electric Company's priced specifications for similar equipment items.
- (d) Engineering Letters (EL) and Planning Letters.
- (e) Recent jobs of comparable size and type.

6.12 Other sources for estimating Western Electric Labor Cost are:

- (a) Recent Western Electric estimates covering similar items of work.
- (b) Written or verbal information from the Installation Department of Western Electric Company.
- (c) Western Electric Handbook 151.

6.13 Western Electric extras, incurred expenditures ordinarily excluded from the Western Electric main estimate and billed later, such as, adverse installing conditions, etc., shall be estimated on the basis of the particular job conditions.

6.14 Some of the normal sources for obtaining Telephone Company furnished material are listed below. The records of the sources may be used in developing Telephone Company Material Charges.

- (a) Other offices within the company (Direct Reuse, 122-24, 122-39).
- (b) Chief Engineer's "C" stock (122-08).
- (c) Engineer's supplies (122-14, 122-24).
- (d) Purchase from other associated companies by way of Central Records AX cases.
- (e) Central Office equipment held for initial use (122-14).
- (f) Central Office equipment held for disposition (122-39).
- (g) Purchase from outside supplier.

6.15 The cost of material from source (a), (b), (c), and (f), shall be the material cost of the original installation. Items from (d), (e), and (g), shall be priced in accordance with the purchase price (this includes shipping charges, etc.). Care should be taken to properly consider

the Western Electric Company tax credit in each of the cases above. See Section 790-100-520 SW.

6.16 Telephone Company Engineering Costs, including Commercial and Traffic Engineering, related to the undertaking shall be included in the estimate. At the time the estimate is being prepared, Accounting may have already accrued charges against the estimate request that must be considered in pricing the job. Hourly rates for engineering expenses can be obtained from Accounting.

6.17 Plant Department expenditures related to the undertaking shall be included in the estimate. They are generally obtained by reviewing with Plant the Engineer's estimate of the labor hours required for the undertaking or the costs developed by using broad gauge figures.

6.18 House Service Charges associated with the undertaking, when significant, may be included in the Specific Estimate. House Service Costs are a breakdown by square foot of the total cost of such items as electrical service, heating and cooling, cleaning services, etc. Charges to the Specific Estimate should be based on the total amount of floor space that will be used by Western Electric Installation Forces during the installation interval.

6.19 Interest During Construction - Under the Federal Communications Commission's Uniform System of Accounts, Telephone Companies are permitted to capitalize, i.e., charge as part of the construction cost of any new plant, a reasonable amount of interest while the new plant is being built and is not producing revenue. The cost of new construction should include an amount representative of the interest cost of the investment while it is tied up in nonrevenue producing plant. After plant is placed in service, it is considered revenue producing and the revenue rates (tariffs) include a cost element for a return on the investment. While amounts are held in the Telephone Plant Under Construction, Account 100.2, interest is applied to monthly balances in each "C" account code at a specified annual rate, obtainable from Accounting. These costs should be estimated and included in estimates classified as under construction.

6.20 Plant Retirements - The engineer preparing the estimate shall arrange to have the proper records changed to reflect the amount of Plant Retired. The book cost of equipment being removed from existing plant shall be reported to the Accounting Department. This is done so that the plant investment can be reduced by the book cost of equipment being retired and that the proper debit can be made to

the Depreciation Reserve Account. The book cost to be retired consists of the original cost of material, engineering, and installation, together with overhead expenditures. This cost shall be calculated by increasing the original material cost by the estimate factor of the particular estimate under which this material was installed. In cases where the equipment was installed under Routine, the office factor should be used. This amount should be adjusted for W.E. Company tax credits, if applicable. See Section 790-100-520 SW.

6.21 The estimate factor is calculated on completed jobs from actual costs. It is the total installed cost of plant additions divided by the material cost. The estimate factor is calculated on each job by individual subaccount. (See Section 790-100-580 SW, Specific Estimate Closure.)

6.22 Estimated Salvage - The estimated salvage value of material removed or buildings retired shall be shown in the estimate. If the material is to be put in stock, held for reuse, or transferred, the estimated salvage amount shall be the original material cost less the Western Electric deferred tax credit. If scrapped or disposed of as rubbish, the expected salvage amount from the sale of such should be shown. The estimated gross salvage for plant cut dead but not physically removed should be transferred to Account 122-39 until physical removal. Care should be taken to reverse Account 122-39 entries when plant is physically removed and actual salvage is realized. (See 790-100-520SW, Paragraph 5 and 7)

#### AUTHORIZATION SHEET

6.23 The Authorization Sheet, Form SN-4 (Fig. 2), is designed to convey all pertinent data required to identify the undertaking and to provide space for the necessary approval signatures. Information shall be entered on the Authorization Sheet as follows (where possible, limit to one page):

- (1) Authorization, Estimate Number - Enter the Estimate Number, if known. Estimate Numbers shall be obtained in accordance with Joint Practice 46, Part 1E.
- (2) Area - Enter name of operating area.
- (3) Division - Enter name of division and distribution code (group code).
- (4) Estimate Request Number - Enter the assigned estimate request number.
- (5) Title - Enter the city, state and the authorized wire center designation (name), PBX customer's name, or an appropriate circuit equipment project

title. Add a concise statement identifying the type or kind of endeavor. For PBX estimates state the type vehicle and service proposed. (Only 60 spaces can be included on Mechanized reports.)

(6) Nature and Necessity of Work - Enter the nature and necessity of work.

(a) Enter a clear and concise description of the work or transition involved, the reasons for undertaking the project at this time and in the recommended manner, and the results to be accomplished. The description shall contain information upon which the officers of the Company and others can base their judgment as to the justification for the authorization of the estimate. The information shall be presented so that anyone unfamiliar with the engineering details and terminology may readily understand the nature of the proposed undertaking and judge as to its advisability. Acronyms should not be used on this sheet. They can be used in the Outline of Plan and other parts of the estimate if first spelled out. The four "Ws" of equipment engineering should always be answered. (See 6.06)

(b) Reference should be made to associated specifications (project number for circuit equipment estimates), Traffic Orders, Methods of Provisions, Facility Reports, Annual Gain Trends, Power Data Sheets, Central Office Equipment Recommendations, Wire Center Area Forecasts, Engineering Questionnaires, Plant Extension Studies, Associated Projects, etc., as appropriate for the type of endeavor covered by the estimate.

(c) Only the approval letter of referenced Plant Extension Studies should be attached. Referenced specifications should not be attached. All other references should be attached in the same order as listed on the authorization sheet.

(d) Signature of the engineer preparing the estimate should be entered on the SN-4 in the Vice President-Engineering copy. Also, the signature of the Senior or Supervising Engineer who reviewed the estimate, if any, should be entered on the SN-4.

(e) The date of preparation or latest review of supporting data shall be indicated (if other than the detailed forecast or planning forecast of stations) and in no case shall this date be more than six months prior

to approval by the Vice President and General Manager, and submission of the estimate to general company headquarters for executive approval.

(f) Large PBX estimates shall include the customer's name, location, present serving arrangement and the proposed serving vehicle. Include a brief explanation of choice of serving vehicle or why the project is being done this way. A statement shall be made that contract agreements have been signed.

(g) When an undertaking involves joint ownership of telephone plant between this company and AT&T, the Authorization Sheet shall reflect only those costs to be borne by Southwestern Bell.

(h) When joint ownership of telephone plant is involved, a statement shall be included on the Authorization Sheet stating the non-Telephone Company expenditures to be incurred (AT&T, etc.). This statement (where joint work is with AT&T) shall also state which company is to direct and perform the work. If Southwestern Bell is the constructing company, a statement shall be included that AT&T (or other organization, as appropriate) has authorized or will be requested to authorize its portion of the costs.

(i) If advance approval has been obtained for the undertaking, a copy of the advance approval request should be included in the estimate request.

(j) A statement should be made that estimated gross salvage for plant cut dead but not physically removed is to be placed in Account 122-39 until physical removal, if this is known at the time the estimate request is prepared.

(k) A statement should be made that displaced plant not held for reuse will be returned to the Western Electric Company for best allowance or junked locally.

(7) FCC Authorization - Place an "X" in the appropriate space indicating whether or not Federal Communication Commission (FCC) Authorization is required for a particular undertaking. The requirements for FCC Authorization are covered in Joint Practice 46, Part 1F, Accounting Instruction in accordance with the Communications Act of 1934, Section 214 (Inter-state Facilities) or Section 319 (Radio). The Engineer making the determination of FCC requirements should place his initials in space provided. Also see 6.26 (e) (7).

(8) Service date, completion date - These dates indicate the time frame of the job to management. They also can be used by accounting as an indication of reasonableness of the timing of certain charges to the estimate. The Service Date is the date all plant is expected to be in service or completed and regularly assigned as standby. The Complete Date is the date all work including any removal work is expected to be completed.

(9) Gross Expenditures, Plant Retirements - The gross expenditures and plant retirements should be shown here for approval. Spaces are also provided for net additions and maintenance.

(10) Recommended By and Approvals - Line through the titles not applicable to the individual recommending the estimate. Spaces are provided at the bottom of the Authorization Sheet for appropriate signatures and dates of approvals.

#### OUTLINE OF PLAN

6.24 All central office equipment, large PBX or building estimates shall contain an Outline of Plan. The Outline of Plan should provide the details of the proposed endeavor as may be required to present, to those who review and approve the estimate, a definite and comprehensive outline of the work involved. In general, the Outline of Plan shall include but is not limited to the following:

(a) A quantitative list of major items of equipment being added, removed, or modified, e.g., lines, terminals, numbers, total trunks, originating registers, senders, traffic usage recorders, frames, dial long line mountings, repeaters, signaling equipment, battery strings, rectifiers, carrier terminal mountings, power plants, engine-alternator sets, and other items of equipment representing significant cost.

(b) A statement of the relation between building, central office equipment and outside plant conditions. For example, in estimates covering additional central office equipment, state whether the building is suitable or adaptable to accommodate the additional equipment, and whether the outside plant is adequate and in satisfactory condition.

(c) Complete detailed information relative to the necessity for the work and the propriety of doing it in the way planned, taking up each component part in sufficient detail to establish the case clearly. This should include an explanation of the extent and reason for any work which may be done later.

(d) A tabular comparison of the study view and the present view of gross additions for all the associated projects should be shown if the undertaking is covered by a

Plant Extension Study. Any important variation between the amounts in the study and those in the estimate shall be explained, indicating their effect on the results forecasted in the study. This comparison may be included on an attachment if several undertakings are involved.

(e) When maintenance expenditures on equipment projects are involved, a memorandum showing the breakdown of charges by category should be included. (See Fig. 10-4)

(f) Exchange Switching:

Forecast data of line and telephone development in the office covered by the estimate should be included as shown in Figure 14. A statement regarding the source of these figures should be included (wire center area forecast or planning forecast).

A table showing the lines and terminals or numbers and the operative capacity split between present, addition and total should be given.

(g) Toll Switching:

(1) Switchboard:

Basic traffic data shall be provided when switchboard positions or traffic service positions are involved as shown in Fig. 16.

(2) Intertoll Dial Switching:

The basic trunk and switching equipment shall be listed for major inter-toll dialing equipment.

(h) Circuit Equipment:

A table summarizing the carrier systems being provided and the usage of the channels equipped should be included.

Basic traffic data for the circuits involved, should be included as shown in Figure 20.

When telephone repeaters are provided, a table showing the number of trunks involved the appropriate resistance (exchange trunks) and the loss with and without repeaters shall be included.

(i) Buildings:

State the contract and loaded costs per square foot. Costs per cubic foot may be shown.

State or show on the attached study plans, the forecasted lines and main telephones and the capacity of the building in terms of lines and main telephones.

Describe briefly any unusual conditions affecting cost and design.

For building additions and alterations, attach to the Vice President-Engineering copy a work sheet showing retirement details and reasons for charges to the various C, X, M and R account codes. (Retain a copy of this breakdown for possible audit.)

Attach a copy of the Annual Gain Trend for major estimates.

(j) Large Private Branch Exchange:

Undertakings for large PBX equipment shall include a copy of Form SW-5054 (Facility Report - Centrex/PBX), or the PBX proposal and Equipment Order.

(k) Power Plants and Emergency Engine Alternator Sets:

Undertakings involving telephone power plants shall include, in the Vice President-Engineering copy, a summary of the pertinent power data developed by the Engineer in sizing the plant. This summary should give the data for the present, the end of the engineering period and in some cases a long range view for the particular equipment involved. Refer to the Power Engineering Practice, Section 802-000-901 SW, for more information.

(l) Radio Routes:

Undertakings involving the establishment of new radio routes shall include in the Vice President-Engineering copy a summary of proposed Frequency Plan, polarization plan, order of channel growth, tower and antenna information, reliability study (attach MICROREL computer program printout), and interference study (attach RAX computer program printout). The program printouts should be furnished by the Transmission and Protection Engineer or Engineering Manager-Facilities.

(m) Cable Carrier Routes:

Undertakings involving the establishment of new or extension of existing cable carrier routes shall include in the Vice President-Engineering copy a design sketch which will indicate all pertinent transmission parameters, i.e., repeater spacing, transmit and receive levels, section losses, noise calculations, etc. For N carrier routes attach computer printout NCXR-2 which should be furnished by the Transmission and Protection Engineer or Engineering Manager-Facilities.

(n) Joint Undertakings With Independent Companies:

Joint undertakings with Independent companies for new or extension of existing cable carrier or radio routes shall include, in the Vice President-Engineering copy, information required in Paragraphs (k) and (l) above for the entire project including the Independent company portion. Also include a copy of the SWB-Independent Company agreement covering such pertinent transmission design parameters.

(o) Plug-In Estimate:

The annual central office plug-in unit estimate shall include a tabulation of plug-in units required by type of service, e.g., toll circuit program, special service, exchange trunking, etc.

SUMMARY ACCOUNTS CHARGEABLE SHEET

6.25 The Summary Accounts Chargeable Sheet (Fig. 3) is designed to summarize the total expenditures that are recommended for approval in the estimate request. Where only one detailed Accounts Chargeable Sheet (Fig. 4 or 5) is used in an Estimate Request, the Summary Accounts Chargeable Sheet is not required; the detailed accounts chargeable sheet is used in its place. Information shall be summarized from the individual Accounts Chargeable Sheets onto the Summary Accounts Chargeable Sheet as follows:

- (1) Estimate Number - Enter the Estimate Number when known.
- (2) Estimate Request Number - Enter the Estimate Request Number.
- (3) Location Code - Enter individual location codes.
- (4) Class of Plant - Enter a term descriptive of the major effort involved, i.e., #5 X-Bar Addition, SXS and Toll Addition; New #1 ESS Office, etc.
- (5) Gross Additions, Cost of Removal, Plant Retired, Salvage, and Reused Material - Transcribe these amounts from the "Total Expenditures" row of the individual Accounts Chargeable Sheets.
- (6) Maintenance Expense - The Maintenance Expense, as shown on the lower half of the detailed Accounts Chargeable Sheet, is summarized here.
- (7) Total - Show the total for each column.
- (8) Total Expenditures In - Summarize expenditures to show years of anticipated occurrence.

- (9) Summary of Estimated Requirements - Enter total of summarization from individual sheets.

## ACCOUNTS CHARGEABLE SHEET

6.26 The Accounts Chargeable Sheet, SN4-A or SN4-C, is designed to accomplish the following: (See Fig. 4 and 5)

- (a) To summarize, for each class of plant, the effect of the undertaking on the Company's accounts.
- (b) To furnish to Western Electric the necessary information for applying a percentage breakdown of Western Electric Company Billing under Account 725 Billing. This requires that a separate SN4-C be prepared for each requisition placed on Western Electric.
- (c) To furnish to Accounting the necessary information for preparation of Estimate Ledgers and Journals.
- (d) To furnish to Accounting the necessary information to allow them to distribute the charges accumulated under the Estimate Request Number to the Estimate Number when the undertaking is authorized.
- (e) To provide the equipment engineer with a document to make job cost comparisons through the life cycle of the estimate. Information shall be entered on the Accounts Chargeable Sheet as follows (refer to 790-100-415 SW for description of 725 Billing input portion):
  - (1) Estimate Request Number - Enter the Estimate Request Number.
  - (2) Estimate or Routine Order Number - Enter the Estimate or Routine Order Number when known.
  - (3) Area Number - Enter location code per Telephone Plant Accounting Handbook, Sec. 27.603.
  - (4) Area Number (R&M) - Enter location code for R&M charges.
  - (5) Sheets - Enter page number(s) of Accounts Chargeable Sheets.
  - (6) Date - Enter preparation date.
  - (7) FCC Authorization Required - Make a positive indication by location by placing an "X" in the appropriate box to indicate that Federal Communications Commission Authorization is or is not required. Also see Paragraph 6.36.

- (8) Under Construction or Currently Ready for Service - Place an "X" to indicate appropriate category. Refer to Joint Practice 46, Part 1A, for instructions. Not required for removal only estimates. Also see Paragraph 3.23 and 3.24.

- (9) Engineered By - Place an "X" to indicate which engineering organization does the detailed engineering. Engineered Service Orders (ESO's) are Western Electric Engineered Orders.

- (10) Subaccount - The description and account code shall be entered, followed in the appropriate column by the total charges of gross additions and/or cost of removal. These should be brought forward from the "Total Charges" column at the bottom right-hand side of the sheet.

- (11) Plant Retired and Salvage - Totals by account of plant retired and salvage should be shown in these columns. Salvage from sale as junk should not be shown unless expected to exceed \$2,000. See 790-100-520 SW, Paragraph 5.01.

- (12) Reused Material - The totals by account of material being reused, if known, should be shown in this column. To be included in this column, the amounts have to also be included as part of the gross additions. Reused material represents the total worth of material being used from Accounts 122-08 (C Stock), 122-14, 122-24, and 122-39. This does not include AX purchases.

- (13) Gross Additions By Years - These blocks are used to show the amount and year in which the engineer anticipates the money will be spent.

- (14) Area Number - Enter location code to which each amount should be charged.

- (15) Accounting Classification - Enter the account code appropriate for each expenditure. The main account entry on the SN4-C is not required at this time.

- (16) W.E. Co. Bills - The amounts of expected Western Electric billing are broken down under material, labor, and remainder. This breakdown is helpful for analysis of Western Electric contracts and billing. Telephone Company material transferred from another

location shall be shown under "Other Telephone Company Charges - Tel. Co. Material." Refer to 790-100-510 SW for explanation of W.E. billing.

(17) Other Telephone Company Charges - This includes all charges other than W.E. Co. billing. They are subdivided as follows:

- (a) Telephone Company Material - This includes the cost of material transferred from another location or from a supplies account (other than 122-08, C stock). Material obtained from another company on an "AX" transaction or from C stock should be shown under W.E. Co. material, since billing will be handled through the Western Electric Company.
- (b) Plant Labor and Associated Costs - This includes amounts for actual plant labor hours, plus supervision overhead, charged to the estimate.
- (c) Telephone Company Engineering and Associated Costs - This includes the loaded cost of time charged to the estimate by Engineering Department, Traffic Engineering, and Commercial Engineering personnel.
- (d) Sundry and Misc. Bills - This includes all charges to the estimate not included in other categories, such as house service expense, Traffic Dial Administration expense, Long Lines billing, vouchers, etc.
- (e) Interest During Construction - This includes a charge representing interest on funds involved in plant additions prior to being placed in service. See Paragraph 6.19 and 6.30.

(18) Total Charges - These charges are carried forward to the plant additions and cost of removal columns (see Item 10 above).

(19) Summary of Estimated Requirements - This summary shall be computed per formulas shown on the form and included in the space provided. The items summarized here (summary sheet where more than one TEO is involved) shall be carried forward to the Authorization Sheet. As these are estimated figures, the totals for each account should be represented in whole one hundred dollar amounts. The requirements are computed as follows:

- (a) Gross Expenditures equal Gross Additions plus Cost of Removal
- (b) Net Requirements equal Gross Expenditures minus Salvage.
- (c) Net Additions equal Gross Additions minus Plant Retired.
- (d) Net Capital Requirements equal Gross Additions plus Cost of Removal minus Reused Material.

6.27 One accounts chargeable sheet for each Telephone Equipment Order (TEO) or location and a summary sheet, when needed, shall be prepared to show the combined totals for the entire estimate by location for all locations. Where estimates involve more than one division, summary sheets by division should be prepared in addition to the total summary sheet. See Figure 17.

6.28 Where estimates involve billing to others, such as Long Lines, which will necessitate crediting the plant accounts, separate Accounts Chargeable Sheets shall be prepared as follows:

- (a) One form showing each category of plant by accounting areas showing the totals, sum of (b) and (c) below.
- (b) One form showing the amount of expected billing to the party or company for which the construction is being done.
- (c) One form showing the net amount chargeable to the Southwestern Bell Telephone Company's telephone plant accounts. This is the amount to be carried forward to the Authorization Sheet for approval.

6.29 Negative amounts on the Authorization and Summary Accounts Chargeable Sheets shall be shown by enclosing in parentheses. Credit lines must be shown as "CR" on the Accounts Chargeable Sheets for 725 billing (see 790-100-415 SW).

6.30 Under construction estimates associated with an undertaking which includes the construction of a building should include an allowance under the land code for interest during construction and taxes during construction, where appropriate, on the cost of land involved for the period of construction of the building. Where buildings are constructed on land previously acquired, the cost of which is carried in Account 100.3, or in the miscellaneous physical property account (103), the building estimate should provide for the transfer of the book cost of the land from Account 100.3 or 103 to Account 100.2 as outlined in Joint Practice 46, Part 2D. Such transfers from another account should be provided for on Form SN-4A by means of a

negative entry in Column A, plant additions under Account 1211-11C or 103 and an off-setting positive entry in the same column under Account Code 100.2 - 11C, together with an explanation of the entry. Care should be taken in showing transfers of amounts from Account 103 to Account Code 100.2 - 11C when buildings on the property in Account 103 have been leased to tenants. Depreciation amounts should be taken into Account when determining the amount to be transferred to Account 100.2 - 11C. Expenditures for other items applicable to the land code, including interest during construction, should be shown separately on Form SN-4A.

6.31 The Accounts Chargeable Sheet shall also show estimated maintenance expenditures by maintenance account codes, subdivided when involving work on plant jointly owned with others, in a manner similar to that described in Paragraph 6.28 for other appropriations. For projects involving Lone Lines, estimated maintenance expenditures by account codes should be shown chargeable to Southwestern Bell's plant accounts. These maintenance expenditures will not be billed as they are recovered through Division of Revenue procedures. Accounts Chargeable Sheets SN-4A for building work shall include in tabular form a breakdown of the amounts shown in Columns A and B, plant additions and cost of removal, by account codes and source of major charges such as main contract, architectural supervision, architects' fee, etc., where applicable. Similarly show M&R codes where applicable.

6.32 Where an estimate authorizes the addition or retirement of plant designed for both toll and exchange usage, e.g., step-by-step switching trains, the accounts chargeable sheet shall show the estimated appropriations separately between exchange and toll for the classes of plant involved.

6.33 When the project involves the installation or removal of any of the following equipment or other equipment covered in Section 790-100-905 SW, Memorandum Records, a supplementary sheet shall be included in the estimate giving the breakdown of the subaccount in which the equipment is included similar to the example given in Figure 37, only if other equipment is booked under the same location code. This is known as a Memorandum Record.

DSA switchboards	SXS CAMA Equipment
Information boards	Foreign Area Trans-
Intercepting boards	lators
Auxiliary boards	INWATS Timers
Service observing boards	(For additional items, see Section 790-100-905 SW)
Broadband circuit equipment	

6.34 The approximate date of the withdrawal from service for any plant displaced shall be included on Forms SN-4A or SN-4C in the space provided.

6.35 Forms SN-4C shall be revised and furnished the Accounting Department as follows:

(a) When it is found at the time of analysis of the Contract Proposal, or when it otherwise becomes known, that the distribution of the contract billing to the various subaccount codes (C, X, R and M), per the original Form SN-4C, will result in a deviation from the total amount estimated for any account code by 25% or more for estimated amounts of less than \$6,000 for the account code, by 20% or more for estimated amounts of \$6,000 or more and less than \$25,000, and by 15% or more for estimated amounts of \$25,000 or more, (providing the changes do not affect the distribution of all account codes proportionately), the engineer shall revise the Western Electric charges portion of Form SN-4C, briefly explain the reason for the change, and forward three copies to the Accounting Department. No changes can be made, however, in the total amounts (expenditures, retirements, etc.) initially approved for the estimate except on submitting a supplemental estimate. One copy of Form SN-4C shall be filed with the estimate (see Section 790-100-415 SW, 725 Billing).

(b) When a change of plans results in an increase in gross expenditures or plant retirements of Specific Estimate proportions requiring a supplemental estimate per Paragraph 7.01, revised Forms SN-4A or SN-4C made a part of a supplemental estimate shall be forwarded to the Accounting Department as a part of their copy of the supplemental estimate.

#### FCC AUTHORIZATION

6.36 When FCC approval is required, a summary of the costs applicable to the interstate portion shall be included on Form SN-4D. See Joint Practice 46, Part 1F.

#### 7. SUPPLEMENTAL AUTHORIZATIONS

##### GENERAL

7.01 A supplemental estimate shall be submitted during the course of approval or after approval of a specific estimate when:

(a) There is a change of plans involving additional gross expenditures or plant retirements by an amount of specific estimate proportions (Schedule of Authorizations, Section 4.05).

(b) It is expected or found that for any reason the actual gross expenditures or plant retirements will exceed those authorized by 15% or more, and the excess is an amount of specific estimate proportions.

Note 1: A change in plans involving equipment is defined as a change which results in a greater or lesser amount of lines and terminals, traffic handling capacity, trunk circuits (including intertoll, etc.), the change or elimination of one type of plant at the expense of another type or a change in inter-office trunk design. For instance, additional long line equipment might be required if the conductor gauge of the outside plant is reduced, or additional T1 carrier repeater locations might be required due to changes in outside plant design.

Note 2: A change in plans involving a building is defined as the addition of more space (such as the construction of an additional floor, additional bays, etc.), or the inclusion of a major service feature such as air conditioning or elevators not covered in the original estimate.

7.02 Close administrative control of estimate expenditures is necessary so that supplemental estimates, where needed, can be prepared and approval obtained before limiting deficits are reached.

7.03 The Authorization sheet of a supplemental estimate shall show in tabular form the gross additions, cost of removal, retirements, salvages and maintenance amounts previously authorized, the supplemental amounts being requested and the total amounts required under the current view.

#### PREPARATION OF SUPPLEMENTAL ESTIMATES

7.04 The supplemental estimate shall be prepared in the same manner as the estimate it supplements. It should be given the same title and number as the original estimate and "Supplement No. 1, 2, etc.," shall be shown as the case may be. Accounts Chargeable sheets shall be prepared showing: (1) the breakdown of the supplemental authorization being requested and (2) the total amounts authorized under the original estimate, previous supplements and the supplement being submitted. Only the "total by requisition" SN-4C should be completed with "header" data for 725 Billing. Each Accounts Chargeable sheet should be clearly marked to show what it covers. See Fig. 32.

7.05 Supplemental estimates shall be routed along the same lines of organization as the original estimate and, in addition, shall be routed as required to obtain any necessary higher approval, if the supplemental amounts increase the gross expenditures or plant retirements sufficiently to require it.

7.06 After a supplemental estimate has been approved, the appropriations under the original estimate shall be combined with those under the supplement when making any subsequent comparison between the actual expenditures and appropriated amounts.

7.07 Changes in plan involving the change or elimination of one type of plant at the expense of another but not requiring a supplemental estimate shall be referred to the Vice President-Engineering for concurrence. Example: Changes in type of ringing plants, power plants, or carrier systems.

#### 8. APPROVAL AND ROUTING

##### GENERAL

8.01 Sufficient copies of each estimate in whole or part shall be prepared for distribution as shown on the Routing and Assembly Chart, Fig. 1.

8.02 The original Authorization sheets of estimates prepared by the Engineering Department shall be signed by the Equipment Engineer, Special Service Engineer, or Architectural Engineer as appropriate. After approval by the division level engineering manager, copies will be routed as indicated by the Routing Chart, Fig. 1. The copy of this Authorization sheet for the Vice President-Engineering shall be signed by the engineer preparing the estimate, the senior or supervising engineer if appropriate, and the Equipment Engineer, Special Service Engineer, or Architectural Engineer as appropriate.

8.03 The Division Accounting Manager's copy shall be forwarded as soon as the estimate has been approved by the division level engineering manager. After verifying the accounting, the Division Accounting Manager will notify the division level engineering manager of accounting verification, including any corrections required, and retain the copy of the estimate. If extensive corrections are required, the estimate will be returned. The division level engineering manager shall arrange for the necessary corrections, if any, to be made on all other copies of the estimate.

8.04 Before approving an estimate, the Chief Engineer shall, among other considerations, determine:

- (a) Whether on the basis of the facts presented the work planned is proper and the expenditures warranted.
- (b) Whether there are any further considerations which will affect the propriety of the plans or expenditures.
- (c) Whether the work proposed is in accordance with the approved technical standards of materials and methods.
- (d) Whether the work proposed is in accordance with the fundamental plans established by the Engineering Department.
- (e) Whether the estimate presents all the essential facts concerning the necessity and propriety of the work.
- (f) Whether the estimate is prepared in accordance with the requirements of this practice and the Estimate Routine and whether all necessary attachments, recommendations, etc., have been included.

8.05 After the Chief Engineer has approved an estimate, the original copy shall be routed to the other departments, Vice President and General Manager, and Vice President-Missouri-Illinois or Vice President-Texas if appropriate, for approval. To expedite approval, the Vice President-Engineering's copy may be forwarded to General Headquarters immediately following approval by the Chief Engineer.

8.06 Verification of the accounting by the Division Accounting Manager shall be obtained before the original copy of an estimate (Form SN4) is routed to the Vice President-Engineering. Preliminary copies of all Purchase or Sales Estimate Requests and Keep Cost Orders should be sent to the Inventory and Cost Engineer who will forward the preliminary copy to the General Inventory and Cost Engineer for review and concurrence prior to routing for approval.

8.07 After the required estimate approvals have been secured, the Vice President-Engineering will assign an estimate number and notify the Chief Engineer who shall notify the other area departments concerned. The Division Accounting Manager shall transmit two copies of the Form SN-4C to the Invoice Supervisor upon receipt of the approved copy of the SN-4 from the Chief Engineer.

8.08 Estimates which cannot be closed by the end of the third calendar year after approval, or estimates to which charges are not expected for 12 months or more after installation (or removal) has been started, shall be handled in accordance with Section 790-100-580 SW.

#### JOINT UNDERTAKINGS

8.09 The Long Lines Department's authorization shall be obtained for estimates involving expenditures chargeable to the Long Lines Department. Upon approval by the Chief Engineer, copies of the estimate shall be furnished to the Long Lines Department and approval requested. When the Southwestern Company's estimate has received the necessary approvals, and notification of the approval of the Long Lines Department also has been received, the Chief Engineer shall notify the departments concerned of the approval of the estimate. (See paragraph 6.28)

8.10 When the work under a specific estimate is to be performed by the Long Lines Department, the Southwestern Company's specific estimate shall be forwarded for approval in the same manner as for exclusive Southwestern Company's estimates. When the Southwestern Company's estimate has received the necessary approvals, the Chief Engineer shall notify the Long Lines Department accordingly and furnish the Southwestern Company's estimate number under which bills covering the cost of the work should be rendered. (See paragraph 8.13)

8.11 The following procedures should be followed on projects engineered by Long Lines on jointly owned plant where work will be performed by Southwestern Bell forces:

- (a) Place a statement on the face sheet of each Southwestern Bell Estimate that charges against the estimate shall be limited to Long Lines billing and Southwestern Bell engineering charges.
- (b) Place a cross-reference in the Estimate to a Custom Work Order which shall be issued at the same time as the estimate. This Custom Work Order should cover all plant charges for the project and direct that all billing be made to Long Lines estimate. This Long Lines estimate number should be listed in both the Custom Work Order and the Southwestern Bell estimate as a reference.

It is also suggested that Long Lines be requested to include the Southwestern Bell Custom Work Order number on specification face sheets where Southwestern Bell forces will perform work with a statement that "S.W. Bell plant charges should be charged to S.W. Bell Custom Work Order No. \_\_\_\_\_."

## ADVANCE APPROVALS

8.12 When it is necessary to perform work or incur expenditures prior to the submittal or approval of a specific estimate, advance approval may be secured through the regular channels in accordance with Part 4.04 of the Schedule of Authorizations. After the required approval has been secured, the Vice President-Engineering will assign an estimate number from the regular or casualty series of numbers and notify the Chief Engineer, who shall advise the other area departments concerned. Requests for advance approval shall be accompanied by a statement briefly outlining the nature of the urgency, the work involved, the estimated gross expenditures, plant retirements and the estimate request number assigned to the undertaking. The estimate shall be submitted as soon thereafter as practicable and in no event more than 30 days after the date of advance approval. In the case of estimates covering large PBX equipment under a customer termination agreement, the estimate number may be obtained by telephone from the Vice President-Engineering after the contract agreement is negotiated and approval of the Vice President and General Manager obtained. The Chief Engineer should confirm the estimate number in writing to the Vice President-Engineering for record purposes and forward the related estimate promptly. Upon receiving advance approval, the SN-4A or SN-4C showing estimated detail distribution of expenditures must be furnished to Accounting promptly so that billing can be incurred under DOPAC procedures.

8.13 Advance approval on specific estimates involving expenditures chargeable to the Long Lines Department shall be obtained by the Chief Engineer from the Long Lines Department.

## 9. EXPENDITURES UNDER THE ROUTINE ESTIMATE

## GENERAL

9.01 A routine estimate is a formal set of documents used to authorize the expenditures of money for individual undertakings, each amounting to less than specific estimate proportions. These undertakings include jobs involving buildings, central office and PBX equipment, outside plant and subscriber station equipment, and general equipment by various departments of the Company.

9.02 Preparation of the routine estimate is the responsibility of the Division Plant Engineer, and is covered in Part 3A of Joint Practice 46. The equipment engineer is not responsible for preparation of the routine estimate, but is responsible for managing the expenditure of much of the

routine estimate money via routine orders, keep cost orders, and/or custom work orders. Therefore, Part 9 of this section outlines specific methods to be used by the equipment engineer, where he has prime responsibility, and supplements that data with additional information. The authorization of the routine estimate is of a general nature and does not remove the responsibility for the proper planning and supervision of routine work.

9.03 Jobs under the Routine Estimate with gross additions of less than \$10,000 meet the currently ready for service requirements and the expenditures will be charged directly to the final accounts as they are incurred.

9.04 A service order issued by the Commercial or Marketing Department or a Routine Order or Keep Cost Order prepared by the Engineering or Plant Department shall be issued to authorize expenditures under the Routine Estimate. Items that are not the responsibility of the equipment engineer are covered in detail in Part 3B of Joint Practice 46.

## SERVICE ORDERS

9.05 Service orders issued by the Commercial or Marketing Departments covering the installation, disconnection, changes, etc., of station apparatus, (which includes radiotelephone equipment, teletypewriter equipment, small PBX equipment, and booths) are the authority for placing and retiring classes of plant such as the following:

- (a) Station Connections
- (b) Exchange aerial wire on existing poles when placed by the station installation force to provide service for a customer.
- (c) Installation of ready access terminals on aerial PIC cable when placed by the station installation or repair forces.
- (d) Subscribers' station apparatus, including carrier, radiotelephone and teletypewriter station apparatus, key equipments and wiring plans, etc., and intercommunicating systems.
- (e) Booths and special fittings, except that additions and retirements of special fixtures, furniture, floor coverings, etc., such as rugs, chairs for customers, counters, etc., at public telephone centers of specific estimate proportions shall be authorized by specific estimates.
- (f) Small private branch exchanges includable in Account 231.
- (g) Private mobile radiotelephone equipment.

(h) Order turrets chargeable to the station apparatus accounts.

(i) Cross-connections and other miscellaneous work performed in central offices incident to the completion of service orders.

9.06 The Plant Department shall generally be responsible for preparing the necessary plans and specifications for construction, replacement, or removal work authorized by service orders except that, by agreement of the Engineering and Plant Department Heads, certain work may be handled by the Engineering Department.

#### ROUTINE AND KEEP COST ORDERS

9.07 The Engineering and Plant Departments are responsible for the preparation of Routine and Keep Cost Orders. The Engineering Department has the responsibility for preparing orders of the following types:

- (a) Acquisition of land, including improvements thereon, and its retirement from telephone use and assessments for public improvements chargeable to the land account and purchase and sales of buildings and all COE equipment.
- (b) Construction of new buildings, additions to or changes in existing buildings, and retirements of buildings.
- (c) Additions and retirements of central office equipment including major tools and test sets used and kept in central offices and charged to the central office accounts.
- (d) Additions and retirements of large private branch exchange equipment and other equipment included in Account 234 for which specific estimates are not required.

#### PREPARATION OF ROUTINE ORDERS

9.08 The preparation of plans and specifications and the estimating of costs for work to be done under routine and keep cost orders shall, in general, conform to the provision for comparable work under specific estimates insofar as they are applicable.

9.09 A routine order shall be prepared on Form SN-446(a or e) Routine Order Authorization. The Accounts Chargeable Sheet is required with the Routine Order for Account 725 Billing Distribution, on orders involving Western Electric Company billing (See Fig. 35). A combined form (See Fig. 9) can be used where only a small amount of space is needed for the "nature and necessity" of the proposed undertaking. The order, with any necessary attached sheets, shall show:

(a) Location and appropriate location code, and nature and necessity of work with essential facts required by those to whom authority for approval has been delegated.

(b) The estimated monetary requirements.

(c) Information concerning any amounts to be billed others which will be credited to the accounts charged in the order and reference to the related custom work order or billing authorization involved.

(d) The estimated required facility service date or completion date, where applicable.

(e) Tabular list of estimated amounts by account codes. On orders involving Western Electric Company billing, this should be shown on the detailed distribution portion of the Accounts Chargeable sheet, Form SN-4C. Breakdown of expenditure by category (Gross Addition, Cost of Removal, etc.) and Summary of Estimated Requirements on the SN-4C are not required for Routine Orders.

(f) A reference to related telephone equipment orders and departmental recommendations.

9.10 A sufficient number of copies of orders shall be prepared to meet the needs of the departments involved. The original copy of the authorization sheet shall be signed by the person preparing the order and by the management levels delegated to approve the undertaking for the gross expenditures or plant retirements involved as provided in the Schedule of Authorizations. The original signed copy of the order, plus three copies of the Accounts Chargeable Sheet if W.E. Company billing is involved, shall be sent to the Accounting office immediately following its approval.

9.11 Routine authorizations shall not be held open for long periods of inactivity. If delays of six months or more have been or probably will be experienced during the progress or following substantial completion of the work, the order shall be closed and the remainder of the work covered under another authorization.

9.12 Routine orders or keep cost orders shall be prepared for all undertakings not authorized by service orders or custom work orders, where the estimated aggregate gross expenditures or plant retirements are of amounts less than specific estimate proportions, except as provided below:

(a) Routine orders are not required for general equipment items involving

charges and credits of less than specific estimate proportions chargeable to Account 261, Furniture and Office Equipment ("X"70C subaccounts excepted) and Account 264, Vehicles and Other Work Equipment, except as covered below.

NOTE: Motor vehicles should be purchased or retired under periodic specific estimates. Other items of general equipment of less than specific estimate proportions to be purchased shall be covered by properly approved supplies requisitions.

(b) Routine orders are not required for maintenance replacement of station apparatus.

(c) Routine orders are not required for the placing of additional jacks, cords, or power equipment at existing small PBX locations when installed for Plant Department reasons and which are covered by memorandum service orders issued by the Plant Department.

9.13 Authorization for changes in plans shall be prepared and approved per the Schedules of Authorization. An increase in gross expenditures or plant retirements to or above \$17,250 on routine orders requires that they shall be resubmitted as a specific estimate.

9.14 Procedures for closing routine orders are covered in Section 790-100-580 SW.

#### PREPARATION OF KEEP COST ORDERS

9.16 A keep cost order is to be used for the purpose of assembling job cost data which could not otherwise be obtained readily or for jobs requiring Federal Communications Commission Authorization when such jobs are of less than specific estimate proportions. It may be used as a work authorization in lieu of a routine order or to identify costs of portions of work provided for under other authorizations, i.e., specific estimate, routine order, or service order. A keep cost order shall not, in any case, be issued as a work authorization whenever the work covered by the order has been or will be authorized under a specific estimate. In such cases, authority to proceed with the work shall be obtained by approval of the specific estimate as provided in Part 6. Keep cost orders are also used for Under Construction jobs of between \$10,000 and \$15,000.

9.17 Keep cost orders are prepared for the following:

(a) Purchases and sales, where the gross expenditures or plant retirements involved are of less than specific estimate proportions.

(b) Work for which the segregation or assembling of actual cost is required and which could not otherwise be determined readily.

(c) Construction and retirement of the following:

(1) Building and central office equipment jobs when desired for the purpose of assembling cost data not otherwise readily available or for jobs involving Account 100.2 accounting.

(2) Jobs requiring Federal Communications Commission Authorization when such jobs are of less than specific proportions. (See Fig. 36)

(d) Accumulating the cost of an item of general equipment (except motor vehicles) or tools built locally, when the estimated cost is of less than specific estimate proportion, so that the total cost may be included on the appropriate record for the item.

(e) Work on jointly-owned plant, of less than specific estimate proportions, where billing to the Long Lines Department will be made direct from the telephone plant accounts. (See 9.24)

(f) Work done for other organizations.

9.18 Keep cost orders shall be prepared on Form SN-446b, Keep Cost Order. (See Fig. 36) The orders shall be assigned numbers from the appropriate series of numbers. (See Joint Practice 46, Part 1E, for number assignments.) The Accounts Chargeable Sheet is required with the Keep Cost Order for Account 725 Billing Distribution, if Western Electric billing is involved. An accounts chargeable sheet is also required, for Keep Cost Orders, used as work authorizations, when:

(a) The construction expenditures are chargeable to the land or building accounts, regardless of amount.

(b) Used for billing to Long Lines Department.

9.19 When used as a work authorization, a Keep Cost Order shall meet the requirements for a routine order as stated in 9.08. When the Keep Cost Order is not a work authorization, Form SN-446b shall state the location and a brief description

of the work on which actual costs are desired, the reason for keeping actual costs, and reference to any related specific estimate or other order number. Where the order is issued to accumulate cost of an item of general equipment or tools built locally, the account codes to be charged with the expenditures upon completion of the order shall be included on Form SN-446b.

9.20 Keep cost orders used to identify portions of work provided for under other authorizations shall be approved by a division level manager. Keep cost orders issued as work authorizations shall be approved by the management level authorized to approve an undertaking of the amount involved.

9.21 Authorization for changes in plans shall be prepared and approved in the same manner as for routine orders (see 9.13).

#### KEEP COSTS FOR JOINT UNDERTAKINGS

##### A. Work Performed by the Telephone Company

9.22 When the Telephone Company is to perform the work, the Engineering Department shall prepare a Keep Cost Order and secure Telephone Company approval. The order shall state the estimated amount to be billed to the Long Lines Department. Two copies of the order shall be sent to the Long Lines Department. If the Long Lines approves the work, they will notify the Telephone Company and give them billing authority, after which the work may proceed.

NOTE: The above applies only to jobs involving amounts affecting the Telephone Company accounts of less than specific estimate proportion. For emergency work, advance Long Lines approval may be secured by telegram or telephone, but final approval should be obtained by the procedure outlined above in all cases.

9.23 The reports during the progress and on completion of an order involving billing to the Long Lines Department shall be the same as other orders except that reports during the progress, preliminary, and final billing to the Long Lines Department shall be furnished as outlined in Joint Practice 46, Parts 5A and 5C.

##### B. Work Performed by the Long Lines Department

9.24 When the Long Lines Department is to perform the work, they will forward to the Telephone Company the information as to the nature of the work, costs, etc., for the preparation of a routine order. On

approval of the routine order, the Telephone Company shall notify the Long Lines Department by letter. In cases of emergency, approvals may be given by telephone or telegraph, but the procedures outlined above in this paragraph shall then be followed.

NOTE: The above applies only to jobs involving amounts affecting the Telephone Company accounts of less than specific estimate proportion.

9.25 On completion of joint work performed by the Long Lines Department, a final bill will be rendered. Basic data for outside plant work will be available on marked specification detail sheets accompanying the final bill and statement of ownership percentage applicable to items added or removed will be shown along with appropriately revised Joint Line Contract schedules, if necessary.

NOTE: Copies of equipment specifications, if needed, may be secured by letter arrangements between the Telephone Company and the Long Lines Department.

##### C. Final Bills from Long Lines Department

9.26 Final bills from the Long Lines Department shall be handled in the same manner as provided in Section 790-100-415SW for final bills in connection with work performed under specific estimates. Also see Joint Practice 46, Part 2D.

#### 10. CUSTOM WORK ORDERS

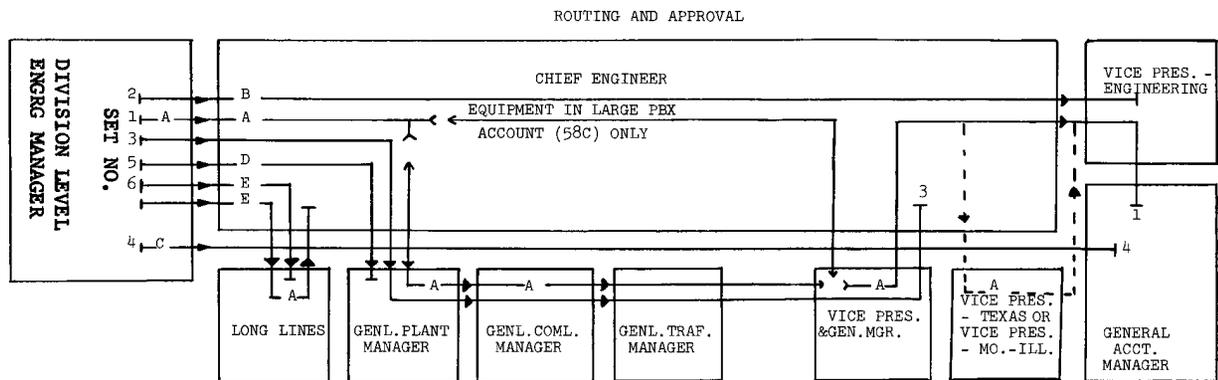
10.01 A Custom Work Order is the medium through which the Accounting Department of this company is authorized to bill an associated Bell System Company, Governmental Agency, or others for work done by this company for the associated company, etc.

10.02 Authority to bill and issue custom work orders for Central Office work is usually covered in letters to and from the Engineering Departments involved. Custom work orders shall not be issued without such authority nor shall they be issued prior to the approval of an authorization when required.

10.03 A Custom Work Order shall be prepared for an undertaking when it is expected that the costs to be incurred will be billed to others. The order shall be prepared in a manner similar to that for routine orders with the addition of details for billing arrangements. A separate block of numbers shall be used for Custom Work Orders as prescribed in Section 1E of Joint Practice 46. Form SN-446a, SN-446b, or SN-446e, as appropriate, can be used for a Custom Work Order. Also see Joint Practice 46, Part 5A.

COPIES CONTAIN PARTS INDICATED AND ASSEMBLED AS FOLLOWS:

SET NO.	FOR	PART A SN-4	PART B SN-4A OR SN-4C	PART C ** SN-4D	PART D DEPARTMENTAL RECOMMENDATIONS	PART E SUPPLEMENTAL INFORMATION	PART F SPECIFICATIONS AND PRINTS
1	GENL. ACCTG. MGR. (ORIGINAL)	1					
2*	VICE PRES. - ENGR.	1	1	1	1	1	
3*	CHIEF ENGINEER	1	1	1	1	1	1
4+	GENL. ACCTG. MGR.	1	2	1			
5*	GENERAL PLANT MANAGER	1	1			1	Ø
6#	LONG LINES DEPARTMENT	2	2			2	Ø
7	LOCAL ORGANIZATIONS	AS REQ'D. AS REQ'D.				AS REQ'D.	



- A - INDICATES SEQUENCE OF APPROVALS. SET 3 WILL ACCOMPANY SET 1 FOR AREA APPROVALS. (EXCEPT EQUIP. IN 58C ACCOUNT)
  - B - TO BE TRANSMITTED WHEN ESTIMATE IS APPROVED BY CHIEF ENGINEER. **DIV. LEVEL ENGRG MANAGER** WILL SECURE LONG LINES APPROVAL.
  - C - TO BE TRANSMITTED TO GENL. ACCTG. MGR. WHEN ISSUED.
  - D - SET 5, IF REQUIRED, AND ALL SETS 7 ARE TO BE DISTRIBUTED AFTER APPROVAL AT THE LEVEL REQUIRED TO PROCEED WITH THE WORK.
  - E - **DIV. LEVEL ENGRG MANAGER** WILL SECURE LONG LINES APPROVAL.
  - \* - TO BE BACKED AND BOUND ON LEFT SIDE. SET 5 MAY BE OMITTED AT OPTION OF PLANT DEPARTMENT.
  - # - TO BE PROVIDED FOR ESTIMATES INVOLVING EXPENDITURES CHARGEABLE TO THE LONG LINES DEPARTMENT.
  - Ø - MAY BE PREPARED AFTER SUBMISSION OF THE ESTIMATE REQUEST. TO BE DISTRIBUTED BY THE **DIVISION LEVEL ENGINEERING MANAGER**
- INDEPENDENT OF THE DISTRIBUTION OF THE ESTIMATE REQUEST.
- + - TWO COPIES OF THE SN-4C SHALL BE FURNISHED THE INVOICE SUPERVISOR BY THE GENERAL ACCOUNTING MANAGER AFTER APPROVAL AT THE REQUIRED LEVEL TO PROCEED WITH THE WORK. (ITEM A)
- \*\* -WHEN REQUIRED, SEE PART 1F OF JOINT PRACTICE 46.

ENGINEERING DEPARTMENT SPECIFIC ESTIMATES

FIGURE 1  
ASSEMBLY AND ROUTING

SECTION 790-100-310SW

SECTION 790-100-310SW

FIGURE 2

FORM SN-4, AUTHORIZATION SHEET

<b>SOUTHWESTERN BELL TELEPHONE COMPANY</b>		FORM SN-4 (REV. 1-73)	
AUTHORIZATION, ESTIMATE NO. _____			
AREA _____	DIVISION _____	ESTIMATE REQUEST NO. _____	
TITLE:			
NATURE AND NECESSITY			
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input type="checkbox"/> INITIALS _____			
SERVICE DATE _____		COMPLETION DATE _____	
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
RECOMMENDED: _____		APPROVED: _____	
DATE _____		DATE _____	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER	
APPROVED:			
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. -- ENG. MGR. - FAC.		VICE PRESIDENT AND GENERAL MANAGER	
CHIEF ENGINEER		VICE PRESIDENT - TEXAS    VICE PRESIDENT - MO. - ILL.	
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING	
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861	
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

FIGURE 3

## FORM SN-4E, SUMMARY ACCOUNTS CHARGEABLE SHEET

FORM SN-4E  
(10-73)

**Southwestern Bell Telephone Company**

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. ① ESTIMATE REQUEST NO. ②

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
③	④	←—————→			⑤		⑥
TOTAL ⑦		(A)	(B)	(C)	(D)	(E)	(F)
TOTAL ⑧							
YEAR 19							
EXPENDITURES							
IN							
YEAR 19							
SUMMARY OF ESTIMATED REQUIREMENTS ⑨				NET REQUIREMENTS (A+B-D) \$ .....			
GROSS EXPENDITURES (A+B)		\$ .....		GROSS ADDITIONS (A)		\$ .....	
PLANT RETIREMENTS (C)		\$ .....		NET ADDITIONS (A-C)		\$ .....	
NET CAPITAL REQUIREMENTS (A+B-E)		\$ .....					



FIGURE 5

FORM SN-4C

**SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE**

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. (1) EST./R.O. NO. (2)  
 LOCATION CODE (C & X) (3) LOCATION CODE (R & M) (4)  
 SHEET (5) OF \_\_\_\_\_  
 DATE (6) \_\_\_\_\_  
 F.C.C. AUTHORIZATION REQ'D YES  NO  (7)  
 UNDER CONSTRUCTION (8)  ENGINEERED BY -TEL. CO.   
 CURRENTLY READY FOR SERVICE  -W.E. CO.  (9)  
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT		DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C								
		(10)	(10)	(10)	(10)	(11)	(11)	(12)
S S P E R.								
A M A								
P O W E R								
P B X								
TOTAL EXPENDITURES				(A) \$	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)				19	AMOUNT	19	AMOUNT	19
				(13)				

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ (19)	
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$			
								CONTROL LOC.	REQ. NO.		NET REQUIREMENTS (A + B - D) \$	
								20-26	27-37		GROSS ADDITIONS (A) \$	
1-2	3	4-5	6-7	8-9	10-11	12-19				NET ADDITIONS (A - C) \$		
CD ID	LOCATION				RI	COMPL. DATE				NET CAPITAL REQUIREMENTS (A + B - E) \$		
38	39-72				73-74	75-80						
1					E							

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		(14)	(15)	(15)	(15)	(16)	(16)	(16)	(17)	(17)	(17)	(17)	(17)	(18)
4														
4														
4														
4														
4														
4														
4														
4														
2		TOTAL												
3		CHANGE TOTAL												

PREPARED BY: \_\_\_\_\_  
 EXPLANATION: \_\_\_\_\_  
 TEL. NO. \_\_\_\_\_

FIGURE 6

FORM SN-4D, FCC AUTHORIZATION RECORD

SOUTHWESTERN BELL TELEPHONE COMPANY  
FEDERAL COMMUNICATIONS COMMISSION AUTHORIZATION RECORD

FORM SN-4D  
(REV. 7-70)

AREA \_\_\_\_\_ DIVISION \_\_\_\_\_ ESTIMATE REQUEST NO. \_\_\_\_\_

ESTIMATE NO. \_\_\_\_\_  
KEEP COST ORDER NO. \_\_\_\_\_  
CUSTOM WORK ORDER NO. \_\_\_\_\_

TITLE \_\_\_\_\_

1. APPROXIMATE DATE F.C.C. APPLICATION WILL BE SUBMITTED \_\_\_\_\_

2. ENTER ANY F.C.C. NUMBERS WHICH APPLY  
SECTION 214, P-C OR T-C NUMBERS DATE GRANTED

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SECTION 319, RADIO C-P FILE NUMBERS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. TO BE LISTED ON CONTINUING AUTHORITY FOR MONTH AND YEAR \_\_\_\_\_

4. MONTH AND YEAR ACTUALLY REPORTED ON CONTINUING AUTHORITY \_\_\_\_\_

5. WHICH AREA OR COMPANY WILL MAKE APPLICATION \_\_\_\_\_

6. START DATE OF INTERSTATE CONSTRUCTION REQUIRED \_\_\_\_\_ ACTUAL \_\_\_\_\_

START DATE OF RADIO CONSTRUCTION ACTUAL \_\_\_\_\_

7. COMPLETION DATE OF INTERSTATE CONSTRUCTION REQUIRED \_\_\_\_\_ ACTUAL \_\_\_\_\_

COMPLETION DATE OF RADIO CONSTRUCTION REQUIRED \_\_\_\_\_ ACTUAL \_\_\_\_\_

8. GROSS ADDITIONS FOR INTERSTATE PORTION \_\_\_\_\_

GROSS ADDITIONS FOR RADIO PORTION \_\_\_\_\_

FIGURE 7

FORM SN-446a

SOUTHWESTERN BELL TELEPHONE COMPANY						SN-446A (REV. 9-64)	
ROUTINE ORDER AUTHORIZATION-NUMBER _____							
DIVISION		DISTRICT		EXCHANGE CO., AREA OR TOLL REFERENCE			
ASSOCIATED ORDER AND NUMBER		TAX DISTRICT(S)		RECOMMENDED			
RECORD REFERENCE		WORK UNITS				APPROVED ENGINEER DATE	
		PL.	SPL.	OTHER	TOTAL		
GROSS ADDITIONS						DIST. ENGINEER OR SENIOR ENGINEER DATE	
COST OF REMOVAL		FACILITY SERVICE DATE		ARCH. ENGR. OR EQUIP. ENGR. OR SPCL. SERV. ENGR. DATE			
GROSS EXPENDITURE		WORK STARTED		DIVISION PLANT ENGINEER DATE			
PLANT RETIRED		WORK COMPLETED		DIVISION PLT. SUPT. OR BLDG. EQUIP. ENG. DATE			
SALVAGE		COMPLETED BY		ENGINEER OF EQUIP. OR ENGINEER OF BLDGS. DATE			
MAINTENANCE		PREPOST		YES NO		GENERAL PLANT MANAGER DATE	
						CHIEF ENGINEER DATE	

FIGURE 8

FORM SN 446B

SOUTHWESTERN BELL TELEPHONE COMPANY						SN-446B (6-65)	
KEEP COST ORDER AUTHORIZATION - NUMBER _____							
DIVISION		DISTRICT		EXCHANGE CO., AREA OR TOLL REFERENCE			
ASSOCIATED ORDER AND NUMBER		TAX DISTRICT(S)		RECOMMENDED			
RECORD REFERENCE		WORK UNITS		APPROVED		ENGINEER	DATE
		PL.	SPL.	OTHER	TOTAL		
GROSS ADDITIONS		FACILITY SERVICE DATE		ARCH. ENGR. OR EQUIP. ENGR. OR SPCL. SERV. ENGR.		DIST. ENGINEER OR SENIOR ENGINEER	DATE
COST OF REMOVAL		WORK STARTED		DIVISION PLANT ENGINEER			DATE
GROSS EXPENDITURE		WORK COMPLETED		DIVISION PLT. SUPT. OR BLDG. EQUIP. ENG.			DATE
PLANT RETIRED		COMPLETED BY		ENGINEER OF EQUIP. OR ENGINEER OF BLDGS.			DATE
SALVAGE		PREPOST		GENERAL PLANT MANAGER			DATE
MAINTENANCE		YES NO		CHIEF ENGINEER			DATE
F. C. C. AUTHORIZATION REQUIRED						INITIALS	
						<input type="checkbox"/> YES <input type="checkbox"/> NO _____	

FIGURE 9

FORM SN-446e, COMBINED ROUTINE ORDER AND 725 BILLING FORM

SOUTHWESTERN BELL TELEPHONE COMPANY						SN-446e (REV. 7-74)
ROUTINE ORDER AUTHORIZATION-NUMBER _____						
DIVISION		DISTRICT		EXCHANGE CO., AREA OR TOLL REFERENCE		
		TAX DISTRICT(S)		RECOMMENDED		
GROSS ADDITIONS		REFERENCE		APPROVED	ENGINEER	DATE
COST OF REMOVAL				SENIOR ENGINEER		DATE
GROSS EXPENDITURE		FACILITY SERVICE DATE		SUPERVISING ENGINEER		DATE
PLANT RETIRED		WORK STARTED		EQUIP. ENGR. OR SPCL. SERV. ENGR.		DATE
SALVAGE		WORK COMPLETED		BLDG. & EQPT. ENG. CUST. SERV. ENG. ENG. MGR-FAC.		DATE
MAINTENANCE		COMPLETED BY		GENERAL PLANT MANAGER		DATE
CHIEF ENGINEER						DATE

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE				
SECTION 1 - HEADER DATA														
CO. ID.	A C	MO.	DAY	YR.	OF. NO.	AUTH. NUMBER	FILE ADDRESS		CD ID	LOCATION		RI	COMPL. DATE	
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.	38	39-72		73-74	75-80	
29									1			E		
SECTION 2 - DETAIL DISTRIBUTION														
CD TO	ADJ.	ACCOUNTING CLASSIFICATION					W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR JR	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGRNG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-79						
4														
4														
4														
4														
4														
4														
2		TOTAL												
3		CHANGE TOTAL												

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

FIGURE 10

DIAL WITH DIAL REPLACEMENT

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_

AREA Kansas City DIVISION Springfield (4) ESTIMATE REQUEST NO. 10995

TITLE: Springfield, Missouri - McDaniel 682 Office - Initial No. 1 Electronic Switching System

NATURE AND NECESSITY

This estimate provides for 43,520 lines and 53,000 numbers (2 Control Groups, 509 frames) of No. 1 ESS Equipment in the new Springfield McDaniel Office to replace 40,400 lines and 44,500 terminals (5 units) of No. 1 Step-by-Step in the Springfield University Office.

This project is planned for service in December, 1974, and is proposed at this time to modernize plant and to care for the forecasted growth until December, 1976. This project will improve service to customers in this office and will reduce maintenance costs. It also will provide relief for the Springfield Tandem Office by establishing LAMA and high usage direct trunks to Kansas City, St. Louis and Joplin.

Displaced equipment not held for reuse will be returned to the Western Electric Company for best allowance or junked locally.

REFERENCES

- Outline of Plan
- Facility Report
- Plant Extension Engineering Study KC-421 - Approval Letter
- Power Plant Capacity Study
- Annual Gain Trend (Typical illustrated in Fig. 13)
- Traffic Order 72-M-76
- Specifications 4T43.3, 4T43.4, 4T43.5, 4T43.6  
7731.343, 9319.131 (Not Attached)

F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	INITIALS <i>JTM</i>
SERVICE DATE		December, 1974		COMPLETION DATE
				October, 1975
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
\$10,668,800	\$5,137,300	\$5,252,100	\$159,500	
RECOMMENDED:	DATE	APPROVED:	DATE	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH.ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
APPROVED:				
DIV. PLT. SUPT. BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.		VICE PRESIDENT AND GENERAL MANAGER		
CHIEF ENGINEER		VICE PRESIDENT-TEXAS VICE PRESIDENT - MO. - ILL.		
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING		
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

Estimate Request 10995  
Page 1 of 7

OUTLINE OF PLAN

Springfield - McDaniel

This installation consists of replacing 40,400 lines and 44,500 terminals (5 units) of No. 1 Step-by-Step Equipment, located in the Springfield University Office, 301 South Jefferson, Springfield, Missouri with two new Control Groups of No. 1 ESS consisting of 43,520 lines and 53,000 numbers. The new No. 1 ESS equipment will be installed in a new building at 530 East McDaniel in Springfield, Missouri. The ESS Control Group 0 will consist of the following major items of equipment:

- 18,432 - Lines
  - 287 - Frames
    - SP-CTX-7 Generic Program
    - Data Links for CO-Centrex Service
- 1,585 - Outgoing Trunks
- 1,475 - Incoming Trunks
- 202 - Operator Trunks
  - 28 - COSMIC Frame Modules\*
- 1,600 - E-6 Repeater Mountings
- 1,400 - E-6 Repeater Units
  - 550 - LSR Mountings
  - 500 - LSR Units
  - 385 - D.L.L. Units

\*Sufficient modules are proposed to provide an ultimate of three control groups.

ESS Control Group 1 will consist of the following major items of equipment:

- 25,088 - Lines
  - 222 - Frames
    - 5 - Remreed Trunk Link Networks
      - SP-CTX-7 Generic Program
      - Dial Tone First Coin Service (For future use)
- 1,440 - Outgoing Trunks
- 1,196 - Incoming Trunks
- 275 - Operator Trunks

This project received executive approval April 7, 1972, and has been assigned Plant Extension Engineering Study Number KC-421. A comparison of the present view and the study view is shown on an attachment.

The ESS Office when cutover will replace step-by-step NNX Codes 862, 869, 865, 866, 831 and 836 without number changes. ESS LAMA for 1 and 2 party customers and direct high usage trunk groups to Kansas City, St. Louis 4A and Joplin XBT will be provided to relieve the existing Springfield Tandem Office.

## OUTLINE OF PLAN

Special Service and Toll Equipment provided on this project is for initial turn-around units only. After cutover, units now located in the University Office will be relocated to the McDaniel Office to provide requirements through the engineering period.

POWER

A new dedicated 48 volt negative and 24 volt positive 326A Power Plant is being provided with the ESS installation which is a system requirement. Two new 200 K.W. Emergency Turbines are also being provided at this time to meet the estimated power requirements for this wire center.

DEVELOPMENT

The Commercial Forecast, dated November 15, 1972, indicates the following:

	Actual 1-25-73	12-31-73		12-31-74		12-31-75		12-76	
		Gain	Total	Cum. Gain	Total	Cum. Gain	Total	Cum. Gain	Total
Lines	36,157	1205	37362	2510	38667	3657	39814	4752	40909
Main Stations	37,910	1195	39105	2560	40470	3567	41477	4490	42400

CAPACITYPresent

	Installed		Operative Capacity	
	Lines	Terminals	Lines	MT
Step-by-Step (Exh. 11-74)*	40,400	44,500	38,400	40,000

This Project

Step-by-Step (Removed)	(40,400)	(44,500)	(38,400)	(40,000)
No. 1 ESS (Added)	<u>43,520</u>	<u>53,000</u>	<u>41,200</u>	<u>42,400</u>
Total - (Exh. 12-76)	43,520	53,000	41,200	42,400

\*May work overloaded on switching capacity until 12-74 cut to Springfield McDaniel ESS.

BUILDING CAPACITY

A new building is being built for the ESS Equipment. Based on forecasted development, building space will last beyond 1985.

Estimate Request 10995  
Page 3 of 7

OUTLINE OF PLAN

Rearrangements and Changes

A. The following rearrangements will be required at the SXS Springfield University Office:

<u>37M</u>	Line verification tests to about 38,600 old cable pairs			\$ 99,000
<u>57M</u>			<u>57M</u>	<u>357M</u>
<u>357M</u>	1. Permanent rearrangements of approximately 300 carrier circuits at the University Office to extend them on VF tie cables to the new office.		6,300	9,600
	2. Rearrangements of special service and miscellaneous circuits during removal of surplus equipment	\$ 4,600		-0-
	Total	\$109,900	\$9,600	

B. The following repair expenditures are required at the McDaniel 862 Office:

<u>77R</u>	Control Group 0 -		
	Minor tools and maintenance spare circuit packs	\$20,000	
<u>77R</u>	Control Group 1 -		
	Minor tools and maintenance spare circuit packs	\$20,000	
	Total	\$40,000	

Estimate Request 10995

Page 4 of 7

OUTLINE OF PLAN  
STUDY VIEW/PRESENT VIEW COMPARISON

ESTIMATE REQUEST 10995

The present view of gross expenditures for the Springfield McDaniel ESS Office, which replaces the Springfield University Office, compares with approved Plant Extension Engineering Study KC-421 as follows:

	<u>Study View</u>	<u>Present View</u>
Electronic Switching Machines (This ER)	\$11,417,000	\$ 9,847,200
SXS Removal Cost (This ER)		279,400
C.E.T. Equipment (This ER)	584,000	541,200
Outside Plant (E.R. 12391)	235,000	306,000
Land (A-0651)	216,000	283,000
Building (Estimate 0875)	<u>2,750,000</u>	<u>3,058,000</u>
	\$15,202,000	\$14,314,800

Equipment Engineering - Switching  
Kansas City Area  
March 20, 1973

Page 5 of 7

SW 5073  
(7/73)

## POWER PLANT DATA SHEET

OFFICE McDanielDATE 3-20-73CITY Springfield

SPEC. NO. \_\_\_\_\_

ESTIMATE  
REQUEST 10995

		-48 VOLT PLANT	NOTE	PRESENT 19 <u>-</u>	END OF PWR. ENGR. PERIOD 19 <u>76</u>	ESTIMATED 19 <u>80</u>
PER PLANT		TYPE OF PLANT			326A	326A
		PLANT CAPACITY (AMPS)	1		4000	4000
		TOTAL EQUIPPED CHARGING CAPACITY (AMPS)			1400	1500
		CHARGING CAPACITY, LARGEST UNIT (AMPS)			100	100
BATTERY RESERVE CALCULATIONS - PER PLANT	A	FINAL VOLTS PER CELL			1.90	1.90
	B	BATTERY STRINGS - QUANTITY/LIST (YEAR INST)			2/07 (74)	2/07 (74)
	C	BUSY HOUR PEAK DRAIN (AMPS)			1150	1350
	D	VARIABLE DRAIN (AMPS)			150	200
	E	VARIABLE DRAIN - 24 HOUR EQUIV. (AMPS)			--	--
	F	CONSTANT DRAIN (AMPS)			1000	1150
	G	POWER FAILURE DRAIN - ADDITIONAL (AMPS)			97	97
	H	TOTAL BATTERY DISCHARGE DRAIN (AMPS)	2		1247	1447
	I	AGE CORRECTION FACTOR - ALL STRINGS			1.0	1.0
	J	TOTAL DRAIN CORRECTED FOR AGE (AMPS)			1247	1447
	K	BATTERY RESERVE PROVIDED (HRS)			7.0#	5.5
L	BATTERY RESERVE REQUIRED (HRS)			3.0	3.0	
PER PLANT		MAXIMUM DEMAND (KW) - THIS PLANT	3		85	100
PER OFFICE		MAXIMUM DEMAND (KW) - TOTAL OFFICE			220	240
		ENGINE - ALTERNATOR CAPACITY (KW)			400	400

- NOTES: 1. SHOW TOTAL CHARGE CAPACITY RATING OF THE POWER PLANT  
 2. FOR 3 HOUR RESERVE - D + F + G  
 FOR 24 HOUR RESERVE - E + F + G  
 3. KW RATING FOR BH PEAK DRAIN  
 # One Battery String Produces Only Two Hours Reserve

POWER PLANT DATA SHEET

OFFICE McDaniel  
CITY Springfield  
SPEC. NO. \_\_\_\_\_

DATE 3-20-73  
ESTIMATE  
REQUEST 10995

		<u>+24</u> VOLT PLANT	NOTE	PRESENT 19 <u>-</u>	END OF PWR. ENGR. PERIOD 19 <u>76</u>	ESTIMATED 19 <u>80</u>
PER PLANT		TYPE OF PLANT,			326A	326A
		PLANT CAPACITY (AMPS)	1		4000	4000
		TOTAL EQUIPPED CHARGING CAPACITY (AMPS)			1600	1600
		CHARGING CAPACITY, LARGEST UNIT (AMPS)			100	100
BATTERY RESERVE CALCULATIONS - PER PLANT	A	FINAL VOLTS PER CELL			1.90	1.90
	B	BATTERY STRINGS - QUANTITY/LIST (YEAR INST)			2/07 (74)	2/07 (74)
	C	BUSY HOUR PEAK DRAIN (AMPS)			1300	1350
	D	VARIABLE DRAIN (AMPS)			--	--
	E	VARIABLE DRAIN - 24 HOUR EQUIV. (AMPS)			--	--
	F	CONSTANT DRAIN (AMPS)			1300	1350
	G	POWER FAILURE DRAIN - ADDITIONAL (AMPS)			8	8
	H	TOTAL BATTERY DISCHARGE DRAIN (AMPS)	2		1308	1358
	I	AGE CORRECTION FACTOR - ALL STRINGS			1.0	1.0
	J	TOTAL DRAIN CORRECTED FOR AGE (AMPS)			1308	1358
	K	BATTERY RESERVE PROVIDED (HRS)			5.0	4.7
L	BATTERY RESERVE REQUIRED (HRS)			3.0	3.0	
PER PLANT		MAXIMUM DEMAND (KW) - THIS PLANT	3		48	50
PER OFFICE		MAXIMUM DEMAND (KW) - TOTAL OFFICE			220	240
		ENGINE - ALTERNATOR CAPACITY (KW)			400	400

- NOTES: 1. SHOW TOTAL CHARGE CAPACITY RATING OF THE POWER PLANT  
 2. FOR 3 HOUR RESERVE - D + F + G  
 FOR 24 HOUR RESERVE - E + F + G  
 3. KW RATING FOR BH PEAK DRAIN

Emergency Power Data Sheet

SW 5075  
(7-73)

Office: McDaniel

E.R. 10995

	Present	End of Power Engr. Period	Estimated
	<u>-</u>	<u>1976</u>	<u>1980</u>
<b><u>Telephone Equipment Load</u></b>			
<u>-48V</u> Plant, KW (AMPS)	<u>                    </u>	<u>85(1150)</u>	<u>100(1350)</u>
<u>+24V</u> Plant, KW (AMPS)	<u>                    </u>	<u>48(1300)</u>	<u>50(1350)</u>
<u>                    </u> Plant, KW (AMPS)	<u>                    </u>	<u>                    </u>	<u>                    </u>
<u>                    </u> Plant, KW (AMPS)	<u>                    </u>	<u>                    </u>	<u>                    </u>
Inverter Plants	<u>                    </u>	<u>                    </u>	<u>                    </u>
AC-Operated Ringing Machine	<u>                    </u>	<u>                    </u>	<u>                    </u>
Other Telephone Equipment Load, KW	<u>                    </u>	<u>                    </u>	<u>                    </u>
<b><u>Essential Building Load</u></b>			
Emergency Lighting, KW (AMPS)	<u>                    </u>	<u>14 (190)</u>	<u>14 (190)</u>
Sump Pump, KW	<u>                    </u>	<u>2</u>	<u>2</u>
Ventilating and Exhaust Fans, KW	<u>                    </u>	<u>53</u>	<u>53</u>
Elevator, KW	<u>                    </u>	<u>                    </u>	<u>                    </u>
Compressor-dehydrator, KW	<u>                    </u>	<u>15</u>	<u>15</u>
Other (list), KW	<u>                    </u>	<u>2</u>	<u>2</u>
<u>Water Pump</u>	<u>                    </u>	<u>4</u>	<u>4</u>
<u>                    </u>	<u>                    </u>	<u>                    </u>	<u>                    </u>
<u>                    </u>	<u>                    </u>	<u>                    </u>	<u>                    </u>
Total Load, KW	<u>                    </u>	<u>220</u>	<u>240</u>
Size of Installed Engine(s), KW	<u>                    </u>	<u>400</u>	<u>400</u>

FORM SN-4E  
(10-73)

Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 10995

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
G1840	Spd. McDaniel ESS - 0	5,196,400					20,000
G1840	Spd. McDaniel Ckt. EQ.	534,900				30,000	
G1732	Spd. McDaniel ESS - 1	4,651,800					20,000
G1720	Spd. Univ. SXS		241,300	4,762,600	487,500		99,000
G1720	Spd. Univ. Ckt. EQ.	6,300	38,100	374,700	107,600		20,500
<b>TOTAL</b>		(A) 10,389,400	(B) 279,400	(C) 5,137,300	(D) 595,100	(E) 30,000	(F) 159,500
<b>TOTAL EXPENDITURES IN</b>							
YEAR 1973		4,046,000	12,000				10,000
YEAR 1974		6,330,400	185,400	5,137,300	595,100	30,000	100,000
YEAR 1975		13,000	82,000				49,500
<b>SUMMARY OF ESTIMATED REQUIREMENTS</b>				<b>NET REQUIREMENTS (A+B-D)</b> \$ 10,073,700			
<b>GROSS EXPENDITURES (A+B)</b>		\$ 10,668,800		<b>GROSS ADDITIONS (A)</b>		\$ 10,389,400	
<b>PLANT RETIREMENTS (C)</b>		\$ 5,137,300		<b>NET ADDITIONS (A-C)</b>		\$ 5,252,100	
<b>NET CAPITAL REQUIREMENTS (A+B-E)</b>		\$ 10,638,800					

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

ESS CG-0

EST. REQ. NO. 10995 EST./R.O. NO. \_\_\_\_\_  
LOCATION CODE (C & X) G1840 LOCATION CODE (R & M) G1840  
SHEET 1 OF 5  
DATE 3-10-73

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  - TEL. CO.   
CURRENTLY READY FOR SERVICE  ENGINEERED BY \_\_\_\_\_ - W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

		SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL					
B A S I C		Switching Electronic		77	\$4,860,000									
		Exchange Line Concentrator		847	16,300									
S P E R		Auto. Message Rec. - Toll Electronic		477T	25,800									
		Pwr. Plt. - 24 Volt and 48 Volt		677	185,000									
P O W E R		Pwr. Plt. Emer. Elec.		977	109,300									
P B X														
TOTAL EXPENDITURES					(A) \$5,196,400	(B) \$	(C) \$	(D) \$	(E) \$					
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)					1973 YEAR AMOUNT \$4,006,700	1974 YEAR AMOUNT \$1,189,700	19	YEAR	AMOUNT					
ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE							SUMMARY OF ESTIMATED REQUIREMENTS							
SECTION 1 - HEADER DATA							GROSS EXPENDITURES (A + B) \$5,196,400							
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$ -					
							CONTROL LOC.	REQ. NO.	NET REQUIREMENTS (A + B - D) \$5,196,400					
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37	GROSS ADDITIONS (A) \$5,196,400					
29	1	3	10	73	34		G1840	779072	NET ADDITIONS (A - C) \$5,196,400					
CD ID	LOCATION				RI	COMPL. DATE				NET CAPITAL REQUIREMENTS (A + B - E) \$5,196,400				
38	39-72				73-74	75-80								
1	SPD.	Mc Daniel	862		E	4	2	23	75					
SECTION 2 - DETAIL DISTRIBUTION														
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS				OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		G1840		77	C	3650000	685000	100000		63000	42000	20000	300000	4860000
4		G1840		847	C	12550	1250	1050		300	200		950	16300
4		G1840		677	C	150200	14600	9500		2000	2100		7600	185000
4		G1840		977	C	93700	5400	2800		2500	1000		3900	109300
4		G1840		477	TC	22150	1600	450		50	100		1450	25800
4		G1840		77	R	20000								20000
4														
4														
4														
4														
2		TOTAL				3948600	707850	113800		67850	45400	20000	812900	5,216,400
3		CHANGE TOTAL												

EXPLANATION: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_  
TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
 CURRENTLY READY FOR SERVICE  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

EST. REQ. NO. 10995 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) G1840 LOCATION CODE (R & M) \_\_\_\_\_  
 SHEET 2 OF 5  
 DATE 3-10-73

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	Circuit Equipment	57	\$485,700	\$	\$	\$	\$30,000
S S P E R	Circuit Equipment	357	49,200				
A M A							
P O W E R							
P B X							

TOTAL EXPENDITURES			(A) \$ 534,900	(B) \$	(C) \$	(D) \$	(E) \$ 30,000
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 73 AMOUNT 8,000	YEAR 19 74 AMOUNT 513,900	YEAR 19 75 AMOUNT 13,000		

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS				
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 534,900			
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$ -			
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.		REQ. NO.		NET REQUIREMENTS (A + B - D) \$ 534,900			
29	1	3	10	73	34		G1840		779153		GROSS ADDITIONS (A) \$ 534,900			
CD ID	LOCATION					RI	COMPL. DATE				NET ADDITIONS (A - C) \$ 534,900			
38	39-72					73-74	75-80			NET CAPITAL REQUIREMENTS (A + B - E) \$ 504,900				
1	SPD.	McDaniel			862	E	4	2	23	75				

CD ID	ADJ.	ACCOUNTING CLASSIFICATION					W.E. CO. BILLS				OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CO.	MATERIAL COST OF EOPT.	LABOR INST. DIV. BILL	REMAINDER EOPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.			
38	3940	41-47	48-50	51-53	54-56	56-63	64-71	72-70	10000	23500	10,200	2000	30000	485,700		
4		G1840		57	C	328,100	63000	18900								
4		G1840		357	C	23,300	16000	3100		2200	1,100	500	3000	49,200		
2		TOTAL					351,400	79000	22000		25700	11300	2500	33000	534,900	
3		CHANGE TOTAL														

EXPLANATION: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_  
TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

ESS CG-1

EST. REQ. NO. 10995 EST./R.O. NO. \_\_\_\_\_  
LOCATION CODE (C & X) G1732 LOCATION CODE (R & M) G1732  
SHEET 3 OF 5  
DATE 3-10-73

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

BASIS	SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
		Switching Electronic		77	\$4,626,000	\$	\$	\$
	Auto Message Rec-Toll Electronic		477T	25,800				
TOTAL EXPENDITURES				(A) \$4,651,800	(B) \$25,000	(C) \$4,626,800	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)				YEAR 1973 AMOUNT 25,000	YEAR 1974 AMOUNT 4,626,800	YEAR 1975 AMOUNT	YEAR 1976 AMOUNT	YEAR 1977 AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS			
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 4,651,800		
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$ -		
								CONTROL LOC.	REQ. NO.		NET REQUIREMENTS (A + B - D) \$ 4,651,800		
											GROSS ADDITIONS (A) \$ 4,651,800		
											NET ADDITIONS (A - C) \$ 4,651,800		
29	1	3	10	73	34		G1732		779073	NET CAPITAL REQUIREMENTS (A + B - E) \$ 4,651,800			
CD ID	LOCATION				RI	COMPL. DATE							
38	SPD. McDaniel 862				E 4	2 23 75							

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		G1732		77	C	3605000	471000	94500	75500	45000	20000	315000	4,626,000		
4		G1732		477	TC	22150	1600	450	50	100		1450	25,800		
4		G1732		77	R	20000							20,000		
4															
4															
4															
4															
4															
4															
4															
4															
2		TOTAL				3647150	472600	94950	75550	45100	20000	316450	4,671,800		
3		CHANGE TOTAL													

EXPLANATION: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10995 EST./R.O. NO. \_\_\_\_\_  
LOCATION CODE (C & X) G1720 LOCATION CODE (R & M) G1720  
SHEET 4 OF 5  
DATE 3-10-73

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 12-74

BASIS	SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	Switching Step-By-Step		237	\$ 221,300	\$ 451,000	\$ 451,000	\$ 451,000	\$ -
	Toll Switching Step-By-Step		237T	2,000	12,300	1500		
	Exchange Line Concentrator		847	850	14,200			
S P E R A M A	Auto Number Identification		437T		10,300	162,000	17,000	
	48 Volt		637		5,500	45,000	8,000	
P O W E R	Emergency Engines		937		1,350	19,100	10,000	
P B X								
TOTAL EXPENDITURES				(A) \$ -	(B) \$ 241,300	(C) \$ 4762,600	(D) \$ 487500	(E) \$ -
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19	AMOUNT	YEAR 19	AMOUNT	YEAR 19	AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS					
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 241,300				
CO. ID.	A	MO.	DAY	YR.	OFF. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$ 4,762,600				
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.		20-26		27-37		NET REQUIREMENTS (A + B - D) \$ (246,200)		
29	1	3	10	73	34		G1720		779152		GROSS ADDITIONS (A) \$ -				
CD ID	LOCATION					RI	COMPL. DATE				NET ADDITIONS (A - C) \$ 4,762,600				
38	39-72					73-74	75-80			NET CAPITAL REQUIREMENTS (A + B - E) \$ 241,300					
1	SPD. University 862					E 4	2 23 75								

CD ID	ADJ.	ACCOUNTING CLASSIFICATION					W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES				
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'G & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.						
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70											
4		G1720		237	X	6000	170,200	33,100		2,000	10000						221,300		
4		G1720		237	TX	150	1,200	500		50	100						2,000		
4		G1720		437	TX	300	8,850	750		100	300						10,300		
4		G1720		847	X	-	600	100		50	100						850		
4		G1720		637	X	200	3,600	1,100		100	500						5,500		
4		G1720		937	X	150	750	300		50	100						1,350		
4		G1720		37	M	18000				79,800	1200						99,000		
4																			
4																			
4																			
4																			
4																			
2		TOTAL					24800	185,200	33,850		82,150	12300						340,300	
3		CHANGE TOTAL																	

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10995 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) G1720 LOCATION CODE (R & M) G1720  
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ SHEET 5 OF 5  
 CURRENTLY READY FOR SERVICE  -TEL. CO.  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 12-74 DATE 3-10-73

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	Circuit - Exchange	57	\$ 6300	\$ 18000	\$ 272,000	\$ 83000	\$
	Circuit - Toll	57T		8400	14,000	4000	
	Circuit - Subscriber	157		2500	43,000	18000	
	Carrier						
S P E R	Circuit - Exchange	357		7150	36,200	2000	
	Circuit - Toll	357T		2050	9,500	600	
A M A							
P O W E R							
P B X							
TOTAL EXPENDITURES			(A) \$ 6300	(B) \$ 38100	(C) \$ 374,700	(D) \$ 107600	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 73 AMOUNT 6300	YEAR 19 AMOUNT	YEAR 19 AMOUNT	YEAR 19 AMOUNT	

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 44,400	
CO. ID.	A	MO.	DAY	YR.	OFF. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$ 374,700			
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.	NET REQUIREMENTS (A + B - D) \$ (63,200)			
29	1	3	10	73	34		G1720	779154	GROSS ADDITIONS (A) \$ 6,300			
CD ID	LOCATION				RI	COMPL. DATE				NET ADDITIONS (A - C) \$ (368,400)		
38	39-72				73-74	75-80				NET CAPITAL REQUIREMENTS (A + B - E) \$ 44,400		
1	SPD. University 862				E 4	2 23 75						

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'G & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-56	56-63	64-71	72-70							
4		G1720		57	C	4500	800	500		100	100		300	6300	
4		G1720		57	X	2900	7600	3800		1200	1000	1500		18000	
4		G1720		57	TX	300	3500	2900		600	500	600		8400	
4		G1720		157	X	50	550	500		500	400	500		2500	
4		G1720		357	TX	150	3300	2700		500	400	100		7150	
4		G1720		357	TX	50	800	700		200	200	100		2050	
4		G1720		57	M	6600	1600	1200			1500			10900	
4		G1720		357	M					9600				9600	
4															
4															
4															
4															
2		TOTAL				14550	18150	12300		12700	4100	2800	300	64900	
3		CHANGE TOTAL													

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

M E M O R A N D U MMajor Accounts Springfield University1/73 Total Book Costs

37C (Basic Switching)	4,407,164.07
37TC (Basic Toll Switching)	12,267.30
* 57C (Basic Circuit)	383,355.93
* 57TC (Basic Toll Circuit)	261,963.61
437TC (Auto. Number Identification)	161,184.01
357C (Special Service-Exchange Circuit)	36,178.31
357TC (Special Service-Toll Circuit)	9,502.15
157C (Circuit-Subscriber Carrier)	40,316.34
* 637C (Pwr. Plt. -48 volt Exchange)	123,649.06
* 937C (Pwr. Plt. Emergency)	38,102.62
847C (Exchange Line Concentrator)	14,176.28

\* These account codes will be only partially retired due to Local Test Desk, Mobile Radio and "N" Carrier equipment left in the University Building.

Equipment Engineering - Switching  
 Kansas City Area  
 March 20, 1973  
 JME/jko

FIGURE 11

INITIAL NO. 1 ESS

<b>SOUTHWESTERN BELL TELEPHONE COMPANY</b>		FORM SN-4 (REV. 1-73)
<b>AUTHORIZATION, ESTIMATE NO. _____</b>		
AREA <u>St. Louis</u>	DIVISION <u>Ladue (1)</u>	ESTIMATE REQUEST NO. <u>10708</u>
TITLE: <u>St. Louis, Missouri - Manchester 527 Office - Initial No. 1 ESS Equipment</u>		
<p><b>NATURE AND NECESSITY</b></p> <p>This estimate provides for the installation of 12,800 lines and 16,00 numbers of No. 1 ESS equipment and associated trunking and power equipment which is to be installed as a growth unit in the Manchester Central Office, 200 Manchester Road, Ballwin, Missouri.</p> <p>This project is planned for service in August, 1970, and is being proposed at this time to provide subscriber relief within the wire center. Centrex-CO services are included for the new Western Electric Regional offices.</p> <p>At cutover the No. 1 ESS will serve approximately 4,500 high usage subscribers presently working in the existing No. 5 Crossbar Office. This will increase the No. 5 Crossbar operative main telephone capacity.</p> <p>Displaced equipment not held for reuse will be returned to the Western Electric Company for credit or junked locally.</p> <p><u>REFERENCES</u></p> <p>Outline of Plan Plant Extension Study STL-114 Traffic Order 70-56 Power Plant Capacity Study (Typical illustrated in Fig. 10) Annual Gain Trend (Typical illustrated in Fig. 13) Spec. 4T40.1 (not attached)</p>		
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <u>ARH</u>		
SERVICE DATE <u>August, 1970</u>		COMPLETION DATE <u>August, 1970</u>
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS
\$3,621,500	-	\$3,621,500
		MAINTENANCE
		\$54,100
RECOMMENDED:	DATE	APPROVED:
DIV. PLT. ENG. . EQUIP. ENG. . ARCH.ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER
APPROVED:		
DIV. PLT. SUPT. BLDG. & EQPT. ENG. . ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.		VICE PRESIDENT AND GENERAL MANAGER
CHIEF ENGINEER		VICE PRESIDENT-TEXAS VICE PRESIDENT - MO. - ILL.
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860

## OUTLINE OF PLAN

Estimate Request 10708  
Sheet 1 of 3OUTLINE OF PLAN  
ST. LOUIS-MANCHESTER

This installation consists of the following major items of equipment for a new initial No. 1 ESS for growth in this wire center:

- 12,800 - Lines
- 205 - Frames
  - SP-CTX-5 Generic Program
  - Data Links for CO-Centrex Service
- 62 - Operator Trunks
- 1,214 - Outgoing Trunks
- 1,426 - Incoming Trunks

This office will provide service initially as a growth unit to business and residential customers within the area plus cutting approximately 4500 high usage lines presently working in the existing No. 5 Crossbar equipment.

This project received executive approval April 21, 1968 and was assigned Plant Extension Engineering Study No. STL-114.

POWER

The new dedicated 48 volt negative and 24 volt positive 111A Power Plant is being provided with the ESS which is a System requirement. An additional 115 KW Emergency Alternator is also being provided at this time to meet the estimated emergency power requirements for this wire center. Refer to the attached power study data.

BUILDING

The present building capacity is adequate until after 1983.

Estimate Request 10708  
Sheet 2 of 3

OUTLINE OF PLAN  
DEVELOPMENT AND FORECAST DATA  
ST. LOUIS-MANCHESTER

DEVELOPMENT

The commercial forecast dated February 21, 1969 indicates the following:

	Actual 2-25-69	<u>12-31-69</u>		<u>12-31-70</u>		<u>12-31-71</u>		<u>12-31-73</u>		<u>12-31-74</u>	
		Gain	Total								
Main Tel.	10082	1298	11380	5203	15285	6875	16957	10345	20427	12160	22242
Lines	9663	1184	10847	5085	14748	6769	16432	10353	20016	12107	21770

Both the new No. 1 ESS and existing No. 5 Crossbar equipment capacities are developed as follows:

<u>Capacity</u>	<u>Installed</u>		<u>Operative</u>	
	<u>Lines</u>	<u>Numbers</u>	<u>Lines</u>	<u>Main Tel.</u>
No. 5 Crossbar (Exhaust 8-70)	17,000	15,000	14,680	12,200
No. 1 ESS (This Addition)	12,800	16,000	12,150	15,100
Total No. 5 Crossbar & No. 1 ESS (Exhaust A-74)	29,800	31,000	26,830	27,300

Estimate Request 10708  
Sheet 3 of 3OUTLINE OF PLANPRESENT VIEW OF ASSOCIATED PROJECTS

	<u>Gross Additions</u>
No. 1 ESS Equipment - This Estimate	\$3,621,500
T-1 Carrier	420,000
Circuit Equipment for Private Lines	200,000
Outside Plant	345,000
Equipment at Customers Premises (CO-CTX)	100,000
Building Addition (Estimate 1425)	1,033,300
Total Project	\$5,719,800

MAINTENANCE EXPENDITURES

Identify, relocate and rearrange auxiliary framing and cable racking now existing in the ESS area which was originally installed for future No. 5 Crossbar. Rearrange rolling ladders, track and ladder stops.

Material	\$3,000
W.E. Labor	2,500
Tel.Co. Labor	2,000
Tel.Co. Engr.	<u>1,600</u>
47M	\$9,100

Spare circuit packs, memory card modules, and program use fee.

Material	77R \$45,000
----------	--------------

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10708 EST./R.O. NO. \_\_\_\_\_  
LOCATION CODE (C & X) D 1025 LOCATION CODE (R & M) D 1025  
SHEET 1 OF 1  
DATE \_\_\_\_\_

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

B A S I C	SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
		EXCH. ELEC. SWITCHING EQPT.		77	\$ 3,397,700	\$	\$	\$
	EXCH. CIRCUIT EQPT.		57	31,900				
S P E R								
A M A	AUTOMATIC MESSAGE RECORDER		447T	36,100				
P O W E R	24V & 48V POWER PLANT		677	135,000				
P B X	EMERGENCY ENGINE ALT.		947	20,800				
TOTAL EXPENDITURES				(A) \$ 3,621,500	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)				YEAR 19 69 AMOUNT 2,910,000	YEAR 19 70 AMOUNT 711,500			

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 3,621,500	
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$	
							CONTROL LOC.	REQ. NO.			NET REQUIREMENTS (A + B - D) \$ 3,621,500	
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37			GROSS ADDITIONS (A) \$ 3,621,500	
29	1	06	15	69	81		D 1025 760.333		NET ADDITIONS (A - C) \$ 3,621,500			
CD ID	LOCATION					RI	COMPL. DATE			NET CAPITAL REQUIREMENTS (A + B - E) \$ 3,621,500		
38	39-72					73-74	75-80					
1	MANCHESTER					E	2 11 24 72					

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		D 1025		77	C	2,634,800	460,400	71,500	9500	32000	21000	19000	149300	3,397,700
4				477	TC	31,300	900	600	100	900	600		1700	36,100
4				677	C	78,700	24,000	17,900	400	4300	2900		6800	135,000
4				57	C	19,400	5,800	2,900		1500	600	400	1300	31,900
4				47	M		4,000	400		3200	700	800		9,100
4				947	C					300	500	19000	1000	20,800
4				77	R	45,000								45,000
2		TOTAL				2,809,200	495,300	93,300	10000	42200	26300	39200	16100	3,675,600
3		CHANGE TOTAL												

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_  
TEL. NO. \_\_\_\_\_

FIGURE 12

NO. 5 CROSSBAR ADDITION - TRUNKING

SOUTHWESTERN BELL TELEPHONE COMPANY

Form SN-4  
(Rev. 7-70)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_

AREA San Antonio DIVISION San Antonio (3) ESTIMATE REQUEST NO. 10809

TITLE: Additional No. 5  
San Antonio, Texas - Culebra 684 Office: Crossbar Equipment

NATURE AND NECESSITY

This estimate provides for 455 trunks, 29 frames of No. 5 Crossbar equipment and additional negative 48 volt power.

This addition, with a service date of July, 1972, is proposed at this time to:

1. Provide trunking for the elimination of interzone charges in Metropolitan San Antonio in accordance with our commitment to the City of San Antonio.
2. Provide additional negative 48 volt charging and battery equipment for the engineered growth of this office.

REFERENCES:

Traffic Order 71-S-19P and 71-S-19P, S. 1  
Specification 1665.40  
Outline of Plan  
Power Plant Data (Typical illustrated in Fig. 10)  
Annual Gain Trend (Typical illustrated in Fig. 13)

Estimate Prepared By \_\_\_\_\_

Estimate Reviewed By \_\_\_\_\_

F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	INITIALS <u>CZM</u>
SERVICE DATE		July, 1972		COMPLETION DATE June, 1972
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
238,100	---	238,100	25,000	
RECOMMENDED:	DATE	APPROVED:	DATE	
DIV. PLT. ENG., EQUIP. ENG., ARCH. ENG. OR SPCL. SERV. ENG.		GENERAL MANAGER		
APPROVED:		VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.		
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING		
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

E.R. 10809

Sheet 1 of 2

OUTLINE OF PLANSAN ANTONIO-CULEBRA 684 OFFICE

Of the 455 total trunks being provided, 235 are Incoming, 186 are Outgoing, and 34 are Miscellaneous. Twenty-nine No. 5 Crossbar frames are programmed.

The additional power equipment consists of one string of 27 cells of KS-15544 List 508 batteries and one additional 100 Ampere 48V Charging rectifier. See attached Power Plant Data Sheets.

The present View of Associated Projects involved in this undertaking which provides for the elimination of inter-zone charges in San Antonio is as follows:

<u>Location</u>	<u>Est. Req.</u>	<u>Present View</u>
S.A. Diamond 342	E.R. 10821	\$ 109,600
S.A. Salado 692 (See S.A. Diamond 342)		
S.A. Edison 333	E.R. 10833	81,600
S.A. Indian Creek 623		20,000
S.A. Oak Island 624 (See Walnut 922)		
S.A. Palo Alto 628 (See Walnut 922)		
S.A. Buena Vista 627 (See Walnut 922)		
S.A. Walnut 922		180,000
S.A. Thelma 626		46,000
S.A. Sandy Hills 621 (See Thelma 626)		
S.A. Jarratt 622		45,000
S.A. Southton 633		131,000
S.A. Elmdorf 635 (See Southton 633)		
S.A. Martinez 661		150,000
S.A. St. Hedwig 667 (See Martinez 694)		
S.A. Helotes 695		28,000
S.A. Elm Creek 697 (See Wetmore 694)		
S.A. Wetmore 694		150,000
S.A. Fratt 655		150,000
S.A. Bracken 651 (See Fratt 655)		
S.A. Universal City 658	E.R. 10788	108,100
S.A. Lackland 674	E.R. 10829	112,000
S.A. Montgomery 677(See Lackland 674)		
S.A. Potranco 679 (See Lackland 674)		
S.A. Culebra 684	E.R. 10809	219,300

E.R. 10809

Sheet 2 of 2

OUTLINE OF PLANSAN ANTONIO-CULEBRA 684 OFFICE

<u>Location</u>	<u>Est. Req.</u>	<u>Present View</u>
S.A. Geronimo Creek 688 (See Culebra 684)		\$\$
S.A. Babcock 696		41,000
S.A. Leon Springs 69 <sup>9</sup> (See Babcock 696)		
S.A. Sayers 649		<u>21,000</u>
Total C.O.E. (Switching) Expenditure		\$1,592,600
Total Circuit Equipment Expenditure		2,670,600
Total Outside Plant Expenditure		<u>258,000</u>
Total Project Expenditure		\$4,521,200

MAINTENANCE EXPENDITURES

The following rearrangements will be required at the Culebra office:

47M 1. Permanent rearrangement of four bays of No. 5 Crossbar equipment to allow for orderly growth of the trunking equipment.

W.E. Labor	14,400
W.E. Engineering	3,800
Tel.Co. Engineering	<u>3,800</u>
Total	\$22,000

347M 2. Associated Plant labor involved in turning down trunks in conjunction with the above rearrangement. \$3,000

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10809 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) X4146 LOCATION CODE (R & M) X4146  
 F.C.C. AUTHORIZATION REQ'D YES  NO  -TEL. CO.   
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -W.E. CO.   
 CURRENTLY READY FOR SERVICE  SHEET 1 OF 1  
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_ DATE 6-1-70

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	No. 5 Crossbar Eqpt.		47	\$ 219300	\$	\$	\$
S P E C I A L							
P O W E R	48 Volt Power Eqpt.		647	18800			
P B X							
TOTAL EXPENDITURES			(A) \$ 238100	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 71 AMOUNT 4000	YEAR 72 AMOUNT 234100	YEAR 19 AMOUNT	YEAR 19 AMOUNT	YEAR AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS			
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 238100		
CO. ID.	A	MO.	DAY	YR.	QFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$		
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.			NET REQUIREMENTS (A + B - D) \$ 238100		
29	1	6	01	70	71		X4146	7-32051			GROSS ADDITIONS (A) \$ 238100		
CD ID	LOCATION					RI	COMPL. DATE			NET ADDITIONS (A - C) \$ 238100			
38	39-72					73-74	75-80			NET CAPITAL REQUIREMENTS (A + B - E) \$ 238100			
1	CULEBRA					E	310 05 72						

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'G & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		X4146		47	C	136,700	51000	19600		3,000	4000	900	4100	219300	
4		X4146		647	C	10,100	4,100	2000		800	1000	500	300	18800	
4		X4146		47	M		14,400	3800			3800			22000	
4		X4146		347	M					3,000				3000	
4															
4															
4															
4															
4															
4															
2		TOTAL				146800	69500	25400		6800	8800	1400	4460	263100	
3		CHANGE TOTAL													

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_  
 TEL. NO. \_\_\_\_\_

FIGURE 13

NO. 5 CROSSBAR ADDITION - EXCHANGE GROWTH

SOUTHWESTERN BELL TELEPHONE COMPANY		Form SN-4 (Rev. 7-70)
AUTHORIZATION, ESTIMATE NO. _____		
AREA <u>Kansas City</u>	DIVISION <u>Springfield (4)</u>	ESTIMATE REQUEST NO. <u>10704</u>
TITLE: Sedalia, Missouri - 826 Office - Additional No. 5 Crossbar Eqnt.		
NATURE AND NECESSITY  This estimate provides 1320 lines, 1000 numbers, 20 frames, and 172 trunks of No. 5 Crossbar equipment. This addition, with a service date of March, 1972 is proposed at this time to meet forecasted development until September, 1973. It is based on Wire Center Area Forecast dated February 1, 1971 which was verified on March 5, 1971.  Displaced equipment not held for re-use will be returned to the Western Electric Company for best allowance or junked locally.		
REFERENCES:  Traffic Order 71-M-7 Specification 3268.178 Facility report dated March 5, 1971 Outline of Plan Annual Gain Trend		
Estimate Prepared By _____		
Estimate Reviewed By _____		
F.C.C. AUTHORIZATION REQUIRED YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <u>VLM</u>		
SERVICE DATE <u>March 1972</u>		COMPLETION DATE <u>March 1972</u>
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS
181,200	100	180,700
		MAINTENANCE
		18,300
RECOMMENDED:	DATE	APPROVED:
DIV. PLT. ENG., EQUIP. ENG., ARCH. ENG. OR SPCL. SERV. ENG.		GENERAL MANAGER
APPROVED:		
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.		VICE PRESIDENT AND GENERAL MANAGER
CHIEF ENGINEER		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860

E.R. 10704

Sheet 1 of 3

OUTLINE OF PLANSEDALIA, MISSOURI

The following major items of equipment are being added:

1320 - Lines  
 1000 - Numbers  
 20 - Frames  
     3-Basic 290 Line Link Frames  
     2-Split 100 Line Link Frame  
     2-Split 50 Line Link Frame  
     8-Trunk Frames  
     1-Trunk Link Frame  
     1-Number Group Frame  
     1-Line Link Connector Frame  
     1-Number Group Connector Frame  
     1-Miscellaneous Frame  
 172 - Trunks

The lines and numbers are based on the following forecasted development:

	<u>2-25-71</u>	<u>12-31-71</u>	<u>12-31-72</u>	<u>9-73</u>			
	<u>Actual</u>	<u>Gain</u>	<u>Cum. Gain</u>	<u>Cum. Gain</u>			
		<u>Total</u>	<u>Total</u>	<u>Total</u>			
Lines	9,846	770	10,616	1,482	11,328	1,914	11,760
Main Stations	10,982	408	11,390	1,012	11,994	1,326	12,308

The existing and proposed switching capacities are as follows:

	<u>Installed</u>		<u>Operative</u>	
	<u>Lines</u>	<u>Numbers</u>	<u>Lines</u>	<u>Numbers</u>
Present - Will Last Until 3-72	13,660	13,000	12,180	11,500
This Addition	1,320	1,000	1,100	800
Total - Will Last Until 9-73	14,980	14,000	13,280	12,300

E.R. 10704

Sheet 2 of 3

OUTLINE OF PLAN

SEDALIA, MISSOURI

Rearrangements - Changes - Modifications

In addition to the provisions for estimated growth, the following service improvement items are included:

1. Modify DP Senders to provide "wink" feature  
per E.M. 1445. \$4,700 47M
2. Modify DP Senders to provide time out feature  
per SD-26050-01 Issue 16-D. \$8,000 47M
3. Modify office for stuck sender tracing feature  
per E.M. 1812. \$2,000 47M
4. Modify coin supervisory circuits per  
E.L. 892. \$1,000 47M
5. Modify CAMA Billing Indexer per SD-26012,  
Issue 11D. \$ 500 47M

An increase in recording trunk multiple is being accomplished on this job by re-locating and re-using 200 existing intertoll and tributary trunk multiple. \$2,100 17M

Sheet 3 of 3

OUTLINE OF PLANANNUAL GAIN TREND

Est. Req. 10704

Moberly District  
Sedalia ExchangeSpringfield Division  
Sedalia 826 Wire Center AreaMAIN TELEPHONE GAIN

<u>ACTUAL</u>		<u>FORECAST</u>	
1966	<u>388</u>	1971	<u>401</u>
1967	<u>152</u>	1972	<u>604</u>
1968	<u>337</u>	1973	<u>421</u>
1969	<u>167</u>	1974	<u>415</u>
1970	<u>148</u>	1975	<u>185</u>
Ann. Avg.	<u>238</u>	Ann. Avg.	<u>405</u>

## NOTES

1966 and 1968 gains and 1967 loss caused by moving and out of Minuteman modification crews. Low gains in 1969 and 1970 were caused by poor economic conditions.

The new Army ABM project will cause another unusual gain pattern. Even though Senate approval has not been received, it is assumed it will be and the gains are reflected in the forecast period, with move out expected in 1975.

May 11, 1971

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  - TEL. CO.   
 CURRENTLY READY FOR SERVICE  ENGINEERED BY \_\_\_\_\_ - W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 3-72

EST. 10704 EST./R.O. \_\_\_\_\_  
 REQ. NO. \_\_\_\_\_ NO. \_\_\_\_\_  
 LOCATION G5804 LOCATION CODE (R & M) G5804  
 CODE (C & X) \_\_\_\_\_ SHEET 1 OF 1  
 DATE 3-10-71

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	No. 5XB Eqpt.	47	\$ 180800	\$ 250	\$ 100		\$
	3 CL SWBD. Multiple	17T		150			
S P E C I A L							
A M A							
P O W E R							
P B X							

TOTAL EXPENDITURES			(A) \$ 180800	(B) \$ 400	(C) \$ 100	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 71 AMOUNT 140,800	YEAR 19 72 AMOUNT 40,000	YEAR 19	YEAR 19	AMOUNT

SECTION 1 - HEADER DATA										SUMMARY OF ESTIMATED REQUIREMENTS				
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS			GROSS EXPENDITURES (A + B)	\$ 181,200			
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.		PLANT RETIREMENTS (C)	\$ 100			
29	1	3	10	71	31		G5804	7-79972		NET REQUIREMENTS (A + B - D)	\$ 181,200			
CD ID	LOCATION		RI	COMPL. DATE		ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE						GROSS ADDITIONS (A)	\$ 180,200	
38	39-72		73-74	75-80								GROSS ADDITIONS (A)	\$ 180,200	
1	Sedalia		E 4	1 25 72								NET ADDITIONS (A - C)	\$ 180,700	
SECTION 2 - DETAIL DISTRIBUTION										NET CAPITAL REQUIREMENTS (A + B - E)	\$ 181,200			

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-56	56-63	64-71	72-70							
		G5804		47	C	117500	36300	15200	150	1000	6500	150	4000	180800	
		G5804		47	M	5000	5400	4800		500	500			16200	
		35804		47	X		100	50			100			250	
		G5804		17	M	700	1100	200		50	50			2100	
		G5804		17	M		50	50			50			150	
2		TOTAL				123200	42950	20300	150	1550	7200	150	4000	199500	
3		CHANGE TOTAL													

EXPLANATION: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

FIGURE 14

## STEP-BY-STEP ADDITION - EXCHANGE AND TOLL SWITCHING

SOUTHWESTERN BELL TELEPHONE COMPANY		Form SN-4 (Rev. 7-70)	
AUTHORIZATION, ESTIMATE NO. _____			
AREA <u>Kansas</u>	DIVISION <u>Northern (4)</u>	ESTIMATE REQUEST NO. <u>10000</u>	
<b>TITLE:</b>			
Topeka, Kansas - Topeka 232 - Step-by-Step Addition			
<b>NATURE AND NECESSITY</b>			
<p>This estimate provides for additional exchange and toll switching equipment consisting of 1800 Lines, 600 Terminals, 35 Shelves and 190 Trunks, exchange circuit equipment and initial TOUCH-TONE equipment in the Topeka 232 office as covered on the attached outline of plan. Associated power is also provided.</p> <p>The additional equipment is required at this time (1) to prevent exhaust of present exchange switching equipment, (2) to care for forecasted exchange development until January, 1974, and for the 1974 toll busy season and (3) provide for the Suburban 4-party conversion scheduled for completion in July, 1973.</p> <p>Displaced equipment not held for re-use shall be returned to Western Electric for best allowance or be junked locally.</p>			
<b>REFERENCES:</b>			
<ol style="list-style-type: none"> <li>1. Outline of Plan</li> <li>2. Facility Report dated March 5, 1971</li> <li>3. Annual Gain Trend (Typical illustrated in Fig. 13)</li> <li>4. Power Data Sheets (Typical illustrated in Fig. 10)</li> <li>5. Central Office Equipment Recommendations</li> <li>6. Traffic Order TO 71-N-00</li> <li>7. Wire Center Area Forecast dated February 1, 1971 (Verified March 25, 1971)</li> <li>8. Specification SWK-XXXX-73 (Not attached)</li> </ol>			
Estimate Prepared By _____		Estimate Reviewed By _____	
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <u>BZR</u>			
SERVICE DATE <u>July 1972</u>		COMPLETION DATE <u>July 1972</u>	
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
404,400	17,000	383,400	8,500
RECOMMENDED: _____		APPROVED: _____	
DATE _____		DATE _____	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		GENERAL MANAGER	
APPROVED: _____			
DIV. PLT. SUPT. BLDG. & EQPT. ENG. ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.		VICE PRESIDENT AND GENERAL MANAGER	
CHIEF ENGINEER		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.	
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING	
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861	
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

OUTLINE OF PLAN

E.R. 10000

Topeka 232

## 1. Major items of equipment

## Additions:

1800	Lines (Total 16,200)
600	Terminals (Total 17,400)
20	Selector Shelves
75	Interoffice Trunks
40	Intertoll Trunks
25	Tributary Trunks
50	Incoming CAMA Trunks
30	Originating Registers (TOUCH-TONE)
1	4A Traffic Usage Recorder Frame
110	Dial Long Line Mountings
10	Two Party ANI Dial Long Line Units
94	E Repeater Mountings
140	2A Range Extenders
2	48 Volt Battery Strings (B and D)
1	400 Ampere 48 Volt Rectifier (G 05)
1	6000 Ampere 48 Volt End Cell Switch

## Removals:

1	48 Volt Battery String (B)
1	2000 Ampere 48 Volt End Cell Switch

## Modifications:

18	SXS CAMA Senders - PEM 9629
1	48 Volt 302A Power Plant - 6000 Ampere
3	SXS Line Finder Units - TOUCH-TONE

## 2. Dial Equipment

All equipment added in normal pattern of growth.

## 3. Power Equipment

## (a) 48 Volt Power Plant

Forecasted demand will exceed the rating of the present 2000 ampere end cell switch. The proposed 6000 ampere switch will care for expected requirements through 1985 by which time much of the SXS equipment will be replaced. Battery string B is electrically deteriorated and unreliable as covered on the discharge-recharge test results included with the attached power study. The

OUTLINE OF PLAN

addition of Battery string D and rectifier G-05 care for expected demand through the engineering period for this project.

- (b) 24 volt, 130 volt, and Emergency Engine-Alternator plants present equipment is adequate to care for expected demand through the engineering period for this project.

## 4. Exchange Switching Capacity

	<u>Installed</u>		<u>Term.</u> <u>(Total)</u>	<u>Operative</u>		<u>Term.</u> <u>(Total)</u>
	<u>Lines</u> <u>(TT)</u>	<u>(Total)</u>		<u>Lines</u> <u>(TT)</u>	<u>(Total)</u>	
Present (Ext. 7/21)	0	14400	16800	0	13000	15100
Additional	<u>2400</u>	<u>1800</u>	<u>600</u>	<u>1200</u>	<u>1550</u>	<u>525</u>
Proposed Exh.1/74)	2400	16200	17400	1200	14550	15625

## 5. Exchange Development

Actual 2/25/71	<u>Wire Center Area Forecast (2/1/71)</u>				<u>1/74 (Exh.)</u> <u>Cum.</u>				
	<u>12/31/71</u>	<u>12/31/72</u>	<u>12/31/73</u>	<u>1/74 (Exh.)</u> <u>Cum.</u>					
<u>Total</u>	<u>Gain</u>	<u>Total</u>	<u>Gain</u>	<u>Total</u>	<u>Gain</u>	<u>Total</u>	<u>Gain</u>	<u>Total</u>	
TT Lines	0	0	0	750	750	1150	1150	1200	1200
Total Lines	12650	175	12825	475	13125	1825	14475	1845	14495
Total Terminals	14625	250	14875	600	15225	970	15595	1000	15625

## 6. Exchange Circuit Equipment

- A - Exchange Loops 1300 to 1600 ohms (2A Range Extender)  
 B - Exchange Loops 1600 to 1800 ohms (48 volt Long Line and E Repeater)  
 C - Exchange Loops 1800 to 2800 ohms (96 volt Long Line and E Repeater)  
 D - Special Service Loops (E Repeater)

OUTLINE OF PLAN

Page 3 of 4

## Forecast Requirements

<u>Loop</u>	<u>Party</u>	<u>Present</u> <u>2/1/71</u>	<u>12/31/71</u>	<u>12/31/72</u>	<u>12/31/73</u>	<u>1/74(Exh.)</u>
A	all	0	0	10	140	140
B	1	0	0	0	5	5
B	2	15	15	17	20	20
B	4	0	0	0	75	75
B	8	3	5	8	0	0
C	4	0	0	0	30	30
D		15	16	18	20	20

<u>Equipment</u>	<u>Installed</u> <u>Present</u>	<u>Forecast</u> <u>Requirements</u>
48v DLL	30*	100#
96v DLL	0	30#
E Repeater	60	150

\*Existing 48 volt DLL units consist of 10 SD-96555 wired units and 20 SD-96588 2-party ANI units.

# Shelves are provided for 100 plug-in DLL units (22 individual line, 88 four party selective lines). Plug-in equipment will be provided by the Central Plug-in Coordinator.

## 7. Building Capacity

Switching equipment floor space is adequate to care for growth through 1975. A building addition is presently scheduled to be ready for equipment in August, 1975.

## 8. Modifications

37M 1. Step-by-Step	<u>CAMA Senders</u>	<u>Power Plant</u>	<u>Line Finder Units</u>
W.E.Material	\$ 300	\$ 300	\$ 100
W.E.Labor	1,400	800	1,000
W.E.Engineering	700	300	500
Tel.Co.Engineering	400	100	100
Total	\$2,800	\$1,500	\$1,700

337M 2. Plant labor required in connection with turning down trunks, etc., in association with the above modifications. \$2500

OUTLINE OF PLAN

## 9. Associated Project Costs.

Associated project costs for the Suburban 4-party conversion are as follows:

Outside Plant E.R. 10001	\$ 89,000
Outside Plant E-500 (Approved March 5, 1971)	110,000
COE (This E.R.)	<u>95,000</u>
	\$294,000

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10000 EST./R.O. NO. \_\_\_\_\_  
LOCATION CODE (C & X) K3510 LOCATION CODE (R & M) K3510  
SHEET 1 OF 1  
DATE 6-5-71

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-72

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	Exch - SXS Dial Switching	37	\$ 325,000	\$	\$	\$	\$
	Exch - Circuit	57	30,100				
	Toll - SXS Dial Switching	37 T	22,700				
S P E R A M A							
P O W E R	48W Power Plant	637	22,600	4,000	17,000	5,000	
P B X							
TOTAL EXPENDITURES			(A) \$ 400,400	(B) \$ 4,000	(C) \$ 17,000	(D) \$ 5,000	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 71 AMOUNT 2,000	YEAR 19 72 AMOUNT 398,400	YEAR 19 AMOUNT	YEAR AMOUNT	

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 404,400	
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$ 17,000	
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.			NET REQUIREMENTS (A + B - D) \$ 399,400	
29	1	6	5	71	42		K3510	7-76511			GROSS ADDITIONS (A) \$ 400,400	
CD ID	LOCATION					RI	COMPL. DATE				NET ADDITIONS (A - C) \$ 383,400	
38	39-72					73-74	75-80			NET CAPITAL REQUIREMENTS (A + B - E) 404,400		
1	Topeka 232					E 2	9 07 72					

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS				OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		K3510		37	C	200,000	70,000	37,000		3,000	1,200		3,000	325,000
4		K3510		37	C	17,000	3,000	1,500		100	800		300	22,700
4		K3510		57	C	21,000	5,000	2,800		200	600		400	30,100
4		K3510		637	C	12,200	6,500	2,500		500	700		200	22,600
4		K3510		637	X	-	2,500	1,000		200	300			4,000
4		K3510		37	M	700	3,200	1,500			500		100	6,000
4		K3510		337	M	-				2,500				2,500
4														
4														
4														
4														
2		TOTAL				250,900	90,200	46,300		6,500	14,900	200	3,900	412,900
3		CHANGE TOTAL												

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_  
TEL. NO. \_\_\_\_\_

FIGURE 15

## DIRECTORY ASSISTANCE POSITIONS-CONVERSION OF 23A DESKS TO 2B AUXILIARY POSITIONS

SOUTHWESTERN BELL TELEPHONE COMPANY				Form SN-4 (Rev. 7-70)
AUTHORIZATION, ESTIMATE NO. _____				
AREA	Houston	DIVISION	W. Houston (2)	ESTIMATE REQUEST NO. 10470
<b>TITLE:</b> Houston, Texas - Pasadena Toll Office - Modification of No. 23A Directory Assistance Positions to No. 2B Auxiliary Service Positions				
<b>NATURE AND NECESSITY</b>				
<p>This estimate provides for the conversion of 36-No. 23A Directory Assistance Positions to No. 2B Auxiliary Service Positions and for the provision of new auxiliary service positions for operation with a No. 5 Crossbar Automatic Call Distributor.</p> <p>Provisions are also included for the removal of old No. 23A desk equipment that will not be re-used.</p> <p>The existing directory assistance system in Houston consists of seven scattered information units which are nearing exhaustion. Each of these units has its own concentrating and call distributing unit. The directory assistance load has increased substantially since the introduction of Extended Metropolitan Service in 1970. Further growth is expected when nearby Independent Companies join the Metropolitan dialing plan.</p> <p>This work is in accordance with approved Plant Extension Engineering Study H-103 and is proposed at this time for the following reasons:</p> <ol style="list-style-type: none"> <li>1. To gain the efficiency of the one large No. 5 Crossbar call distributor which will effect reduced position requirements. Space is not available to expand present No. 23A Desk installations.</li> <li>2. To effect a more constant and evenly distributed work load to all desk positions and to provide call carrying capacity for the anticipated increase in information traffic.</li> </ol> <p>Displaced equipment not held for re-use shall be returned to Western Electric for best allowance or junked locally.</p>				
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input type="checkbox"/> INITIALS				
SERVICE DATE		COMPLETION DATE		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
RECOMMENDED:		DATE	APPROVED:	DATE
DIV. FLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.			GENERAL MANAGER	
APPROVED:			VICE PRESIDENT AND GENERAL MANAGER	
DIV. FLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.			VICE PRESIDENT - TEXAS    VICE PRESIDENT - MO. - ILL.	
CHIEF ENGINEER			VICE PRESIDENT - ENGINEERING	
GENERAL PLANT MANAGER			LISTED ON WEEKLY SUMMARY - FORM SN-861	
GENERAL COMMERCIAL MANAGER			AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

SOUTHWESTERN BELL TELEPHONE COMPANY

Form SN-4  
(Rev. 7-70)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_

Page 2 of 2

AREA Houston DIVISION W. Houston (2) ESTIMATE REQUEST NO. 10470

TITLE:

NATURE AND NECESSITY

REFERENCES:

Outline of Plan  
 Traffic Orders: 70-EH-46  
                   70-EH-46, S. 1  
 Specification 4H87.12  
 Vice President-Texas letter of December 31, 1969, to  
 Vice President-Engineering - File E-1P1.01

Estimate Prepared By \_\_\_\_\_

Estimate Reviewed By \_\_\_\_\_

F.C.C. AUTHORIZATION REQUIRED YES  NO  INITIALS CDH

SERVICE DATE March, 1972 COMPLETION DATE September, 1972

GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
113,600	111,700	14,200	900
RECOMMENDED: _____ DATE _____		APPROVED: _____ DATE _____	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH.ENG. OR SPCL. SERV. ENG.		GENERAL MANAGER	
APPROVED: _____		VICE PRESIDENT AND GENERAL MANAGER	
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.		VICE PRESIDENT-TEXAS VICE PRESIDENT - MO. ILL.	
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING	
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861	
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

E.R. 10470

Sheet 1 of 1

OUTLINE OF PLANHOUSTON-PASADENA TOLL

This job which is in accordance with approved Plant Extension Engineering Study No. H-103 provides for the following major items:

Modify	36 - No. 23A desks for No. 2B desks (\$900 to 47M)
Add	4 - No. 2B Desks
Add	2 - No. 2B Supervisory Control Consoles
Add	40 - Position, Trunk & Control Circuits (Primary)
Add	4 - Position, Trunk & Control Circuits (Secondary)
Remove	170 - Incoming Trunks
Remove	8 - Outgoing Trunks

The conversion of the Houston Information Service to the No. 5 ACD has progressed so that there are now 144 positions of No. 23A desk already modified or other orders have been placed for their modification to No. 2B operation. These positions are located at the Capitol, Ashland and Pasadena Toll Building. With this installation there will be 184 positions of No. 2B Auxiliary Service Positions connected to the No. 5 ACD in Houston.

The following is a comparison of the present and study view costs of this project. The study view of this project was calculated based on preliminary price information prior to the issuance of an Engineering Letter. Western Electric price information was unavailable. Also originating office test equipment information was unavailable.

<u>Item</u>	<u>Study View</u>	<u>Present View</u>
3ACD System installed for interim relief (Est.2195)	\$200,000	\$166,000
5ACD System 5XB ACD (E-2547)	\$525,000	\$599,000
Auxiliary Service Centers:		
Witte location	\$144,000 (60 pos.)	\$454,000 (120 pos.)
Airline Toll	\$125,000 (52 pos.)	\$188,550 ( 52 pos.)
Pasadena Toll	\$ 9,600 ( 4 pos.)	\$ 14,400 ( 4 pos.)
Modify existing 23A desks	\$192,000	\$380,000
Circuit Equipment	\$209,000 (estimated)	\$209,000 (estimated)
Originating Ofc. Test Eqpt.	---	\$ 63,600
	<u>\$1,404,600</u>	<u>\$2,074,550</u>

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10470 EST./R.O. NO. \_\_\_\_\_

LOCATION CODE (C & X) W2099 LOCATION CODE (R & M) W2099

F.C.C. AUTHORIZATION REQ'D YES  NO  UNDER CONSTRUCTION  -TEL. CO.

CURRENTLY READY FOR SERVICE  ENGINEERED BY \_\_\_\_\_ -W.E. CO.

SHEET 1 OF 1  
DATE 1/14/71

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 3-72

SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
Exch: 2B Aux. Service Center	47	\$ 97,500	\$	\$	\$	\$
Exch: 23 Desk Eqpt.	37		16,100	111,700	100	
TOTAL EXPENDITURES						
		(A) \$ 97,500	(B) \$ 16,100	(C) \$ 111,700	(D) \$ 100	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)		1971 AMOUNT 5,000	1972 AMOUNT 92,500	1971 AMOUNT	1972 AMOUNT	

SECTION 1 - HEADER DATA										SUMMARY OF ESTIMATED REQUIREMENTS				
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS			GROSS EXPENDITURES (A + B)				
							CONTROL LOC.	REQ. NO.		PLANT RETIREMENTS (C)				
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37		NET REQUIREMENTS (A + B - D)				
29	1	4	23	71	62		W2099	766391		GROSS ADDITIONS (A)	\$ 97,500			
CD ID	LOCATION						RI	COMPL. DATE			NET ADDITIONS (A - C)	\$ (14,200)		
38	39-72						73-74	75-80			NET CAPITAL REQUIREMENTS (A + B - E)	\$ 113,600		
1	Pasadena Toll						E	2 5 01 72						

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS				TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.							
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		W2099		47	C	63,000	18,000	10,000			1,500	2,500	500	2,000	97,500
4		W2099		37	X		10,200	4,500			500	800	100		16,100
4		W2099		47	M		600	200				100		900	
2		TOTAL				63,000	28,800	14,700			2,000	3,400	600	2,000	114,500
3		CHANGE TOTAL													

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

FIGURE 16

3CL SWITCHBOARD GROWTH

SOUTHWESTERN BELL TELEPHONE COMPANY

Form SN-4  
(Rev. 7-70)

**AUTHORIZATION, ESTIMATE NO.** \_\_\_\_\_

AREA Dallas DIVISION South Dallas (8) ESTIMATE REQUEST NO. 10075

**TITLE:**  
Longview, Texas, Main 753 Office: Additional #3CL Switchboard Positions

**NATURE AND NECESSITY**

This estimate provides for the installation of 15 additional No. 3CL switchboard positions, multiple facilities, 128 intertoll trunks, 351 intertoll step-by-step selectors and 78 local selectors.

This addition is proposed at this time to:

1. Provide switchboard positions for the estimated increase in operator handled traffic through August, 1972.
2. Provide intertoll trunks to handle the dialed intertoll traffic through August, 1972.
3. Provide intertoll tandem step-by-step selectors and local selectors for the new Longview "757" unit and the Longview Judson "663" wire center.

Surplus 3CL switchboard and associated equipment from the Dallas "941" office will be applied on this addition to the extent possible.

**REFERENCES:**

Traffic Orders 70DS-10 and 70DS-29P  
Specifications 8393.296 and 0685.59  
Outline of Plan

Estimate Prepared By \_\_\_\_\_  
Estimate Reviewed By \_\_\_\_\_

F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	INITIALS <b>ARD</b>
SERVICE DATE <u>5-71</u>		COMPLETION DATE <u>5-71</u>		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
249,500	-	249,500	6,000	
RECOMMENDED:		DATE	APPROVED:	DATE
DIV. PLY. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.			GENERAL MANAGER	
APPROVED:			VICE PRESIDENT AND GENERAL MANAGER	
DIV. PLY. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.			VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.	
CHIEF ENGINEER			VICE PRESIDENT - ENGINEERING	
GENERAL PLANT MANAGER			LISTED ON WEEKLY SUMMARY - FORM SN-861	
GENERAL COMMERCIAL MANAGER			AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

E.R. 10075

Sheet 1 of 1

OUTLINE OF PLAN

LONGVIEW, TEXAS-MAIN 753 OFFICE

This addition consist of the following major items:

- 15 Positions
- 120 Recording Multiple
- 80 Toll Switch Multiple
- 128 Intertoll Trunks
- 22 Selector Shelves
- 351 Intertoll Selectors
- 78 Local Selectors

The above are required at this time to provide the necessary facilities to handle the anticipated increase in operator handled and dialed intertoll traffic through August, 1972.

The additional positions are based on the switch-board traffic data indicated on Page 2 of Traffic Order 70DS-10. Surplus equipment will be applied on this project from the Dallas "941" office.

Rearrangements and Changes

The following rearrangements will be required at the step-by-step Longview Main 753 office:

<u>37M</u> Verification tests and labor associated with relocating two switchboard positions.	\$3,500
<u>337M</u> Permanent rearrangements of approximately 60 intertoll trunks.	\$2,500
Total	<u>\$6,000</u>

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.

CURRENTLY READY FOR SERVICE  -W.E. CO.

EST. REQ. NO. 10075 EST./R.O. NO. \_\_\_\_\_

LOCATION CODE (C & X) M7435 LOCATION CODE (R & M) M7435

SHEET 1 OF 1

DATE 2/10/70

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL							
B A S I C	Local: SXS Switching	37	\$ 17,000	\$	\$	\$	\$ 1,500							
	Toll: SXS Switching	37T	77,500											
	Toll: Manual Switching	17T	155,000				30,000							
S P E C I A L														
A M A														
P O W E R														
P B X														
TOTAL EXPENDITURES			(A) \$ 249,500	(B) \$	(C) \$	(D) \$	(E) \$ 31,500							
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 70 AMOUNT 4,500	YEAR 19 71 AMOUNT 245,000	YEAR 19 AMOUNT	YEAR AMOUNT	YEAR AMOUNT							
ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE				SUMMARY OF ESTIMATED REQUIREMENTS										
SECTION 1 - HEADER DATA				ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE										
CO. ID.	A	MO.	DAY					YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS CONTROL LOC. REQ. NO.			
1-2	3	4-5	6-7					8-9	10-11	12-19	20-26 27-37			
29	1	5	29					70	58		M7435 725025			
CD ID	LOCATION			RI	COMPL. DATE									
38	39-72			73-74	75-80									
1	Longview 753 Toll			E 4	10 15 71									
SECTION 2 - DETAIL DISTRIBUTION				NET CAPITAL REQUIREMENTS (A + B - E) \$ 218,000										
CD ID	ADJ.	ACCOUNTING CLASSIFICATION			W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES			TOTAL CHARGES			
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		M7435		37	C	7,500	3,000	1,500	1500	1000	2000		500	17,000
4		M7435		37	TC	40,500	10,500	10,000	-	2000	6000		8500	77,500
4		M7435		17	TC	60,900	21,000	15,000	30000	3500	8000		16000	155,000
4		M7435		37	M	-	1,000	500	-	-	2000		-	3,500
4		M7435		337	M	-	-	-	-	2500	-		-	2,500
2		TOTAL				108,900	36,100	27,000	31500	9000	18000		25000	255,500
3		CHANGE TOTAL												

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

(RESERVED FOR FUTURE USE)

FIGURE 17

## INITIAL NO. 4 ESS - JOINT OWNERSHIP

SOUTHWESTERN BELL TELEPHONE COMPANY				FORM SN-4 (REV. 1-73)
<b>AUTHORIZATION, ESTIMATE NO. _____</b>			Page 1 of 2	
Springfield &				
AREA	Kansas City	DIVISION	Kansas City (5)	ESTIMATE REQUEST NO. 11020 (KC)
<b>TITLE:</b>				
Kansas City, Missouri - Toll Office - Initial No. 4 Electronic Switching System				
<b>NATURE AND NECESSITY</b>				
<p>This estimate provides for the Southwestern Bell Telephone Company, Kansas City Area's portion of costs for the addition of a new jointly owned Number 4 Electronic Switching System and removal of the present Number 4A Crossbar Switching System. Also included under this authority are the addition, removal and rearrangement of one hundred per cent Southwestern Bell owned associated circuit equipment at Kansas City Toll and various locations throughout the area. This joint undertaking is covered by Long Lines Estimates 3-W1679, 3-W1569, 3-W4004 and 3-W2012.</p> <p>This project with a service date of July, 1976 is proposed at this time to provide a replacement for the present Number 4A Crossbar Switching System which will exhaust its incoming termination capacity during the 1976 busy season. The initial installation, planned to cover forecasted growth through the 1977 busy season will provide for the termination of 13,719 intertoll and 10,883 toll completing and secondary intertoll trunks.</p> <p>All equipment in the jointly owned Electronic Switching System environment will be engineered by Southwestern Bell. Southwestern Bell will bill Long Lines on a custom billing basis. Excluding A type channel banks and associated carrier equipment, Southwestern Bell will assume engineering responsibility for 100 percent owned circuit equipment outside the Electronic Switching System environment at Kansas City Toll and various locations throughout the area.</p> <p>Displaced equipment not held for reuse will be returned to Western Electric Company for best credit or junked locally.</p>				
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input type="checkbox"/> INITIALS				
SERVICE DATE		COMPLETION DATE		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
RECOMMENDED:		DATE	APPROVED:	DATE
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.			ASSISTANT VICE PRESIDENT AND GENERAL MANAGER	
APPROVED:			VICE PRESIDENT AND GENERAL MANAGER	
DIV. PLT. SUPT. . BLDG. & EQPT. ENG. . ENG. BLDG. OR ENG. EQPT. . CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.			VICE PRESIDENT - TEXAS    VICE PRESIDENT - MO. - ILL.	
CHIEF ENGINEER			VICE PRESIDENT - ENGINEERING	
GENERAL PLANT MANAGER			LISTED ON WEEKLY SUMMARY - FORM SN-861	
GENERAL COMMERCIAL MANAGER			AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_ Page 2 of 2  
Springfield &

AREA Kansas City DIVISION Kansas City (5) ESTIMATE REQUEST NO. 11020 (KC)

**TITLE:**  
Kansas City, Missouri - Toll Office - Initial No. 4 Electronic Switching System

**NATURE AND NECESSITY**

**REFERENCES:**

Outline of Plan  
Plant Extension Study KCT-131 (Approved Letter dated 1-9-73)  
Letter dated 7-11-73 to Vice President-Operations  
Long Lines Switching Equipment Order No. 26192, Issue 2  
Methods of Provision 3704-73 and 1424-74  
Engineering Letter 1224  
General Letter 72-08-097  
Plant Extension Memorandum dated 8-14-73  
Traffic Order 73-T-02 and Supplement No. 1

Estimate Prepared by \_\_\_\_\_ Date \_\_\_\_\_  
Engineer

\_\_\_\_\_ Date \_\_\_\_\_  
Senior Engineer

F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	INITIALS <i>DAP</i>
SERVICE DATE <u>July, 1976</u>		COMPLETION DATE <u>July, 1977</u>		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
<u>17,236,850</u>	<u>8,345,900</u>	<u>8,187,600</u>	<u>301,050</u>	
RECOMMENDED: _____ DATE _____		APPROVED: _____		DATE _____
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG. APPROVED:		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT. . BLDG. & EQPT. ENG. . ENG. BLDG. OR ENG. EQPT. CUST SERV ENG. -- ENG. OF OSP -- ENG. MGR. - FAC.		VICE PRESIDENT AND GENERAL MANAGER		
CHIEF ENGINEER		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.		
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING		
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

E.R. 11020  
Sheet 1 of 6

OUTLINE OF PLAN

Kansas City Toll Office

It is proposed to equip the No. 4 ESS initially with Circuit Maintenance System (CMS), Carrier Transmission Measuring System (CTMS), Centralized Automatic Reporting on Trunks (CAROT), Remote Office Test Line (ROTL), Unitized Terminal Equipment (UTE) and Digroup Terminals (DT). In addition to the above, a Switched Maintenance Access System (SMAS) will be provided for testing N, ON and metallic circuit facilities from 51A test positions. Testing on A Bank facilities will be performed primarily by the CTMS, but also from the aisles (on a manual basis), and from the 51A test positions using a CMS-CTMS interface. The initial system planned to meet second quarter 1978 growth requirements is expected to reach its ultimate capacity in 1987.

The major amount of maintenance expenditures are for rearranging drop (i.e. equipment side) of all packages "N2" and "N3" carrier terminals and 480 "ON" carrier terminals to the second floor distributing frame for the following reasons.

1. Distributing frame and cable rack congestion will not permit termination of No. 4 ESS voice frequently and signal leads on the third floor distributing frame.
2. Packaged "N2" and "N3" carrier systems presently terminated on the 4th floor distributing frame utilize "E" type signal units which will require E and M lead applique units (one component of a retrofit bay) to be compatible with No. 4 ESS.
3. All retrofit bays consisting of E and M lead applique units, "window shade" pads, manual access panel, SMAS connectors, communications panel, terminal strips and fuse and alarm panel will be installed as hard wired units (within the retrofit bay) and terminated on the second floor distributing frame.
4. All existing non packaged "N3", "N2" and "ON" carrier equipment on the first floor is terminated on the second floor distributing frame and will require no work other than plant cross-connections.

E.R. 11020  
Sheet 2 of 6

5. Termination of leads from all "N" and "ON" carrier terminals, retrofit bays and signaling equipment on the same distributing frame as the voice interface units (VIU) and signal processor (SP) will permit full utilization of connectorized cable to the No. 4 ESS, maintain uniform VF levels at the maintenance connects and eliminate the need for segregation of private line and message circuits on "N" and "ON" carrier.
6. Adequate frame space appears to be available on the existing second floor 023 frame. A detailed analysis will be made after the cutover committee begins to function.

Extensive use of T carrier in conjunction with this project is based on the following.

1. The introduction of the Digroup Terminal (DT) will allow direct switching of T lines without decoding to individual channels.
2. Cost reduction realized by the use of Digroup Terminals has reduced the distance at which "T" operations are economical. This reduced cost will allow conversion of VF metallic circuits to "T" carrier and release outside plant facilities for local growth.
3. Cutover from the No. 4A to the No. 4 ESS will be on a phased basis. The use of "T" carrier as a replacement for metallic VF facilities will allow the cutover to be on a 24 circuit group basis and will reduce cross connect effort and congestion at Kansas City Toll. Cutover devices and plant cross connect effort will be distributed among the end offices.
4. Existing D1A and D1B banks require replacement of 12 common equipment plug-in units for conversion to D1D banks (which is required to be compatible with Digroup Terminals). Displaced plug-in units will be used on future T carrier systems not associated with the No. 4 ESS.

Southwestern Bell proposed Accounting classification and per cent ownership of No. 4 ESS equipment engineered by Long Lines are as follows:

<u>Unit</u>	<u>SWB % Ownership</u>	<u>Account Code</u>
51A Test Positions	77	57TC
Circuit Maintenance System (CMS)	77	770C
Centralized Automatic Reporting on Trunks (CAROT)	85	770C
Remote Office Test Line (ROTL)	71	57TC
Digroup Terminals (DT)	100	57TC
Switched Maintenance Access System (SMAS) 3B	61	57TC
A6 Unitized Terminal Equipment Frames (UTE)*	100	57TC
Signal Processor I (SP-I)	49	77TC
Signal Processor II (SP-II)	49	77TC

\* Each company assumes 100% ownership of the A Banks used for its trunk groups.

E.R. 11020  
Sheet 3 of 6

<u>Unit</u>	<u>SWB % Ownership</u>	<u>Account Code</u>
Metallic Trunk Frames (MTF)	100	57TC
Voice Interface Frames (VIF)	61	57TC
Voice Interface Units (VIU)	61	57TC
No. 4 Electronic Switching System (including 1A Processor and Time Division Network)	49	77TC
620A Power Plant (-24V)	50	577TC
620A Power Plant (+24V)	50	577TC
625B Power Plant (148V)	50	677TC
451A Power Plant (+140V)	50	777TC
KS20452 List 1 140 Volt Battery String	50	777TC
750 Kilowatt Turbine Alternators	55	977TC
AC Power Facilities	55	#

# Assumes Account Code of its environment.

The following is a comparison of the present view and Toll Plant Extension revised study letter dated July 11, 1973.

	Study View SWB	Present View SWB
COE	\$ 7,610,000	\$ 6,381,500
CET	10,627,000	10,152,000
Station Equipment	*	225,000
Building and Air Conditioning	525,000	525,000
Total Gross Additions 4ESS	\$18,762,000	\$17,283,500
Removal 4A SWB	\$ 623,300	\$ 587,950
Removal Misc. CET SWB	-	115,400
Contingency Plan Mission 4A	729,100	1,038,300
Outside Plant Advanced	403,500	-
Gross Expenditures SWB	\$20,517,900	\$19,025,150
Maintenance No. 4 ESS	\$ 216,000	\$ 301,050
Maintenance Contingency Plan		157,000
Total	\$20,733,900	\$19,483,200
Combined SWB-LL Gross Expenditures	\$33,573,100	\$30,387,800

\*Station equipment is a part of COE Cost in Study view.

It is estimated that the replacement of the No. 4 A Switching System with a No. 4 Electronic Switching System will result in Maintenance charges to this estimate as follows:

(Not shown--See Typical Fig. 10-4)

E.R. 11020  
Sheet 4 of 6

Quantitative description of Major No. 4 ESS and associated power equipment engineered by Long Lines.

<u>Quantity</u>	<u>Description</u>
2	Central Control Frame
5	Program Store Frame
9	Program Store Unit
6	Call Store Frame
12	Call Store Unit
4	File Store Frame
6	File Disk
5	Signal Processor (SPI)
3	Signal Processor (SPII)
19	Time Slot Interchange Frame
8	Time Multiplex Switch Frame
9	Distribute and Scan Matrix Frame
9	Distribute Applique Frame
22	Voiceband Interface Frame
130	Unitized Terminal Equipment Frame 55 100% SWB, 75 100% LL (Includes 15 e/w Echo Suppressors)
260	Oscillator and Transfer Unit
12	Digroup Terminal Frame
8	51A Test Position
1	Switched Maintenance Access System (12,000 Line Concentrator)
2	Remote Office Test Line Frame
1	Centralized Automatic Reporting on Trunks System
20	Total Miscellaneous Frames
1	Circuit Maintenance System 1A

E.R. 11020  
Sheet 5 of 6

Quantitative description of major items continued:

<u>Quantity</u>	<u>Description</u>
17	Metallic Trunk Frame
4	Group Distributing Frame (GDF)
283	A6 Channel Bank Plug-In Units (Full Complement)
74	A6 Channel Bank Plug-In Units (Partial Complement) 100% SWB
17	A6 Channel Bank Plug-In Units (Basic Unit) 100% SWB
394	A6 Channel Bank Plug-In Units (Full Complement) 100% LL
41	A6 Channel Bank Plug-In Units (Partial Complement) 100% LL
35	A6 Channel Bank Plug-In Units (Basic Unit) 100% LL
2	750 Kilovolt Turbine Alternator
1	Turbine Control Bay
1	750 Kilovolt Ampere Transformer
9	415A Positive 140 Volt Power Plants
18	200 Ampere 140 Volt Rectifier
630	1680 Ampere-Hour Cylindrical Cell

\*Cost for station equipment (Model 40 TTY) not included in estimate.

E.R. 11020  
Sheet 6 of 6

<u>Quantity</u>	<u>Description</u>
5	Area Bus Center
3	620A Power Plants (-24 Volt)
3	620A Power Plants (+24 Volt)
40	Positive 140 Volt to 24 Volt Converter
7	625B Power Plants (48 Volt)
52	Positive 140 Volt to 48 Volt Converter

Major items of equipment engineered by Southwestern Bell;

<u>Quantity</u>	<u>Description</u>
21	Retrofit Bays
5113	FWA Plug-In Units
16	D3 Bays (Fully Equipped)
3	DSX Bays
38	D1D Bays
14	Carrier Group Alarm Bays (T Carrier)
146	T-Carrier Terminals Converted From D1B to D1D
232	Existing T-Carrier Terminals equipped as D1D

Major items of equipment removed by this Project:

<u>Quantity</u>	<u>Description</u>
1300	4A Crossbar Frames
480	4A Crossbar Trunk Frames
1	48 Volt Power Plant
250	A5 Channel Banks
11	X Type Signal Bays
14	E Type Signal Bays
146	Sets of D1B Common Plug-In Units

Specifications associated with this Estimate Request are:

8749.139	8186.288	8186.289	8186.290	8186.291
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FORM SN-4E  
(10-73)

## TOTAL PROJECT

Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 11020

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
E6130		21701800					
E6125		2750150	1276700	15761100	4286025		211100
E1298		24400					
E1373		557900				2000	
E2065		151500				1000	9100
E4130		613650	4400	88500	62550	6000	78150
G2212							300
G2399							2400
TOTAL		(A) 25799400	(B) 1281100	(C) 15849900	(D) 4348625	(E) 9000	(F) 301050
TOTAL EXPENDITURES IN	YEAR 1974	7530000					
	YEAR 1975	16425300				9000	99350
	YEAR 1976	1844100	1281100	15849900	4348625		201700
SUMMARY OF ESTIMATED REQUIREMENTS				NET REQUIREMENTS (A+B-F) \$22731875			
GROSS EXPENDITURES (A+B)		\$27080500		GROSS ADDITIONS (A)		\$25799400	
PLANT RETIREMENTS (C)		\$15849900		NET ADDITIONS (A-C)		\$9949500	
NET CAPITAL REQUIREMENTS (A+B-E)		\$27071500					

FORM SN-4E  
(10-73)

**S.W.B. PORTION OF PROJECT**  
Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 11020

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
E 6130		12491300					
E 6125		2694750	698950	8259100	2354275		211100
E 1298		24400					
E 1373		551900				2000	
E 2065		151500				1000	9100
E 4130		613650	4400	88800	62550	6000	78150
G 2212							300
G 2399							2400
TOTAL		(A) 16533500	(B) 703350	(C) 8345900	(D) 2416825	(E) 9000	(F) 301050
TOTAL EXPENDITURES IN	YEAR 1974	4730000					
	YEAR 1975	10479900				9000	99350
	YEAR 1976	1323600	703350	8345900	2416825		201700
SUMMARY OF ESTIMATED REQUIREMENTS				NET REQUIREMENTS (A+B-C)		\$ 14 820 025	
GROSS EXPENDITURES (A+B)		\$ 17 236 850		GROSS ADDITIONS (A)		\$ 16 533 500	
PLANT RETIREMENTS (C)		\$ 8 345 900		NET ADDITIONS (A-C)		\$ 8 187 600	
NET CAPITAL REQUIREMENTS (A+B-E)		\$ 17 227 850					

FORM SN-4E  
(10-73)

*AT&T PORTION OF PROJECT*  
Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 11020

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
E6130		9210500					
E6125		55400	577750	7504000	1931800		
<b>TOTAL</b>		(A) 9265900	(B) 577750	(C) 7504000	(D) 1931800	(E)	(F)
<b>TOTAL EXPENDITURES IN</b>		YEAR 1974 2800000	YEAR 1975 5945400	YEAR 1976 520500	577750	7504000	1931800
<b>SUMMARY OF ESTIMATED REQUIREMENTS</b>				<b>NET REQUIREMENTS (A+B-F)</b>		\$ 7,911,850	
<b>GROSS EXPENDITURES (A+B)</b>		\$ 9,843,650		<b>GROSS ADDITIONS (A)</b>		\$ 9,265,900	
<b>PLANT RETIREMENTS (C)</b>		\$ 7,504,000		<b>NET ADDITIONS (A-C)</b>		\$ 1,761,900	
<b>NET CAPITAL REQUIREMENTS (A+B-E)</b>		\$ 9,843,650					

SW Bell Portion  
KC DIV

FORM SN-4E  
(10-73)

Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 11020

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
E6130		12491300					
E6125		2694750	698950	8257100	2354275		21100
E1298		2440					
E1373		537900				2000	
E4130		613650	4400	88800	62550	6000	78150
E2065		157500				1000	9100
TOTAL		(A) 16533500	(B) 703350	(C) 8345900	(D) 2416825	(E) 9000	(F) 298350
TOTAL EXPENDITURES IN		YEAR 1974 4730000					
		YEAR 1975 10479900				9000	98350
		YEAR 1976 1323600	703350	8345900	2416825		200000
SUMMARY OF ESTIMATED REQUIREMENTS				NET REQUIREMENTS (A+B-F) \$ 14820025			
GROSS EXPENDITURES (A+B)		\$ 17326850		GROSS ADDITIONS (A)		\$ 16533500	
PLANT RETIREMENTS (C)		\$ 8345900		NET ADDITIONS (A-C)		\$ 8187600	
NET CAPITAL REQUIREMENTS (A+B-E)		\$ 17227850					

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION

CURRENTLY READY FOR SERVICE

ENGINEERED BY \_\_\_\_\_

W.E. CO.

EST. REQ. NO. 11020

LOCATION CODE (C & X) E6130

EST./R.C. NO. \_\_\_\_\_

LOCATION CODE (R & M) \_\_\_\_\_

SHEET 1 OF 15

DATE 8-13-73

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
TOLL CIRCUIT EQPT	577	9,500.00				
TOLL ELECTRONIC DIAL CODE PROCESSOR EQPT	777	9,411.00				
	770	564.30				
24 AND 48 VOLT 140 VOLT EMERGENCY ENGINES	677	801.00				
	777	635.40				
	977	789.50				
TOTAL EXPENDITURES		(A) \$ 21,701.80	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)		YEAR 19 74 AMOUNT \$ 6,700.00	YEAR 19 75 AMOUNT \$ 13,861.30	YEAR 19 76 AMOUNT \$ 1,140.50		

SECTION 1 - HEADER DATA										SUMMARY OF ESTIMATED REQUIREMENTS					
CD. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS			GROSS EXPENDITURES (A + B)	PLANT RETIREMENTS (C)	NET REQUIREMENTS (A + B - D)	GROSS ADDITIONS (A)	NET ADDITIONS (A - C)	NET CAPITAL REQUIREMENTS (A + B - E)
							CONTROL LOC.	REQ. NO.		\$ 21,701.80	\$ -	\$ 21,701.80	\$ 21,701.80	\$ 21,701.80	\$ 21,701.80
39	1	08	1373	02			E6130	7-79373							
CD ID	LOCATION				RI	COMPL. DATE									
38	39-72				73-74	75-80									
1	K.C. Toll (4E)				E	5 07 01 76									

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		E 6130		577	C	7,916.50	153.80	76.80		153.80	76.80	1,122.90		9,500.60	
4		E 6130		777	C	7,879.80	153.95	76.50		153.95	76.50	1,033.90		9,411.00	
4		E 6130		770	C	476.20	9.20	46.00		9.20	46.00	60.50		564.30	
4		E 6130		677	C	304.20	145.00	43.60		48.00	48.00	98.60		801.00	
4		E 6130		777	C	437.00	127.20	38.20		44.00	44.00	24.40		635.40	
4		E 6130		977	C	498.00	171.30	64.40		14.30	60.00	35.30		789.50	
2		TOTAL				17,711.70	759.55	304.10		339.70	311.00	2,356.60		21,701.80	
3		CHANGE TOTAL													

EXPLANATION: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_  
TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 11020 EST. R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) E 6130 LOCATION CODE (R & M) \_\_\_\_\_  
 F.C.C. AUTHORIZATION REQ'D YES  NO  SHEET 2 OF 15  
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ DATE 8-13-73  
 CURRENTLY READY FOR SERVICE  -TEL. CO. # \_\_\_\_\_  
 -W.E. CO. X AT&T - 4E  
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_ Porton

BASIC SYSTEM	DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
	TOLL CIRCUIT EQPT	577	53,230.200				
	TOLL ELECTRONIC DIAL COE	777	4,799.600				
	PROCESSOR EQPT	770	107.200				
	24 AND 48 VOLT	677	400.500				
	140 VOLT	777	317.700				
	EMERGENCY ENGINES	977	355.300				

TOTAL EXPENDITURES	9,210.500					
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)	1974	2,800.000	1975	5,900.000	1976	4,510.500

SECTION 1 - HEADER DATA										SUMMARY OF ESTIMATED REQUIREMENTS		
ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										GROSS EXPENDITURES (A + B)	\$	9,210.500
ESTIMATED COMPOSITION OF EXPENDITURES										PLANT RETIREMENTS (C)	\$	-
SECTION 1 - HEADER DATA										NET REQUIREMENTS (A + B - D)	\$	9,210.500
CO. ID	A	C	M	DAY	YP.	OPC NO.	AUTH. NUMBER	FILE ADDRESS		GROSS ADDITIONS (A)	\$	9,210.500
								CONTROL LOC.	REQ. NO.	NET ADDITIONS (A - C)	\$	9,210.500
39								20-26	27-37	NET CAPITAL REQUIREMENTS (A + B - E)	\$	9,210.500
38								73-74	75-80			
1	K.C. Toll (4E)							E				

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES				
CO. ID	ADJ.	LOCATION CODE	MAIN ACCT	CODE OR SUB ACCT	LTP. CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. CONSTR.	TOTAL CHARGES
38	39-40	E6130	51-47	48-50	51-53	54-55	56-63	64-71	72-70					
4		E6130		577	C	2,691.600	52.300	26.100		52.300	26.100			391.800 3,230.200
4		E6130		777	C	4,018.700	780.50	39.000		780.50	58.500			527.300 4,799.600
4		E6130		770	C	90.500	1.700	9.000		1.700	9.000			11.300 107.200
4		E6130		677	C	252.100	7.2500	21.800		2.400	2.400			49.300 400.500
4		E6130		777	C	218.500	63.600	19.100		2.200	2.100			12.200 317.700
4		E6130		977	C	226.100	7.7100	29.000		6.500	2.700			15.900 355.300
2		TOTAL				7,495.500	3,952.50	1,35.900		1,431.50	9,210.00			998.000 9,210.500
3		CHANGE TOTAL												

EXPLANATION \_\_\_\_\_ PREPARED BY \_\_\_\_\_ TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN 4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION

CURRENTLY READY FOR SERVICE

ENGINEERED BY

-TEL. CO.

-W.E. CO.

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE

EST. REQ. NO. 11020

LOCATION CODE (C & X) EG130

EST./R.O. NO. \_\_\_\_\_

LOCATION CODE (R & M) \_\_\_\_\_

SHEET 3 OF 15

DATE 8-13-73

**SWB - 4E**  
**PORTION**

B A S I C	SUB ACCOUNT		GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
	DESCRIPTION	CODE					
	TOLL CIRCUIT EQPT	577	\$ 6 270 900				
	TOLL ELECTRONIC DIAL COE	777	4 611 900				
	PROCESSOR EQPT	770	457 100				
S P E R							
A M A							
P O W E R	24 AND 48 VOLT	677	400 500				
	140 VOLT	777	317 700				
	EMERGENCY ENGINES.	977	434 200				
P B X							
TOTAL EXPENDITURES			(A) \$ 12 491 300	(B) \$	(C) \$	(D) \$	(E) \$

GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)	YEAR	AMOUNT	YEAR	AMOUNT	YEAR	AMOUNT
	19 74	\$ 3 900 000	19 75	\$ 7 961 300	19 76	\$ 630 000

ESTIMATED COMPOSITION OF EXPENDITURES  
ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE

SUMMARY OF ESTIMATED REQUIREMENTS

SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 12,491,300	
CO. ID.	A	MO.	DAY	YR.	OFF. NO.	AUTH. NUMBER	FILE ADDRESS		CONTROL LOC.		REQ. NO.	PLANT RETIREMENTS (C) \$ -
1 2	3	4 5	6 7	8 9	10 11	12 19	20 26		27 37			NET REQUIREMENTS (A + B - D) \$ 12,491,300
CD ID	LOCATION				RI	COMPL. DATE						GROSS ADDITIONS (A) \$ 12,491,300
38	39-72				73-74	75-80					NET ADDITIONS (A - C) \$ 12,491,300	
1	KC Toll (40)				E						NET CAPITAL REQUIREMENTS (A + B - E) \$ 12,491,300	

SECTION 2 - DETAIL DISTRIBUTION

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE. ETC	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'G & ASSOC. COSTS	SUNDRY & MISC. BILLS		INT. DUR. CONSTR.
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		EG130		577	C	5234900	101500	50700		101500	50700		74100	6270900
4		EG130		777	C	3861100	75000	37500		75000	37500		50600	4611900
4		EG130		770	C	385700	75000	3700		75000	3700		49000	457100
4		EG130		677	C	252100	72500	21800		2400	2400		49300	400500
4		EG130		777	C	218500	63000	19100		2200	2100		12200	317700
4		EG130		977	C	273900	94200	35400		8000	3300		19400	434200
2		TOTAL				10216200	414300	168200		196600	118400		137700	12491300
3		CHANGE TOTAL												

PREPARED BY:

EXPLANATION:

TEL. NO.

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION

CURRENTLY READY FOR SERVICE

ENGINEERED BY  -TEL. CO.

-W.E. CO.

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-1-76

EST. 11020 EST./R.C. NO. \_\_\_\_\_

REQ. NO. 11020 LOCATION CODE (R & M) \_\_\_\_\_

LOCATION CODE (C & X) E6125 SHEET 4 OF 15

TOTAL 4A

DATE 8-13-73

BASIS	SUB ACCOUNT		GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
	DESCRIPTION	CODE					
BASIC	TOLL DIAL COE	47T	\$109,000				
	TOLL DIAL COE	247T		1,059,900	1,419,400	3,643,775	
POWER	48 VOLT	647		84,700	68,900	175,000	
PBX							

TOTAL EXPENDITURES (A) \$109,000 (B) \$1,144,600 (C) \$1,480,300 (D) \$3,818,775 (E) \$

GROSS ADDITIONS BY YEARS (PLANT ADDITIONS) YEAR 1975 AMOUNT \$89,000 YEAR 1976 AMOUNT \$20,000 YEAR 19 AMOUNT \$

ESTIMATED COMPOSITION OF EXPENDITURES  
ACCOUNT 75 - INPUT DATA FOR MASTER DISTRIBUTION FILE

SECTION 1 - HEADER DATA

CO. ID.	A	MO.	DAY	YR.	OFF. NO.	AUTH. NUMBER	FILE ADDRESS	
						CONTROL LOC	REQ. NO.	
1-2	3	4	5	6	7	8	9	10-11
27	1	08	13	73	02			E6125
								7-79360
CD ID	LOCATION				RI	COMPL. DATE		
38	39-72				73-74	75-80		
1	KC TOLL (4A)				E	5 07 31 77		

ACTION CODE  
1. NEW  
2. CHANGE HEADER ONLY  
3. CHANGE DETAIL DIS.  
4. DELETE

SUMMARY OF ESTIMATED REQUIREMENTS

GROSS EXPENDITURES (A + B)	\$ 1,253,600
PLANT RETIREMENTS (C)	\$ 1,480,300
NET REQUIREMENTS (A + B - D)	\$ (2,565,175)
GROSS ADDITIONS (A)	\$ 109,000
NET ADDITIONS (A - C)	\$ (1,469,300)
NET CAPITAL REQUIREMENTS (A + B - E)	\$ 1,253,600

SECTION 2 - DETAIL DISTRIBUTION

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		E6125		47T	C	26700			74200	1900		6200		109000	
4		E6125		247T	X	5000	601700	282900	29600	141200				1059900	
4		E6125		647	X	2000	68900	6900		6900				84700	
2		TOTAL				33700	670600	289300	103900	150000		6200		1253600	
3		CHANGE TOTAL													

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-3C  
REVISED 11-73

EST. REQ. NO. 11020 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) EG125 LOCATION CODE (R & M) \_\_\_\_\_  
 F.C.C. AUTHORIZATION REQ'D YES  NO  5190  
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ SHEET 9 OF 15  
 CURRENTLY READY FOR SERVICE  -TEL. CO.  -W.E. CO.  AT&T PORTION  
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-1-76 4A DATE 8-13-73

BASIC	SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
				\$	\$	\$	\$	\$
	Toll DIAL COE		47T	55400				
	Toll DIAL COE		247T		540550	7200900	1858300	
SSPEE								
AMA								
POWER								
PBX								

TOTAL EXPENDITURES				(A) \$ 55400	(B) \$ 540550	(C) \$ 7200900	(D) \$ 1858300	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)				YEAR 1975 AMOUNT \$ 45400	YEAR 1976 AMOUNT \$ 10000	YEAR 1976 AMOUNT \$ 10000	YEAR 1976 AMOUNT \$	AMOUNT \$

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS			
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 595950		
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		CONTROL LOC.		REQ. NO.	PLANT RETIREMENTS (C) \$ 7200900	
1-2	3	4-5	6-7	8-9	10-11	12-19			20-26		27-37	NET REQUIREMENTS (A + B - D) \$ (1262300)	
CD ID	LOCATION				RI	COMPL. DATE					GROSS ADDITIONS (A) \$ 55400		
38	39-72				73-74	75-80				NET ADDITIONS (A - C) \$ (1145500)			
1					E					NET CAPITAL REQUIREMENTS (A + B - E) \$ 595950			

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES			
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			REMAINDER		TELE. CO. MATL.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'G & ASSOC. COSTS		SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE. ETC.									
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70									
4		EG125		47T C		13600						37800	900		3100	55400	
4		EG125		247T X		2550	306900	149000				45700	12000			540550	
4																	
4																	
4																	
4																	
4																	
4																	
4																	
2		TOTAL				16150	306900	149000				52900	72900		3100	595950	
3		CHANGE TOTAL															

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_  
 TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_  
 CURRENTLY READY FOR SERVICE  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-1-76

EST. NO. 11020 EST./R.C. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) E 6125 LOCATION CODE (R & M) \_\_\_\_\_  
 SHFET 6 OF 15  
 DATE 8-13-73

**492  
SWB PORTON  
4A**

BASIS	SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
			\$	\$	\$	\$	\$
	TOLL DIAL COE	47T	\$ 53600	\$	\$	\$	\$
	TOLL DIAL COE	297T		\$ 519350	\$ 6918500	\$ 1785475	

TOTAL EXPENDITURES	(A) \$ 53600	(B) \$ 519350	(C) \$ 6918500	(D) \$ 1785475	(F) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)	19 75 AMOUNT \$ 43600	19 76 AMOUNT \$ 10000	19 AMOUNT	19 AMOUNT	19 AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES  
ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE

SECTION 1 - HEADER DATA

CD ID	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS
							CONTROL LOC. REQ. NO.
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26 27-37
2-7							
CD ID	LOCATION				RI	COMPL. DATE	
38	39-72				73-74	75-80	
1	RC TOLL (4A)				E		

SUMMARY OF ESTIMATED REQUIREMENTS

GROSS EXPENDITURES (A + B)	\$ 572950
PLANT RETIREMENTS (C)	\$ 6918500
NET REQUIREMENTS (A + B - D)	\$ (1212485)
GROSS ADDITIONS (A)	\$ 53600
NET ADDITIONS (A - C)	\$ (6869900)
NET CAPITAL REQUIREMENTS (A + B - E)	\$ 572950

SECTION 2 - DETAIL DISTRIBUTION

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.F. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MA'N ACCT	CODE OR SUB ACCT	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		E 6125		47T C		13100			36400	1000			3100	53600	
4		E 6125		297T X		2450	294800	138400	14500	69200				519350	
2		TOTAL				15550	294800	138400	50900	70200			3100	572950	
3		CHANGE TOTAL													

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 11020 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) EG125 LOCATION CODE (R & M) \_\_\_\_\_  
 SHEET 2 OF 15  
 DATE 8-13-73  
 F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY AT&T Porton -TEL. CO.   
 CURRENTLY READY FOR SERVICE  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-1-76

CLASSIFICATION	SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
			\$	\$	\$	\$	\$
BASIC							
SSP							
POWER	48 VOLT	647	37200	303/00	73500		
PBX							
TOTAL EXPENDITURES			(A) \$ 37200	(B) \$ 303/00	(C) \$ 73500	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			19 YEAR AMOUNT	19 YEAR AMOUNT	19 YEAR AMOUNT	19 YEAR AMOUNT	19 YEAR AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 37200	
CO. NO.	A.C.	MO.	DAY	YR.	JFC. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$ 303/00			
1,2	3	4-5	6,7	8,9	10-11	12-19	CONTROL LOC.	REQ. NO.	NET REQUIREMENTS (A + B - D) \$ (36300)			
29									GROSS ADDITIONS (A) \$ -			
CD ID	LOCATION					RI	COMPL. DATE			NET ADDITIONS (A - C) \$ (303/00)		
38	39-72						75-80			NET CAPITAL REQUIREMENTS (A + B - E) \$ 37200		
1	KC TOLL (4A)					E						

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAINT. ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EOPT.	LABOR INST. DIV. BILL	REMAINDER EOPT. SPE. ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-56	56-63	64-71	72-70							
4		EG125		647	X	900	30300	3000			3000				37200
2		TOTAL				900	30300	3000			3000				37200
3		CHANGE TOTAL													

EXPLANATION: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_  
TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 11020 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) E 6125 LOCATION CODE (R & M) \_\_\_\_\_  
 SHEET 8 OF 15  
 F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_  
 CURRENTLY READY FOR SERVICE  DATE 8-13-73  
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-1-76  
 -TEL. CO. # 567  
 -W.E. CO. # S.W.B. PORTION 4A

BASIC SPEER AM POWER PBX	SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
			\$	\$	\$	\$	\$
	48 VOLT	647	47500	385800	101500		
TOTAL EXPENDITURES			(A) \$ 47500	(B) \$ 385800	(C) \$ 101500	(D)	(E)

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS			
SECTION 1 - HEADER DATA										GROSS EXPENDITURES (A + B) \$ 47500			
CO. ID.	A	MG	DAY	YP	OF. NO.	AUTH. NUMBER	FILE ADDRESS		REQ. C	PLANT RETIREMENTS (C) \$ 385800			
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC	20-26	27-37	NET REQUIREMENTS (A + B - C) \$ (34000)			
CD ID	LOCATION				RI	COMPL. DATE				GROSS ADDITIONS (A) \$ -			
38	39-72				73-74	75-80				NET ADDITIONS (A - C) \$ (385800)			
1	K.C. TOLL (4A)				E					NET CAPITAL REQUIREMENTS (A + B - E) \$ 47500			

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			REMAINDER EOPT SPE, ETC	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL CO. ENGR'G & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	TOTAL CHARGES
		LOCATION CODE	MAIN ACCT	CODE OR SUB ACCT.	LTP CD	MATERIAL COST OF EOPT.	LABOR INST. DIV BILL	72-70							
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							47500
4		E 6125		647	Y	1100	38600	3900			3900				
2	TOTAL					1100	38600	3900			3900				47500
3	CHANGE TOTAL														

EXPLANATION: \_\_\_\_\_ PREPARED BY: \_\_\_\_\_  
 TEL. NO. \_\_\_\_\_





SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN 4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY                      -TEL. CO.   
 CURRENTLY READY FOR SERVICE  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE                     

EST. REQ. NO. 11020 EST./R.O. NO.                       
 LOCATION CODE (C & X) E1373 LOCATION CODE (R & M)                       
 SHEET 11 OF 15  
 DATE 8-13-73

	SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	EXCHANGE T CARRIER	57	\$ 557900	\$	\$	\$	\$ 2000
S P E R							
A M A							
P O W E R							
P B X							
TOTAL EXPENDITURES			(A) \$ 557900	(B) \$	(C) \$	(D) \$	(E) \$ 2000
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 74 AMOUNT 5000	YEAR 19 75 AMOUNT 500000	YEAR 19 76 AMOUNT 52900		

SECTION 1 - HEADER DATA										SUMMARY OF ESTIMATED REQUIREMENTS				
CO. ID.	A	MO	DAY	YR.	OFC NO.	AUTH. NUMBER	FILE ADDRESS			ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B)	\$ 557900		
							CONTROL LOC	REQ. NO			PLANT RETIREMENTS (C)	\$ -		
											NET REQUIREMENTS (A + B - D)	\$ 557900		
											GROSS ADDITIONS (A)	\$ 557900		
CD ID	LOCATION						RI	COMPL. DATE			NET ADDITIONS (A - C)	\$ 557900		
38	39-72						73-74	75-80			NET CAPITAL REQUIREMENTS (A + B - E)	\$ 535900		
1	KC MCGEE						E	5 07 01 76						

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES				
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS				OTHER TELEPHONE CO. CHARGES				
		LOCATION CODE	MAINT ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT SPE ETC	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	TOTAL CHARGES
38	39-40	41-47	48-50	51-53	54-56	56-63	64-71	72-70	2000	25300	9800	8000	31600	557900
4		E1373		57	C	434800	46400							
4														
4														
4														
4														
4														
4														
4														
4														
2		TOTAL				434800	46400		2000	25300	9800	8000	31600	557900
3		CHANGE TOTAL												

EXPLANATION: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 11020 EST./R.O. NO. \_\_\_\_\_  
LOCATION CODE (R & M) E2065 LOCATION CODE (R & M) \_\_\_\_\_  
CURRENTLY READY FOR SERVICE  ENGINEERED BY \_\_\_\_\_ SHEET 12 OF 15  
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_ DATE 8-13-73

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  -TEL. CO.   
CURRENTLY READY FOR SERVICE  ENGINEERED BY \_\_\_\_\_ -W.E. CO.

CLASSIFICATION	SUB ACCOUNT		GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
	DESCRIPTION	CODE					
BASIC	EXCHANGE T CARRIER		\$ 151500	\$	\$	\$	\$ 1000
SPER							
AM							
POWER							
PBX							
TOTAL EXPENDITURES			(A) \$ 151500	(B) \$	(C) \$	(D) \$	(E) \$ 1000

GROSS ADDITIONS BY YEARS		YEAR	AMOUNT	YEAR	AMOUNT	YEAR	AMOUNT
PLANT ADDITIONS:		19 75	139000	19 76	12500	19	

ESTIMATED COMPOSITION OF EXPENDITURES  
ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE

SECTION 1 - HEADER DATA

CO. ID.	A.C.	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS	
							CONTROL LOC.	REQ. NO.
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37
2-7	1	08	13	73	73		E2065	779368
CD ID	LOCATION					RI	COMPL. DATE	
38	39-72					73-74	75-83	
1	KC WESTPORT					E	507 01 76	

ACTION CODE  
1. NEW  
2. CHANGE HEADER ONLY  
3. CHANGE DETAIL DIS.  
4. DELETE

SUMMARY OF ESTIMATED REQUIREMENTS

GROSS EXPENDITURES (A + B)	\$ 151500
PLANT RETIREMENTS (C)	\$ -
NET REQUIREMENTS (A + B - D)	\$ 151500
GROSS ADDITIONS (A)	\$ 151500
NET ADDITIONS (A - C)	\$ 151500
NET CAPITAL REQUIREMENTS (A + R - E)	\$ 150500

SECTION 2 - DETAIL DISTRIBUTION

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTP CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'G & ASSOC. COSTS	SUNDRY & MISC. BILLS		INT. DUR. CONSTR.
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		E2065		57	C	11750	14600	3000	1000	5600	4300	1000	10200	151500
4		↓		57	M	1150				6800	1150			2300
4				357	M									6800
2		TOTAL				112900	14600	3000	1000	12400	5500	1000	10200	160600
3		CHANGE TOTAL												

PREPARED BY \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY -TEL. CO.   
 CURRENTLY READY FOR SERVICE  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-1-76

EST. REQ. NO. 11020 EST./R.C. NO. \_\_\_\_\_  
 LOCATION CODE (R & M) E4130 LOCATION CODE (R & M) \_\_\_\_\_  
 SHEET 13 OF 15  
 DATE 8-13-73

B A S I C	SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REMOVED MATERIAL
		EXCHANGE T CARRIER		57	\$ 613650	\$ 4400	\$ 88900	\$ 62550
S P E C I F I C								
P O W E R								
P B X								

TOTAL EXPENDITURES				(A) \$ 613650	(B) \$ 4400	(C) \$ 88900	(D) \$ 62550	(F) \$ 6000
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)				YEAR AMOUNT	YEAR AMOUNT	YEAR AMOUNT	YEAR AMOUNT	YEAR AMOUNT
				19 75 25000	19 75 495000	19 76 495000	19 76 93650	

SECTION 1 - HEADER DATA										SUMMARY OF ESTIMATED REQUIREMENTS		
ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										GROSS EXPENDITURES (A + B) \$ 618050		
FILE ADDRESS										PLANT RETIREMENTS (C) \$ 88900		
CONTROL LOC. REQ. NO.										NET REQUIREMENTS (A + B - D) \$ 555500		
20-26 27-37										GROSS ADDITIONS (A) \$ 613650		
E4130 779366										NET ADDITIONS (A - C) \$ 524850		
LOCATION RI COMPL. DATE										NET CAPITAL REQUIREMENTS (A + B - E) \$ 612050		
39-72 73-74 75-80												
1 KC HIGHLAND E 5073177												

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES				
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EOPT.	LABOR INST. DIV. BILL	REMAINDER EOPT. SPE., ETC.						
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		E4130		57	C	488950	59250	14500	6000	13500	16250	5200	10000	613650
4		E4130		57	X					2400	2000			4400
4		E4130		57	M	7900					1900			22200
4		E4130		57	M					55950				55950
4														
4														
4														
4														
4														
4														
2		TOTAL				496850	59250	14500	6000	71850	32550	5200	10000	696200
3		CHANGE TOTAL												

EXPLANATION: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

S.W. BELL PORTION  
 SPK'D DIV.  
 Southwestern Bell Telephone Company

FORM SN-4E  
 10-73)

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 11020

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
G 2212							300
G 2399							2400
TOTAL		(A)	(B)	(C)	(D)	(E)	(F) 2700
TOTAL EXPENDITURES IN	YEAR 1975						1000
	YEAR 1976						1700
	YEAR 19						
SUMMARY OF ESTIMATED REQUIREMENTS				NET REQUIREMENTS (A+B-F) \$ .....			
GROSS EXPENDITURES (A+B)		\$ .....		GROSS ADDITIONS (A)		\$ .....	
PLANT RETIREMENTS (C)		\$ .....		NET ADDITIONS (A-C)		\$ .....	
NET CAPITAL REQUIREMENTS (A+B-E)		\$ .....					





FIGURE 18

## BROADBAND CARRIER ADDITION-JOINT OWNERSHIP

SOUTHWESTERN BELL TELEPHONE COMPANY				FORM SN-4 (REV. 1-73)
<b>AUTHORIZATION, ESTIMATE NO.</b> _____				
AREA <u>Dallas</u>	DIVISION <u>North Dallas-Ft. Worth (6)</u>		ESTIMATE REQUEST NO. <u>10664</u>	
TITLE: Dallas Area - Additional Broadband Carrier Equipment				
NATURE AND NECESSITY				
<p>This estimate provides for the Southwestern Bell Telephone Company Dallas Area's portion of costs for the addition and removal of jointly owned L carrier multiplex and associated equipment at six locations. This multiplex equipment will provide mastergroup, supergroup and group high frequency lines for 250 Southwestern Bell channel groups required for the 1971 Toll Circuit Program. The Long Lines Department's portion provides for approximately 460 Long Lines channel groups. This joint undertaking is covered by Long Lines Estimate 9W0846.</p> <p>This work is being performed by the Long Lines Department. Southwestern Bell will be billed on a custom billing basis.</p> <p>Charges to this estimate will be limited to Long Lines billing and Southwestern Bell engineering.</p> <p>All Southwestern Bell plant labor performed at Ft. Worth in connection with Long Lines specifications under Long Lines Estimate 9W0846 shall be charged to Custom Work Order Ft. Worth C.W.O. 28026.</p>				
<u>REFERENCES:</u>				
<p>Long Lines Project 1LK071            Long Lines Estimate 9W0846            Outline of Plan.</p>				
Estimate Prepared By _____				
Estimate Reviewed By _____				
F.C.C. AUTHORIZATION REQUIRED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> INITIALS <u>SWJ</u>				
SERVICE DATE <u>October 31, 1970</u> COMPLETION DATE <u>October 31, 1970</u>				
GROSS EXPENDITURES		PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
202,400		23,400	178,200	--
RECOMMENDED:		DATE	APPROVED:	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.			ASSISTANT VICE PRESIDENT AND GENERAL MANAGER	
APPROVED:				
DIV. PLT. SUPT. BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.			VICE PRESIDENT AND GENERAL MANAGER	
CHIEF ENGINEER			VICE PRESIDENT-TEXAS VICE PRESIDENT - MO. - ILL.	
GENERAL PLANT MANAGER			VICE PRESIDENT - ENGINEERING	
GENERAL COMMERCIAL MANAGER			LISTED ON WEEKLY SUMMARY - FORM SN-861	
			AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

E.R. 10664

Page 1 of 1

OUTLINE OF PLAN

This estimate provides for the Southwestern Bell Company's portion of the following additions and removals, at the locations shown. Southwestern Bell % ownership at each location is also shown. Equipment removed at Mineral Wells will be re-used at Dallas.

	<u>Adams</u>	<u>Dallas</u>	<u>Ennis</u>	<u>Mineral</u> <u>Wells</u>	<u>Dallas</u> <u>R1E</u>	<u>Fort</u> <u>Worth</u>
SWB % Ownership	<u>26%</u>	<u>28%</u>	<u>25%</u>	<u>19%</u>	<u>23%</u>	<u>40%</u>
Supergroup Dist. Frame (T&R)	1					
Supergroup Bank Bays (T&R)	3					
LMX2 T&R Term. Bays	1	4	1			2
L-3 Carrier Supply	1	1				
MMX-1 Banks (T&R)	6	6				
MMX-2 Banks (T&R)	11	2				1
MG Connectors	1					
4 kHz PFS	1	1			22	
64 kHz Pilot Supply					1	
MG Branching Panel					3	
24V 800A Rectifier	1					
24V Battery String	1					
130V 100A Rectifier	1					
LMX2 T&R Term. Bays		3		-3		
MMX-1 Banks				-6		
13.00MC Carrier Supply		1		-1		
15.60MC Carrier Supply		1		-1		
18.20MC Carrier Supply		1		-1		

FIGURE 19

## INITIAL MICROWAVE SYSTEM

SOUTHWESTERN BELL TELEPHONE COMPANY		FORM SN-4 (REV. 1-73)	
AUTHORIZATION, ESTIMATE NO. _____			
AREA <u>Arkansas</u>	DIVISION <u>(1)</u>	ESTIMATE REQUEST NO. <u>11304</u>	
TITLE: <u>Pine Bluff-McGehee - Initial Microwave System, and Pine Bluff McGehee Broadband</u>			
NATURE AND NECESSITY			
<p>This estimate provides the initial Pine Bluff-McGehee TM-1/TL-2 3-Hop microwave radio system consisting of one message channel and one protection channel. It also provides L carrier multiplex terminals and channelizing equipment at McGehee and Pine Bluff for 132 channels.</p> <p>This work is proposed at this time to provide facilities for the 1972 Toll Circuit Program and special service forecast, and to relieve the Little Rock-Pine Bluff and Pine Bluff-McGehee N carrier cables that will be working at capacity in 1971.</p> <p>Displaced equipment not held for re-use will be returned to Western Electric Company for credit, or junked locally.</p>			
<u>REFERENCES:</u>			
<p>Toll Plant Extension Study AT-1096, approved October 27, 1969 Transmission Recommendation TR-7.27.1 Projects 7220, 7266 Outline of Plan Traffic Data (Typical Illustrated in Fig. 21) Power Data Sheets (Typical Illustrated in Fig. 10) Microwave Transmission Calculations (Typical Illustrated in Fig. 33)</p>			
Estimate Prepared By _____			
Estimate Reviewed By _____			
F.C.C. AUTHORIZATION REQUIRED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> INITIALS _____			
SERVICE DATE <u>May, 1972</u>		COMPLETION DATE <u>April, 1972</u>	
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
483,800	--	474,200	2,100
RECOMMENDED:	DATE	APPROVED:	DATE
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER	
APPROVED:		VICE PRESIDENT AND GENERAL MANAGER	
DIV. PLT. SUPT. . BLDG. & EQPT. ENG. . ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. -- ENG. OF O.S.P. -- ENG. MGR. . FAC.		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.	
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING	
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861	
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

E.R. 11304

Page 1 of 2

OUTLINE OF PLAN

The 3 hop Pine Bluff-McGehee TM-1/TL-2 microwave system provided in this estimate will utilize the existing tower at Pine Bluff central office, and new guyed towers at the two repeater points and the McGehee terminal. Land, buildings and towers are provided in other authorizations. Path loss testing is included in the towers authorization.

## Major items of equipment added:

6	TM-1 radio bays
6	TL-2 radio bays
6	KS-15676 horn antennas
4	J86822C-2 Negative 24V power plants
1	110A power plant (re-used) 24V, 120 amp capacity
1	String KS-15544 L-508 batteries
2	U600A T&R Multiplex Bays
13	A5 channel banks
1	Group distributing frame

<u>Associated Projects</u>	<u>AT-1096 Study View</u>	<u>Present View</u>
Land ER-11377	\$ 10,000	\$ 4,579
Buildings & Towers E-0429 & ER 11238	146,500	195,800 (A)
L. Rock 1972 Broadband Estimate	42,200	13,700
Radio & Toll Ckt. Eqpt. (this est.) ER-11304	395,300	429,700

NOTE:

(A) The present view includes \$30,000 for path loss testing that is in circuit equipment in the study view.

E.R. 11304

Page 2 of 2

OUTLINE OF PLAN (Continued)

The increase in present view over study view is the result of:

1. Additional waveguide costs due to increased tower height from 100 feet to 250 feet.
2. Change in antenna type from parabolic to horn with associated waveguide pressurization.
3. Three per cent increase in material price.
4. Four per cent increase in labor price.
5. Additional power requirements.

See attachment for channel utilization information.

Channel Utilization Information

(Not shown--See Typical in Fig. 20-4)

Rearrangements and Changes

(Not Shown--See Typical in Fig. 10-4)

FIGURE 20

## TOLL CIRCUIT EQUIPMENT ADDITION

SOUTHWESTERN BELL TELEPHONE COMPANY		FORM SN-4 (REV. 1-73)	
<b>AUTHORIZATION, ESTIMATE NO.</b> _____			
AREA <u>Arkansas</u>	DIVISION <u>(1)</u>	ESTIMATE REQUEST NO. <u>11295</u>	
<b>TITLE:</b> Little Rock - Circuit Equipment for Little Rock, Searcy, Stuttgart and Associated Tributaries for the 1972 Toll Circuit Program			
<b>NATURE AND NECESSITY</b>			
<p>This estimate provides toll circuit equipment and associated patching and testing equipment for the 1972 Toll Circuit Program and special service forecasts in Little Rock, Searcy, Stuttgart and associated tributaries of Little Rock and Searcy.</p> <p>It provides new carrier mountings for 180 channels of N carrier and 16 channels of ON carrier, and 5 17C toll testboard positions (30% Long Lines ownership) for test jack requirements through 1973.</p> <p>It also provides for the removal of approximately 200,000 feet of switchboard cable previously retired in place, and for the removal of two tandem patch bays (25% Long Lines ownership).</p> <p>Displaced equipment not held for re-use will be returned to Western Electric Co. for credit, or junked locally.</p>			
<b>Associated Projects:</b>			
E.R. 11350		1972 Plug-in Units	\$214,500
<b>REFERENCES:</b>			
Transmission Recommendations 72.14.2, 72.15.4 Project 7265 Outline of Plan Traffic Data			
Estimate Prepared By _____			
Estimate Reviewed By _____			
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <u>OCN</u>			
SERVICE DATE <u>March, 1972</u>		COMPLETION DATE <u>February, 1972</u>	
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
95,900	10,300	72,800	4,700
RECOMMENDED: _____		APPROVED: _____	
DATE _____		DATE _____	
<small>DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.</small> APPROVED: _____		<small>ASSISTANT VICE PRESIDENT AND GENERAL MANAGER</small> _____	
<small>DIV. PLT. SUFT. BLDG. &amp; EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.</small> _____		<small>VICE PRESIDENT AND GENERAL MANAGER</small> _____	
<small>CHIEF ENGINEER</small> _____		<small>VICE PRESIDENT - TEXAS    VICE PRESIDENT - MO. - ILL.</small> _____	
<small>GENERAL PLANT MANAGER</small> _____		<small>VICE PRESIDENT - ENGINEERING</small> _____	
<small>GENERAL COMMERCIAL MANAGER</small> _____		<small>LISTED ON WEEKLY SUMMARY - FORM SN-861</small> _____	
		<small>AUTHORIZED BY BOARD OF DIRECTORS - FORM SN-860</small> _____	

E.R. 11295

Page 1 of 4

OUTLINE OF PLAN

## Major items of equipment added:

- 5 - 17C Toll testboard positions (30% Long Lines)
- 14 - N2 Carrier terminal mountings (11 for ofc. engr.)
- 4 - ON Carrier terminal mountings
- 1 - N1 Carrier terminal mounting
- 2 - "P" Pad bays

Power cable from basement to 8th floor BDFB in Little Rock Toll Building.

## Major items of equipment removed:

- 200,000 feet of switchboard cable and power cable
- 2 - Tandem patch bays (25% Long Lines)

Terminal equipment for other toll centers will be provided in estimate requests for those toll centers.

This project also releases five N1 systems and two N2 systems to provide carrier paths for N3 systems in cable routes operating at capacity.

Approximately 200,000 feet of dead switchboard cable in the first floor N carrier area at Little Rock Toll is being removed to provide cable space for the 1972 requirements. Many of the cable runs are now blocked. The cables were retired in place in 1970 (Estimate 0014 which included \$94,000 plant retirements and \$12,9400 salvage into Account 122-39). Removal work has been deferred until the cable space is required, in order to defer removal expenditures.

The two tandem patch bays are no longer required because of the relocation of associated equipment on another project.

E.R. 11295

Page 2 of 4

OUTLINE OF PLAN

Test jacks requirements forecast, 17C toll testboards:

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Intertoll Message Trunks	5369	6013	6615	7271
Total Jacks Available	5700	7620	7620	9140
Total Jacks Required	6174	6905	7607	8362

(to allow for orderly growth in each group)

Rearrangements and Changes

(Not Shown--See Typical in Fig. 10-4)

OUTLINE OF PLAN  
CHANNEL UTILIZATION

<u>New Carrier Systems</u>	<u>Spare or Uneqpd. Before this Proj.</u>	<u>Added This Project (See Notes)</u>				<u>Total</u>
		<u>Toll Msg.</u>	<u>Special Service</u>	<u>Facility Reargmt.</u>	<u>Other</u>	
202N2 Beebe#-Little Rock*		1	3 (9)			4
205N2 Cabot*-Little Rock*		3	2(11)			5
104N Little Rock#-Lonoke*		3	4(41)			7
1010NC L. Rock#-Lonsdale*		1				1
1030NA L. Rock*-Shirley#		1 (A)		1 (B)		2
1030NC L. Rock*-Shirley#			2 (6)	2 (B)		4
1030ND L. Rock*-Shirley#		1 (C)	1	1 (B)		3

NOTES:

1. \* Indicates new mounting # Indicates existing mounting
2. Quantities in ( ) in Special Services Column are existing special service assignments in the group indicated.
3. (A) Clinton-Shirley section of Clinton-Little Rock circuit to be provided by Independent Company.  
(B) Fairfield By-Little Rock circuits re-routed direct Little Rock to Shirley instead of back-to-back via Helen Springs.  
(C) Little Rock-Shirley section of a Fairfield Bay-Little Rock circuit. Fairfield Bay-Shirley section provided by Independent Company.
4. Plug-in Units added to existing systems or mountings to provide circuits not included in this tabulation.

OUTLINE OF PLANTRAFFIC DATA

<u>Group</u>	<u>Schedule</u>		<u>Pres.</u>	<u>Forecast</u>		
	<u>Pres.</u>	<u>Prop.</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Hope - Little Rock	.01	.01	116	125	134	144
Dallas - Hope	H18	H18	9	12	16	17
Cabot - Little Rock	.03	.03	21	21	25	26
Cabot - Little Rock (1W CAMA)	.01	.01	15	16	17	18
Jknvl. (982) - L. Rock	.03	.03	<u>33</u>	<u>37</u>	<u>40</u>	<u>35</u>
Totals			194	213	232	240

Total provided for in this Estimate 12. (7 of the above total will be provided with plug-in units only.)

Traffic data reviewed November 15, 1970.

<u>Interoffice Trunks</u>	<u>Pres.</u>	<u>Forecast</u>		
	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Jknvl. 982 - Little Rock WI5	20	21	23	26
Little Rock WI TDM - Jknvl. 982	51	54	57	64

FIGURE 21

## EXCHANGE INTEROFFICE CIRCUIT ADDITION

(Typical for T-1 Carrier Interoffice Trunk Project)

OUTLINE OF PLANCHANNEL AND CHANNEL BANK MOUNTING UTILIZATION

<u>Office</u>	<u>Exist. Mtgs. 1970</u>	<u>Mtgs. Req'd. 1971</u>	<u>Mtgs. Req'd. 1972</u>	<u>Tot.Mtgs. After Proj.</u>	<u>Tot. Exist. CCTS.</u>	<u>New Msg. 1971</u>	<u>New S.S. 1971</u>	<u>Other 1971</u>	<u>Total CCTS 1971</u>
Hazelwood	-	166	218	219(A)	-	1360	1880	-	3240
Ladue	228	211	225	228	3271	324	214	353	4162
Parkview	<u>138</u>	<u>131</u>	<u>147</u>	<u>138(B)</u>	1895	264	2	252	2413
	366	508	590	585					
Mountings added this estimate				<u>For 1971</u> 166	<u>For 1972</u> 218		<u>Total</u> 219		

## NOTES:

- (A) One additional mounting provided as result of 3 mountings per bay.
- (B) Mountings required for 1972 will be provided in the 1972 project.

FIGURE 22

## ANNUAL PLUG-IN UNIT ESTIMATE - CENTRAL STOCK

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_ Sheet 1 of 2

AREA Oklahoma DIVISION Eastern (H)  
Western (H) ESTIMATE REQUEST NO. 11017

## TITLE:

OKLAHOMA AREA - Calendar Year 1971 Plug-in Equipment Requirements

## NATURE AND NECESSITY

This estimate provides for material and other costs for circuit equipment plug-in units in the Oklahoma Area for the Calendar Year 1971.

Plug-in units for toll, exchange and Special Service requirements are to be bulk ordered periodically and warehoused at the Oklahoma Central Stock location in Oklahoma City. Individual circuit order requirements will be met from this supply as set forth in the Central Office Plug-in Central Stock Plan dated July, 1970.

Work under this estimate is proposed at this time for the following reasons:

1. To provide for plug-in material and other costs for the 1971 Toll Circuit Program, the 1971 Exchange Circuit requirements, the 1971 Special Service requirements and portions of the 1972 Toll Circuit Program required in the latter part of 1971.
2. To provide for plug-in material and other costs for the 1971 portion of the Oklahoma City Metropolitan Wide Area Calling Plan.
3. To provide for plug-in material and other costs for subscriber loop improvement and the rural four-party conversion in the Oklahoma Area.

Traffic data is included as requirement with each authorization for toll center and exchange estimates.

F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input type="checkbox"/>	INITIALS
SERVICE DATE		COMPLETION DATE		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
RECOMMENDED:	DATE	APPROVED:	DATE	
DIV. PLT. ENG., EQUIP. ENG., ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
APPROVED:		VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.		VICE PRESIDENT TEXAS VICE PRESIDENT MO. ILL.		
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING		
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_

AREA Oklahoma DIVISION Eastern (4) Western (4) ESTIMATE REQUEST NO. 11017

TITLE: \_\_\_\_\_

NATURE AND NECESSITY \_\_\_\_\_

REFERENCES:

1971 Toll Circuit Method of Provisions  
 1972 Toll Circuit Method of Provisions  
 1971 Exchange Method of Provisions  
 Oklahoma City-Wide Are Calling Plan Method of Provision.  
 Special Service Forecast.  
 Outline of Plan

Estimate Prepared By \_\_\_\_\_

Estimate Reviewed By \_\_\_\_\_

F.C.C. AUTHORIZATION REQUIRED		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	INITIALS <u>JM</u>
SERVICE DATE <u>January, 1971</u>		COMPLETION DATE <u>December, 1971</u>		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
<u>6,801,700</u>	---	<u>6,801,700</u>	---	
RECOMMENDED:	DATE	APPROVED:	DATE	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
APPROVED:		VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT. BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O S P - ENG. MGR. - FAC.		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.		
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING		
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

E.R. 11017

Sheet 1 of 1

OUTLINE OF PLANOKLAHOMA AREA

The plug-in requirements for the Calendar Year 1971 are as follows:

	<u>1971</u>	<u>1972</u>	<u>Special</u>	<u>Exchange</u>	<u>Total</u>
	<u>TCP</u>	<u>TCP</u>	<u>Service</u>		
*"O" & "ON" Channels	998	114	800	-	1912**
*"N2" Channels	758	133	250	50	1191
*"N3" Channels	1357	133	480	20	1990
*"T-1" Channels	2200	24	100	15751	18075
43A1 Telegraph Channels	10	-	190	-	200**
"E6" Repeaters	32	-	350	1675	2057
"T-1" Repeaters	1075	-	-	9800	10875
"N-2" Repeaters	902	11	-	-	9913
"E" Type SF's	2041	180	850	50	3121
"F" Type SF's	250	-	-	-	250
Dial Long Line Units	-	-	-	475	475
"1" Type Term Sets	2189	300	300	125	2914
227 Type Amplifiers	44	-	300	150	494
359 Type Equalizers	37	-	200	100	337

\* Includes associated group equipment

\*\* These requirements include approximately 1500 "O" and "ON" Channel units and 200 43A1 telegraph channels that will be recovered from disconnected systems and reused in 1971.

FIGURE 23

## POWER PLANT ADDITION

SOUTHWESTERN BELL TELEPHONE COMPANY				FORM SN-4 (REV. 1-73)
AUTHORIZATION, ESTIMATE NO. _____				
AREA	Kansas	DIVISION	Springfield (2)	ESTIMATE REQUEST NO. 10672
<b>TITLE:</b>				
Fisk Repeater Station - Power Plant Equipment				
<b>NATURE AND NECESSITY</b>				
<p>This estimate provides for power plant equipment work at Fisk Repeater Station to replace a 180 ampere hour 130 volt battery with a 540 ampere hour battery, to add one 30 ampere rectifier to the 48 volt plant, and to remove a type 410A power plant that is no longer required at this location.</p> <p>Displaced equipment not held for re-use will be returned to Western Electric Company for credit, or junked locally.</p>				
<b>REFERENCES:</b>				
Central Office Equipment Recommendation Springfield 38-0 Outline of Plan Power Data Sheets Specification 4T41.05 (not attached)				
Estimate Prepared By _____				
Estimate Reviewed By _____				
F.C.C. AUTHORIZATION REQUIRED YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <i>ABA</i>				
SERVICE DATE		COMPLETION DATE		
May, 1971		April, 1971		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
13,400	5,000	7,000	--	
<b>RECOMMENDED:</b>		<b>APPROVED:</b>		<b>DATE</b>
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
<b>APPROVED:</b>		VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF S.P. - ENG. MGR. - FAC.		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.		
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING		
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

E.R. 10672

Page 1 of 3

OUTLINE OF PLAN

1. Replace the +130 volt battery. The present KS15544 List 311 batteries do not provide adequate reserve. Several cells are cracked and constitute a service hazard.
2. Add one 30 ampere rectifier to the type 111A -48 volt plant. Charging capacity must be increased because of increased drain.
3. Remove a type 410A -130 volt power plant. Because of N carrier repeater power feed rearrangements there is no further requirement for this plant at this location.

Major items of equipment added:

- |    |   |
|----|---|
| 66 | KS15544 List 407 cells                                      |
| 1  | 111A supplemental bay equipped with one 30 ampere rectifier |

Major items of equipment removed:

- |     |                        |
|-----|------------------------|
| 1   | 410A power plant       |
| 132 | KS15544 List 311 cells |

## POWER PLANT DATA SHEET

Page 2 of 3 <sup>SW 5073</sup>  
(7/73)OFFICE Fisk RepeaterDATE 3-1-70

CITY \_\_\_\_\_

ESTIMATE  
REQUEST 10672

SPEC. NO. \_\_\_\_\_

		<u>+130</u> VOLT PLANT	NOTE	PRESENT 19 <u>70</u>	END OF PWR. ENGR. PERIOD 19 <u>72</u>	ESTIMATED 19 <u>75</u>
PER PLANT		TYPE OF PLANT		410A	410A	410A
		PLANT CAPACITY (AMPS)	1	40	40	40
		TOTAL EQUIPPED CHARGING CAPACITY (AMPS)		27	27	27
		CHARGING CAPACITY, LARGEST UNIT (AMPS)		9	9	9
BATTERY RESERVE CALCULATIONS - PER PLANT	A	FINAL VOLTS PER CELL		1.86	1.86	1.86
	B	BATTERY STRINGS - QUANTITY/LIST (YEAR INST)		1/L311 (1962)	1/L407 (1971)	1/L407
	C	BUSY HOUR PEAK DRAIN (AMPS)		21	21	23
	D	VARIABLE DRAIN (AMPS)		--	--	--
	E	VARIABLE DRAIN - 24 HOUR EQUIV. (AMPS)		--	--	--
	F	CONSTANT DRAIN (AMPS)		21	21	23
	G	POWER FAILURE DRAIN - ADDITIONAL (AMPS)		--	--	--
	H	TOTAL BATTERY DISCHARGE DRAIN (AMPS)	2	21	21	23
	I	AGE CORRECTION FACTOR - ALL STRINGS		1.0	1.0	1.0
	J	TOTAL DRAIN CORRECTED FOR AGE (AMPS)		21	21	23
	K	BATTERY RESERVE PROVIDED (HRS)		7	32	31
	L	BATTERY RESERVE REQUIRED (HRS)		24	24	24
PER PLANT		MAXIMUM DEMAND (KW) - THIS PLANT	3	4.2	4.2	4.6
PER OFFICE		MAXIMUM DEMAND (KW) - TOTAL OFFICE		6.8	7.2	7.7
		ENGINE - ALTERNATOR CAPACITY (KW)		NONE	NONE	NONE

- NOTES: 1. SHOW TOTAL CHARGE CAPACITY RATING OF THE POWER PLANT  
2. FOR 3 HOUR RESERVE - D + F + G  
FOR 24 HOUR RESERVE - E + F + G  
3. KW RATING FOR BH PEAK DRAIN

## POWER PLANT DATA SHEET

Page 3 of 3

SW 5073  
(7/73)OFFICE Fisk Repr. Sta.DATE 3-1-70

CITY \_\_\_\_\_

SPEC. NO. \_\_\_\_\_

ESTIMATE  
REQUEST 10672

			NOTE	PRESENT 19 <u>70</u>	END OF PWR. ENGR. PERIOD 19 <u>72</u>	ESTIMATED 19 <u>75</u>
		<u>-48</u> VOLT PLANT				
PER PLANT		TYPE OF PLANT		111A	111A	111A
		PLANT CAPACITY (AMPS)	1	120	120	120
		TOTAL EQUIPPED CHARGING CAPACITY (AMPS)		30	60	60
		CHARGING CAPACITY, LARGEST UNIT (AMPS)		30	30	30
				1.86	1.86	1.86
BATTERY RESERVE CALCULATIONS - PER PLANT	A	FINAL VOLTS PER CELL				
	B	BATTERY STRINGS - QUANTITY/LIST (YEAR INST)		1/501(68)	1/501(68)	1/501(68)
	C	BUSY HOUR PEAK DRAIN (AMPS)		32	40	42
	D	VARIABLE DRAIN (AMPS)		--	--	--
	E	VARIABLE DRAIN - 24 HOUR EQUIV. (AMPS)		--	--	--
	F	CONSTANT DRAIN (AMPS)		32	40	42
	G	POWER FAILURE DRAIN - ADDITIONAL (AMPS)		--	--	--
	H	TOTAL BATTERY DISCHARGE DRAIN (AMPS)	2	32	40	42
	I	AGE CORRECTION FACTOR - ALL STRINGS		1.0	1.0	1.0
	J	TOTAL DRAIN CORRECTED FOR AGE (AMPS)		32	40	42
PER PLANT	K	BATTERY RESERVE PROVIDED (HRS)		35	25	24
	L	BATTERY RESERVE REQUIRED (HRS)		24	24	24
PER PLANT		MAXIMUM DEMAND (KW) - THIS PLANT	3	2.6	3.0	3.1
PER OFFICE		MAXIMUM DEMAND (KW) - TOTAL OFFICE		6.8	7.2	7.7
		ENGINE - ALTERNATOR CAPACITY (KW)		NONE	NONE	NONE

- NOTES: 1. SHOW TOTAL CHARGE CAPACITY RATING OF THE POWER PLANT  
 2. FOR 3 HOUR RESERVE - D + F + G  
 FOR 24 HOUR RESERVE - E + F + G  
 3. KW RATING FOR BH PEAK DRAIN

FIGURE 24

PRIVATE BRANCH EXCHANGE - NEW

SOUTHWESTERN BELL TELEPHONE COMPANY		FORM SN-4 (REV. 1-73)	
AUTHORIZATION, ESTIMATE NO. _____			
AREA <u>ST. LOUIS</u>	DIVISION <u>ST. LOUIS (6)</u>	ESTIMATE REQUEST NO. <u>10039</u>	
TITLE: ST. LOUIS, MISSOURI - KSD TV - RADIO - New 770A PBX - Hardware			
NATURE AND NECESSITY  <p style="text-align: center;">This estimate provides for the installation of a new 120 line - Hardware - 770A PBX to serve KSD TV - RADIO, 1111 Olive Street, St. Louis, Missouri. The customer's existing 60 line 756A PBX feature system will be removed by the Plant forces. He is expanding his operations and these requirements exceed the 756's line capacity.</p> <p style="text-align: center;">Negotiations have been completed for Plan I Service under a seven year contract which was signed by the customer on August 1, 1974.</p> <p><u>REFERENCES:</u></p> <p style="text-align: center;">PBX Equipment Order Dated _____          Equipment and Feature Proposal Dated _____          Traffic Order:          Specification:</p> <p style="text-align: center;">Estimate Prepared By _____</p> <p style="text-align: center;">Estimate Reviewed By _____</p>			
F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
		INITIALS <u>RE</u>	
SERVICE DATE <u>NOVEMBER, 1974</u>		COMPLETION DATE <u>OCTOBER, 1974</u>	
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
\$33,000	--	\$33,000	--
RECOMMENDED:	DATE	APPROVED:	DATE
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG. APPROVED:		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER	
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.		VICE PRESIDENT AND GENERAL MANAGER	
CHIEF ENGINEER		VICE PRESIDENT-TEXAS VICE PRESIDENT - MO. - ILL.	
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING	
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861	
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

OUTLINE OF PLAN

770A PBX PROPOSAL

Serial No. 1194

Customer Name: KSD TV - Radio

Proposal No. 1

EQUIPMENT AND FEATURE REQUIREMENTS

Date: \_\_\_\_\_

EQUIPMENT		STANDARD FEATURES PLUS THE FOLLOWING:							
Qty.	ITEM	Qty.	ITEM	Yes	No	FEATURE	Yes	No	FEATURE
<u>102</u>	Stations*	<u>1</u>	Attendant Conf. Ckt.	X		Camp-On	X		Swd. Loop Operation
	Trunks	-	Paging Access Ckt.*	X		Attendant Conf.		X	Room No. Correlation
<u>7</u>	-1W In C.O.	-	Dial Dictation Ckt.*		X	Flex Nite Serv.		X	Reserve Power
<u>16</u>	-2W Combo. C.O.	<u>4</u>	Dial Trans. Ckt.	X		Trk. Ans. Any Sta.		X	Wide Freq. Power
<u>6</u>	-1W Out C.O.		Consoles	X		Touch-Tone			
-	-1W Out WATS*	-	-Direct Term.	X		Toll Restriction			
-	-2W Combo. WATS*	<u>2</u>	-Switched Loop	X		Call Transfer - Ind.			
<u>4</u>	-INWATS*			X		Add-On			
-	-2 Way FX*			X		Consultation Hold			
-	-Dial Tie Lines*			X		DSS			
<u>12</u>	-Attendant				X	Trans. Outgoing Call			
<u>8</u>	-Intercom				X	Message Waiting			
<u>2</u>	-Busy Tone				X	Message Registers			

\* Must be specified by Customer or Marketing.

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

RATE ELEMENTS REQUIRED

ITEM	Traffic Recommendation	Customer Request	ITEM	Traffic Recommendation	Customer Request
Basic Equipment - W/O Res. Pwr.	<u>1</u>	<u>1</u>	Consoles -		
- E/W Wide Freq. Pwr.			- Direct Term, W/O DSS		
- E/W Batt. Res. Pwr.			- Direct Term E/W DSS _____ Sta.		
Line Switch - W/O Message Waiting	<u>3</u>	<u>3</u>	- Sw. Loop W/O DSS		
- E/W Message Waiting			- Sw. Loop E/W DSS <u>200</u> Sta.	<u>2</u>	<u>2</u>
Trk. & Mid Switch - W/O Res. Pwr.	<u>4</u>	<u>4</u>	Dial Transfer Unit (2 Ckts.)	<u>4</u>	<u>4</u>
- E/W Wide Freq. Pwr.			Central Office Trunk Units		
- E/W Batt. Res. Pwr.			- 2 Way W/O Out. Call Trans.	<u>27</u>	<u>27</u>
Dial Pulse Register - Rotary			- 2 Way E/W Out. Call Trans.		
- Touch-Tone	<u>5</u>	<u>4*</u>	- 1 Way Out W/O Trans. (3 Ckt.)	<u>2</u>	<u>2</u>
Attendant Trunk Unit (1 Ckt.)	<u>12</u>	<u>12</u>	Dial Dictation Access Unit - Rotary		
Intercom & Busy Tone Unit (4 Ckts.)	<u>2</u>	<u>2</u>	- Touch-Tone		
Attendant Conference Unit	<u>1</u>	<u>1</u>	Dial Paging Access Unit		
Camp-On Unit (6 Ckts.)	<u>5</u>	<u>5</u>	Equipment Location Unit (160L)		
Code-Call Unit - Rotary			Dialed Station Unit (100L)		
- Touch-Tone			Tie Trunk Unit		
Toll Control Unit			Battery Reserve Power Plant		

\* Provided less than Traffic Recommendation per customer request.

Equipment Cabinets Required: Two (Include Basic Cabinet)

Floor Space Required: 80 square feet Floor Plan No. 1

Interval: 18 Weeks After Firm Order

## OUTLINE OF PLAN

Page 2 of 2

SW-1577  
6-74

## PBX EQUIPMENT ORDER

Date 7-1-74

Customer Name: KSD TV-RADIO

Service Address: 1111 OLIVE ST., ST. LOUIS, MO

Telephone Number: 421-5055 District DOWNTOWN

Inquiry Serial No.: 1194 Proposal No.: 1

Contract Signed Date: 6/74 Floor Plan Signed Date: 6/74

Console Color: WHITE Approx. Distance Console to Switching Equipment: 100 Feet

Service Date Quoted Customer: 11-4-74

Requested Service Date: 10-28-74 Equipment Room Ready Date: 9-16-74

Description of Service Required: NEW HARDWARE 770A PBX

MISCELLANEOUS TRUNK DETAILS

<u>Type of Trunk</u>	<u>Installed</u>
WATS - Zone _____	_____
- Zone _____	_____
- Zone _____	_____
INWATS - Zone <u>6</u>	<u>4</u>
- Zone _____	_____
- Zone _____	_____
FX - _____	_____
FX - _____	_____
DRTT to _____	_____
(Type Dist. PBX) _____)	_____
DRTT to _____	_____
(Type Dist. PBX _____)	_____
CCSA to _____	_____

STATION DETAILS

<u>Type</u>	<u>Installed</u>
Unrestricted _____	<u>102</u>
Restricted _____	_____
Total _____	<u>102</u>

OFF PREMISE STATIONS

<u>Qty.</u>	<u>Address</u>
_____	_____
_____	_____
_____	_____

Station Classes of Services Required: \_\_\_\_\_

\_\_\_\_\_

Room Number Correlation List Attached 

Remarks: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Marketing Representative: \_\_\_\_\_ Tel. No. \_\_\_\_\_

Marketing Manager: \_\_\_\_\_ Tel. No. \_\_\_\_\_

District Marketing Manager: \_\_\_\_\_ Tel. No. \_\_\_\_\_

FORM SN-4C

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.

EST. REQ. NO. 10039 EST./R.O. NO. 3338

LOCATION CODE (C & X) C1260 LOCATION CODE (R & M) \_\_\_\_\_

SHEET 1 OF 1

DATE \_\_\_\_\_

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS \$	COST OF REMOVAL \$	PLANT RETIRED \$	SALVAGE \$	REUSED MATERIAL \$
B							
A							
S							
P							
B	New 770A PBX - Hardware	58	33,000				
X							
TOTAL EXPENDITURES			(A) \$ 33,000	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 <u>74</u> AMOUNT \$ 33,000	YEAR 19 AMOUNT \$	YEAR 19 AMOUNT \$	YEAR 19 AMOUNT \$	YEAR 19 AMOUNT \$

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS			
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE			
CO. ID.	A C	MO.	DAY	YR.	QFC. NO.	AUTH. NUMBER	FILE ADDRESS						
							CONTROL LOC.	REQ. NO.					
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37					
29	1	1	11	74	86	3338	C1260	7-83189					
CD ID	LOCATION				RI	COMPL. DATE							
38	39-72				73-74	75-80							
1	KSD TV - Radio				E	1 10 28 74							
SECTION 2 - DETAIL DISTRIBUTION										NET REQUIREMENTS (A + B - D) \$ 33,000			
										GROSS EXPENDITURES (A + B) \$ 33,000			
										PLANT RETIREMENTS (C) \$			
										NET REQUIREMENTS (A + B - D) \$ 33,000			
										GROSS ADDITIONS (A) \$ 33,000			
										NET ADDITIONS (A - C) \$ 33,000			
										NET CAPITAL REQUIREMENTS (A + B - E) \$ 33,000			

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS				OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		C1260		58	C	25,000	4500			2000	1000	400	100	33,000
4														
4														
4														
4														
4														
4														
4														
2		TOTAL				25,000	4500			2000	1000	400	100	33,000
3		CHANGE TOTAL												

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

FIGURE 25

## PRIVATE BRANCH EXCHANGE - ADDITION

SOUTHWESTERN BELL TELEPHONE COMPANY				FORM SN-4 (REV. 1-73)
<b>AUTHORIZATION, ESTIMATE NO. _____</b>				
AREA	St. Louis	DIVISION	St. Louis (6)	ESTIMATE REQUEST NO. 11749
<b>TITLE:</b>				
St. Louis, Missouri - A.S. Aloe Company - Additional 701B Feature PBX				
<b>NATURE AND NECESSITY</b>				
<p>This estimate provides for the installation of 100 dial station lines, 8 central trunks and the removal of 6 dial repeating tie trunks in the 701B PBX System serving the A.S. Aloe Company, 1831 Olive Street, St. Louis, Missouri. The customer has ordered the additional station lines to serve employees occupying a recently constructed wing of his existing building. The tie trunks are being removed because the employees at the secondary location served by these trunks are being moved to the new wing.</p> <p>A termination agreement covering the additional equipment has been signed by the customer. The termination agreement covering the equipment to be removed has expired.</p> <p>Material valued at \$3,000 will be reused from "C" stock.</p> <p>Displaced equipment not held for reuse will be returned to the Western Electric Company for best allowance or junked locally.</p>				
<b>REFERENCES:</b>				
<p style="margin-left: 40px;">Traffic Order 71-SP-96 Specification X-327.3 Engineering Questionnaire (SW1525) Dated April 18, 1971</p>				
Estimate Prepared By _____				
Estimate Reviewed By _____				
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <b>DS</b>				
SERVICE DATE		COMPLETION DATE		
Sept. 13, 1971		Sept. 12, 1971		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
9,200	1,200	8,000	200	
RECOMMENDED:		APPROVED:		DATE
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
APPROVED:		VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.		VICE PRESIDENT - TEXAS    VICE PRESIDENT - MO. - ILL.		
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING		
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

OUTLINE OF PLAN

Rearrangements and Changes

58M Retermination of 2-way trunks on Dist. Frame                    \$200

FACILITY REPORT - CENTREX/PBX

SW 5054  
(4-72)

Stations	Actual Cutover	Forecast				Trunks	Actual Cutover	Forecast			
		12-31-71	12-31-72	12-31-73	12-31-75			12-31-71	12-31-72	12-31-73	12-31-75
Regular	320	350	400	450	600	Comb. 2-Way					
Restricted						Listed No. & Attd. 2-Way					
Off Premise						Out Dial	18	19	20	21	22
						Incoming	19	20	21	22	23
Total	320	350	400	450	600		6	6	-	-	-
Engineered Sta. Forecast	340	360	400	500	600	Total	43	45	41	43	45

Type - 701B	Installed		Capacity	Exhaust Date	Job No.	Description	Ship Date		
	Plug-In	Wired					Service Date		
Stations - Regular		400	360	2-72	Proposed				
- Restricted									
- Off Premise									
Lines -		400	360	2-72					
Switching Capacity	<del> </del>	370 sta	2220 ccs	4-72					
Existing Equipment	Trunks	Comb. 2-Way			Serving Office for PBX/CTRX 382	Wkg. Station History - Yrly. as of 12-31			
		List No. Attd. 2-Way							
		Out Dial		19				1966	204
		Incoming		20				1967	247
		DID						1968	291
		FX						1969	317
		CCSA						1970	320
		WATS						19	
		Dial Tie Lines		6				19	
		Total		45					
SWBD/CONSOLE TYPE 608D No. Positions 2					Remarks:				
					Installed, Actual & Capacity Data as of: 1-22-71				
					Equipment Room Capacity 20' x 30'				

A. S. Aloe Company      1831 Olive Street      St. Louis, Mo.      701-Feature      382-1500      2-4-71  
 CUSTOMER      ADDRESS      CITY      TYPE SERVICE      TELEPHONE NO.      ISSUE DATE

FACILITY REPORT - CENTREX/PBX

SW 5054  
(4-72)

Stations	Actual 9-71	Forecast				Trunks	Actual 9-71	Forecast			
	Cutover	9-72	9-73	9-74	9-76		Cutover	9-72	9-73	9-74	9-76
Regular	400	420	450	480	600	Comb. 2-Way					
Restricted						Listed No. & Attd. 2-Way					
Off Premise						Out Dial	21	22	23	24	27
						Incoming	22	23	24	25	28
Total	400	420	450	480	600						
Engineered Sta. Forecast	400	420	450	480	600	Total	43	45	47	49	55

Type - 701B	Installed		Capacity	Exhaust Date	Job No.	Description	Ship Date
	Plug-In	Wired					
Stations - Regular		500	450	9-73	5001	Included in Installed Data 100 Line Addition 701B	6-07-71
- Restricted							9-12-71
- Off Premise							
Lines -		500	450	9-73			
Switching Capacity		460 sta	2640 ccs	10-73			
Comb. 2-Way					Serving Office for PBX/CTRX <u>382</u> CCSA _____ WATS _____  Remarks:  Installed, Actual & Capacity Data as of: 5-7-71 Equipment Room Capacity 20' x 30'	Wkg. Station History - Yrly. as of 12-31	
List No. Attd. 2-Way				19 66			204
Out Dial		23	9-73	19 67			247
Incoming		24	9-73	19 68			291
DID				19 69			317
FX				19 70			320
CCSA				19			
WATS				19			
Dial Tie Lines							
Total		47					

SWBD/CONSOLE TYPE 608D No. Positions 2

A. S. Aloe 1831 Olive Street St. Louis, Mo. 701B Feature 382-1500 5-21-71  
 CUSTOMER ADDRESS CITY TYPE SERVICE TELEPHONE NO. ISSUE DATE

FORM SN-4C (1372)

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 11749 EST./R.O. NO. 0483  
LOCATION CODE (C & X) C4189 LOCATION CODE (R & M) \_\_\_\_\_  
SHEET 1 OF 1  
DATE 5-7-71

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 7-71

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL						
			\$	\$	\$	\$	\$						
B A S I C													
S S P E C I A L													
A M A													
P O W E R													
P B X	Add'l. 701B Feature PBX	58C	8,800										
	Removal 701B Feature PBX	58X		400	1,200	100							
TOTAL EXPENDITURES			(A) \$ 8,800	(B) \$ 400	(C) \$ 1,200	(D) \$ 100	(E) \$						
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 71 AMOUNT 8,800	YEAR 19 AMOUNT	YEAR AMOUNT	YEAR AMOUNT	YEAR AMOUNT						
ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE					SUMMARY OF ESTIMATED REQUIREMENTS								
SECTION 1 - HEADER DATA					ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE								
CO. ID.	A C	MO.	DAY	YR.				OFC. NO.	AUTH. NUMBER	FILE ADDRESS			
								CONTROL LOC.		REQ. NO.			
								20-26		27-37			
29		10507		7186				0483 C4189		768234			
CD ID	LOCATION				RI	COMPL. DATE							
38	39-72					73-74 75-80							
1	A.S. Aloe Co.				E 1	8 1 71							
SECTION 2 - DETAIL DISTRIBUTION					NET CAPITAL REQUIREMENTS (A + B - E) \$ 9,200								
CD ID	ADJ.	ACCOUNTING CLASSIFICATION			W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'G & ASSOC. COSTS		SUNDRY & MISC. BILLS
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70					
4		C4189		58	C	5,500	2,200		300	700	100		8,800
4		C4189		58	X		200		100	100			400
4		C4189		58	M		100			100			200
4													
4													
4													
4													
4													
4													
2		TOTAL				5,500	2,500		400	900	100		9,400
3		CHANGE TOTAL											

EXPLANATION: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

FIGURE 26

## PRIVATE BRANCH EXCHANGE - 300 SWITCHING SYSTEM

SOUTHWESTERN BELL TELEPHONE COMPANY		FORM SN-4 (REV. 1-73)
AUTHORIZATION, ESTIMATE NO. <u>ADV. 0493</u>		
AREA <u>Kansas</u>	DIVISION <u>Northern (3)</u>	ESTIMATE REQUEST NO. <u>10425</u>
TITLE: <u>Olathe, Kansas - Federal Aviation Agency - 300 Switching System</u>		
NATURE AND NECESSITY  <p>This estimate provides for the installation of additional positions to the 300 Switching System serving the Federal Aviation Agency's Air Route Traffic Control Center, Olathe, Kansas. The customer has ordered twenty additional positions to provide switching capacity and terminations for a two year forecasted increase of private line, radio, and miscellaneous circuits.</p> <p>Contract negotiations have been completed and DECCO has authorized the additional equipment.</p> <p><u>REFERENCES:</u></p> <p>Engineering Questionnaire SW-1525 Dated February 16, 1971</p> <p>Specification SWK-6A66-51</p> <p>Estimate Prepared By _____</p> <p>Estimate Reviewed By _____</p>		
F.C.C. AUTHORIZATION REQUIRED YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <u>VBP</u>		
SERVICE DATE <u>November 29, 1971</u>		COMPLETION DATE <u>November 7, 1971</u>
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS
<u>160,500</u>	<u>--</u>	<u>160,500</u>
		<u>3,300</u>
RECOMMENDED:	DATE	APPROVED:
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER
APPROVED:		
DIV. PLT. SUPT. BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. -- ENG. OF O.S.P. -- ENG. MGR. - FAC.		VICE PRESIDENT AND GENERAL MANAGER
CHIEF ENGINEER		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860

OUTLINE OF PLAN

300 Switching System (Addition)

FAA - Olathe, Kansas

Estimate 0495

<u>Requirements</u>	<u>Existing</u>	<u>1 Year</u>	<u>2 Year</u>
Manual Controller Positions (Type B)	22	24	28
Horizontal Radar Positions (Type C)	90	96	102
Overhead Coordinator Positions (Type E)	8	9	10
Miscellaneous Trunks	240	260	280

Note:  
No additional power is required.

Rearrangements and Changes  
(Not Shown--See Typical Fig. 10-4)

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10425 EST./R.O. NO. 0493

LOCATION CODE (C & X) K 9464 LOCATION CODE (R & M) K9464

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  ENGINEERED BY  -TEL. CO.

CURRENTLY READY FOR SERVICE  -W.E. CO.

SHEET 1 OF 1

DATE 3-1-71

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
			\$	\$	\$	\$	\$
B A S I C							
S S P E R							
A M A							
P O W E R							
P B X	300 Switching System	58	160,500				10,000
TOTAL EXPENDITURES			(A) \$ 160,500	(B) \$	(C) \$	(D) \$	(E) \$ 10,000
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 70 AMOUNT 3,500	YEAR 19 71 AMOUNT 157,000	YEAR 19 AMOUNT	YEAR AMOUNT	

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS					
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 160,500				
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$ - -				
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.		REQ. NO.		NET REQUIREMENTS (A + B - D) \$ 160,500				
29	1	03	01	71	26	0493	K9464		736321		GROSS ADDITIONS (A) \$ 160,500				
CD ID	LOCATION					RI	COMPL. DATE				NET ADDITIONS (A - C) \$ 160,500				
38	39-72					73-74	75-80			NET CAPITAL REQUIREMENTS (A + B - E) \$ 150,500					
1	OLATHE - FAA					E	5	11	07	71					

CD ID	ADJ.	ACCOUNTING CLASSIFICATION					W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70	10000	2000	5000	1000	3000	160,500	
4		K9464		58	C	85,000	32,500	22,000							
4				58	M	100	1,000	600		500	1000	100		3,300	
4															
4															
4															
4															
4															
4															
2		TOTAL				85,000	33,500	22,600	10000	2500	6000	1100	3000	163,800	
3		CHANGE TOTAL													

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

FIGURE 27

## BUILDING ADDITION

SOUTHWESTERN BELL TELEPHONE COMPANY				Form SN-4 (Rev. 7-70)
AUTHORIZATION, ESTIMATE NO. _____				
AREA	Dallas	DIVISION	Dallas North (4)	ESTIMATE REQUEST NO. 10955
<b>TITLE:</b>				
Dallas, Texas - Melrose 631 Building - Addition and Alterations				
<b>NATURE AND NECESSITY</b>				
<p>This estimate provides for the construction of an upper floor addition and alterations to the DLS Melrose 631 Building in Dallas, Texas, to provide space for the installation of No. 1 ESS equipment.</p> <p>The existing building, three stories without basement, houses telephone power equipment and No. 5 Crossbar equipment. The proposed addition (approximately 100' x 200') will consist of an entire fourth floor, which is the ultimate expansion vertically. No further expansion can be made laterally on presently owned property. The enlarged building will care for forecasted growth requirements in excess of twelve years.</p> <p>Reason for this addition: This work is necessary to provide turn around space for an initial No. 1 ESS unit, which will extend the life expectancy of the office considerably. The present building will exhaust in early 1976, due to concentrated requirements for T-carrier and E-repeater equipment.</p> <p>References: Commercial Forecast, Dated 3-2-71, confirmed 9-28-71 Annual Gain Trend, dated 10-1-71 (Typical Illustrated in Fig. 4)</p>				
Estimate Prepared By _____				
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> INITIALS <b>HBP</b>				
SERVICE DATE		COMPLETION DATE		
10-1-73		12-15-74		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
858,600	24,000	831,200	16,800	
RECOMMENDED:		APPROVED:		DATE
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		GENERAL MANAGER		
APPROVED:		VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT. BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.		VICE PRESIDENT - TEXAS    VICE PRESIDENT - MO. - ILL.		
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING		
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

## Dallas Melrose 631 Building - Additions and Alterations

ER 10955

OUTLINE OF PLAN1. Job Conditions

The 631 wire center is located in one of the fastest growing sections of Dallas, serving a concentrated office and industrial area. If the installation of No. 5 Crossbar equipment is continued, building space will exhaust within the next ten years, requiring the establishment of another wire center. This addition will provide the necessary turn around space and increase the life expectancy of the building. The initial ESS equipment will be shipped in the second quarter of 1974, with a mid-1975 completion date.

The existing building has a reinforced concrete frame and masonry walls with face brick exterior. The addition will be of like construction, and will match the existing building with respect to exterior design and materials. A passenger elevator, provisions for which were included in the original portion of the building, will be installed and a freight elevator will be provided in added space at the rear of the building.

Separate property across street from the building, purchased recently, will be improved as part of this project to satisfy City of Dallas off-street parking requirements. The property is presently in Account 100.2 under another estimate.

## 2. Estimated Cost

Contract (Addition only)		Loaded (Addition only)	
$\frac{\$615,600}{356,586 \text{ cu.ft}}$	= \$1.73 per cu.ft.	$\frac{\$729,000}{356,586 \text{ cu.ft.}}$	= \$2.04 per cuft
$\frac{\$615,600}{20,000 \text{ sq.ft.}}$	= \$30.78 per sq.ft.	$\frac{\$729,000}{20,000 \text{ sq.ft.}}$	= \$36.45 per sqft

Note: Cost per sq. ft. is required. Cost per cu. ft. is optional.
--

3. Forecast

Forecasted line and main station development and equipped building capacity:

	Forecast			Equipped		Building Capacity
	12-31-74	12-31-82	12-31-86	12-31-82	12-31-86	
Lines	25,143	43,400	49,600	47,104	55,296	60,000
Main Stations	23,490	40,000	46,000	50,000	60,000	60,000



## Dallas Melrose 631 Building Addition

Work Sheet - Page 1

Area No. T-8250

ER 10955Dallas Melrose 631 Building Addition: Fourth Floor  
over entire building.

## Cubic Contents:

99' 7 1/2" x 198' 7 1/2" x 15' 6"	=	306,606
8' 4 1/2" x 30' x 15' 6"	=	3,906
20' 4" x 23' 4" x 73'	=	34,529
8" x 23' 8" x 28'	=	5,320
22' 4" x 22' 4" x 12' 6"	=	6,225

	Total	356,586 cu. ft.
Square foot contents	Total	20,000 sq. ft.

Land for parking - purchased in 1971 - Area No. T-8250 -  
Estimate A-2865 to remain in Acct. 100.2 under A-2865.

- |  |             |
|--|-------------|
| 1. Building Addn. - 1969 - Est. 7490 - | Factor 1.11 |
| 2. Orig. Building - 1969 - Est. 9778 - | Factor 1.51 |

	Addn.	Pres.Bldg.	10X	910M	910R	PD
	10C	10C				

Bldg. Addn. 356, 386 c.t. @ 1.60

570,600

Elevator Work	
New Freight	45,000
One passenger	
pres. bldg.	30,000

Bldg. Work associated  
with installation of  
passenger elev:

Shaft walls	4,000		
Remove slabs	800		596
Relocate doors		600	
Repaint refurbish			
lobbies and adj.			2,000
corridor			
New ceiling,			
lobbies 2nd &			
3rd floors	700		

## Dallas Melrose 631 Building Addition

Work Sheet - Page 2

	<u>Addn.</u> <u>10C</u>	<u>Pres.</u> <u>Bldg.</u> <u>10C</u>	<u>10X</u>	<u>910M</u>	<u>910R</u>	<u>P.D.</u>
New Lighting - Lobbies (2nd & 3rd Floors)		800				
Improve parking lot		30,000				
Remove & replace docks		7,500	400			6,756
Remove & replace exterior walls at docks		1,000	350			2,368
Remove roof-orig. bldg.			400			3,512
Piping extensions-pres. bldg.		8,000		1,500	500	
Relocate cooling tower temporarily-then permanently				5,000	800	
Addns. to switchgear & elect extensions		10,000			400	
Relocate exhaust fans-roof				500		
Replace screen-front entrance		1,200	300			1,266
Replace ceramic tile spandrels		6,000	600			2,814
Unforeseen		8,000	500	2,500	1,500	2,000
<u>Contract Totals</u>	615,600	108,000	3,000	10,100	5,200	24,000
Architectural Supervision	5,800	1,000	100	200	100	---
Architectural Fee	32,300	5,700	200	500	250	----
Miscellaneous Expense	6,000	1,000	---	100	50	----
<u>Unloaded Totals</u>	659,700	115,700	3,300	10,900	5,600	24,000
Engineering	12,300	2,000	100	200	100	----
Interest	57,000	8,500	---	---	---	----
<u>Loaded Totals</u>	729,000	126,200	3,400	11,100	5,700	24,000

(Note: For reproduction purposes, this example has been typed. It may be handwritten and the format varied as desired.)

FIGURE 28

NEW BUILDING

SOUTHWESTERN BELL TELEPHONE COMPANY

Form SN-4  
(Rev. 7-70)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_

AREA Dallas DIVISION Dallas North (4) ESTIMATE REQUEST NO. 11085

TITLE:  
FRISCO, TEXAS - New Frisco West 373 Building

NATURE AND NECESSITY

This estimate provides for the construction of the new Frisco West 373 Building in Frisco, Texas. The proposed building, one story and basement, approximately 62' x 100', will house power equipment, a future emergency engine in the basement, and No. 5 Crossbar equipment.

Land for this project is being purchased under Estimate A-3156. The investment will remain in Account 100.2 under that estimate until the office is placed in service.

The proposed building will meet requirements in excess of eight years. The initial building will be designed for lateral expansion to the rear (south) and side (west) and for two additional upper floors to care for future growth requirements.

Reasons for this project:  
An increase of 50.4 percent of total main telephones by 1990 is forecasted due to rapid suburban residential growth, and the proximity of this area to the new Regional Airport. Approved Plant Extension Engineering Study D-6120 indicates the most economical method or serving this area will be to establish a new No. 5 Crossbar office.

References:  
Plant Estension Engineering Study No. D-6120, approved 6-14-71  
Commercial Forecast, dated 10-27-71  
Annual Gain Trend, dated 2-1-71 (Typical Illustrated in Figure 13)

Estimate Prepared By \_\_\_\_\_

F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	INITIALS <i>JH</i>
SERVICE DATE		2-1-74		COMPLETION DATE
				12-1-74
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
\$425,500	-	\$425,500	-	
RECOMMENDED:	DATE	APPROVED:	DATE	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		GENERAL MANAGER		
APPROVED:				
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P.		VICE PRESIDENT AND GENERAL MANAGER		
CHIEF ENGINEER		VICE PRESIDENT-TEXAS VICE PRESIDENT - MO. - ILL.		
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING		
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

## New Frisco West 373 Building

ER 11085

OUTLINE OF PLAN

## 1. Job Conditions

Frisco is located approximately 23 miles north of metropolitan Dallas, in the center of the Denton, McKinney, and Dallas-Ft. Worth employment center. This area is undergoing a transition from an agricultural to a suburban residential community. Garza and Little Elm lake has been and will continue to be an influential growth factor in the development of this area. The new Regional Airport is expected to create approximately 62,000 jobs by 1975, a portion of which will live in this forecasted area. The new building will be required for the initial equipment installation presently scheduled to start in February of 1974.

## 2. Estimated Cost

<u>Contract</u>		<u>Loaded</u>	
\$348,100	= \$1.75 per cu. ft.	\$425,500	= \$2.14 per cu. ft.
	198,920 cu. ft.		198,920 cu. ft.
\$348,100	= \$28.07 per sq. ft.	\$425,500	= \$34.32 per sq. ft.
	12,400 sq. ft.		12,400 sq. ft.

Note: Cost per square ft. is required.  
Cost per cubic ft. is optional.

## 3. Forecast

Forecasted line and main station development and equipped building capacity:

	<u>Forecast</u>		<u>Equipped</u>	
	<u>12-31-74</u>	<u>12-31-81</u>	<u>12-31-81</u>	<u>Building Capacity</u>
Lines	947	4,700	4,840	6,600
Main Stations	975	4,725	5,000	7,000

## 4. Study Comparison of Associated Projects

Comparison of present and study views of gross additions:

	<u>Study View</u>	<u>Present View</u>	
Land	28,000	17,000	
Building	396,000	425,500	
#5XB COE	581,000	581,000	
COE Trunking	150,000	150,000	
Outside Plant	<u>716,000</u>	<u>716,000</u>	
Totals	\$1,871,000	\$1,889,500	(+1.0%)



FIGURE 29

## MICROWAVE TOWERS AND BUILDINGS

SOUTHWESTERN BELL TELEPHONE COMPANY				FORM SN-4 (REV. 1-73)
AUTHORIZATION, ESTIMATE NO. _____				Page 1 of 2
AREA	San Antonio	DIVISION	Austin San Antonio (2)	ESTIMATE REQUEST NO. 11989
<b>TITLE:</b>				
ORANGE GROVE-HARLINGEN TD-2 MICROWAVE SYSTEM. Buildings and Towers				
<b>NATURE AND NECESSITY</b>				
This estimate provides for the erection of buildings and towers required to complete the microwave system between Corpus Christi and Harlingen, Texas. The locations are as follows:				
<u>Location</u>	<u>Self Supporting Tower Height</u>	<u>Type</u>	<u>Building</u>	
Corpus Christi	50'	H (On Roof)	Tulip 882	(Existing)
Rabb	175'	H (Existing)	61' x 28'	(Existing)
Orange Grove	165'	A ( " 150')	61' x 34'	(Existing)
	(Add upper platform)			This Estimate
San Diego	275'	E	61' x 28'	This Estimate
Falfurrias	275'	E	61' x 28'	This Estimate
Rachel	200'	E	61' x 28'	This Estimate
Linn	175'	E	61' x 28'	This Estimate
Monte Alto	125'	E	61' x 28'	This Estimate
Harlingen	155'	Spec.(On Roof)	"423"Bldg.	(Est. 1783)
The new microwave system, which will ultimately interconnect with the Corpus Christi-San Antonio TD-2 System, will be equipped initially for one message channel, two T.V. channels (north to south) and one protection channel.				
The new microwave path is necessary because the present "N" cable serving the Rio Grande Valley with voice grade facilities will exhaust in 1972. TV service for this area is now provided over a Corpus Christi-Harlingen light-haul TD-2 system which will be removed under a separate authorization when the new long-haul system is placed in service. Three of the existing sites, Falfurrias, Rachel and Linn will be used for the new towers and buildings.				
F.C.C. AUTHORIZATION REQUIRED    YES <input type="checkbox"/> NO <input type="checkbox"/> INITIALS _____				
SERVICE DATE		COMPLETION DATE		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
RECOMMENDED:	DATE	APPROVED:	DATE	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH.ENG. OR SPCL. SERV. ENG. APPROVED:		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT. BLDG. & EQPT. ENG. . ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. -- ENG. OF O.S.P. -- ENG. MGR. -- FAC.		VICE PRESIDENT AND GENERAL MANAGER		
CHIEF ENGINEER		VICE PRESIDENT-TEXAS    VICE PRESIDENT - MO. - ILL.		
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING		
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_

Page 2 of 2

AREA San Antonio DIVISION San Antonio (2) ESTIMATE REQUEST NO. 11989

TITLE:

NATURE AND NECESSITY

REFERENCES:

Plant Extension Engineering Study ST-1094, approved October 30, 1969.

Transmission and Protection Engineer Method of Provision TR-1-71-2, dated October 15, 1969, superseded by TR-1-71-2A, dated February 5, 1970

Estimate Prepared By \_\_\_\_\_

F.C.C. AUTHORIZATION REQUIRED		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	INITIALS <i>OP</i>
SERVICE DATE		9-25-71		COMPLETION DATE
9-25-71				9-27-71
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
833,900	-	833,900	-	
RECOMMENDED:	DATE	APPROVED:	DATE	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER		
APPROVED:		VICE PRESIDENT AND GENERAL MANAGER		
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. . ENG. OF O.S.P. . ENG. MGR. . FAC.		VICE PRESIDENT - TEXAS VICE PRESIDENT - MD. - ILL.		
CHIEF ENGINEER		VICE PRESIDENT - ENGINEERING		
GENERAL PLANT MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861		
GENERAL COMMERCIAL MANAGER		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860		

## Orange Grove-Harlingen TD-2 &amp; Microwave System

Estimate Request 11989

OUTLINE OF PLAN

## 1. Job Conditions

The towers will be standard Bell System towers. The buildings will be of masonry.

Three of the existing sites, Falfurrias, Rachal and Linn will be used as sites for the new towers and buildings.

## 2. Study Comparison

Comparison of ST-1094 with present view of gross additions:

	<u>Gross Additions</u>	
	<u>Study View</u>	<u>Present View</u>
Land (Est. A-2379)	\$ 8,000	\$ 8,900
Buildings	510,000	281,000
Towers (ERE-11989)	580,000	549,100
Tower-Harlingen-Est. 1783		258,000
Path Loss Testing (Est. 2078 and Supplement #1)	32,000	57,000
Central Office Equipment		
Radio & Circuit (Part of Est. 2116)	2,047,500	1,890,000
Power (Part of Est. 2116)	424,500	348,500
Cost of Removal (Future Est.)	<u>82,000</u>	<u>82,000</u>
Project Total	\$3,683,750	\$3,474,500

FORM SN-4E  
(10-73)

## Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 11989

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
Y-4360	Buildings	-					
	Towers	29,000					
X-7561	Buildings	58,100					
	Towers	134,600					
X-7296	Buildings	56,200					
	Towers	134,600					
X-6317	Buildings	56,200					
	Towers	104,800					
X-6144	Buildings	56,200					
	Towers	84,600					
X-6383	Buildings	58,100					
	Towers	61,500					
-	Total Buildings	284,800					
-	Total Towers	549,100					
<b>TOTAL</b>		(A) 833,900	(B)	(C)	(D)	(E)	(F)
<b>TOTAL EXPENDITURES IN</b>	YEAR 1970	83,900					
	YEAR 1971	750,000					
	YEAR 19						
<b>SUMMARY OF ESTIMATED REQUIREMENTS</b>				<b>NET REQUIREMENTS (A+B-D)</b>		\$ 833,900	
<b>GROSS EXPENDITURES (A+B)</b>		\$ 833,900		<b>GROSS ADDITIONS (A)</b>		\$ 833,900	
<b>PLANT RETIREMENTS (C)</b>		\$ --		<b>NET ADDITIONS (A-C)</b>		\$ 833,900	
<b>NET CAPITAL REQUIREMENTS (A+B-E)</b>		\$ 833,900					



FIGURE 30

## SUPPLEMENTAL ESTIMATE

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)AUTHORIZATION, ESTIMATE NO. 2973 Supplement #1 Page 1 of 2AREA San Antonio DIVISION San Antonio (2) ESTIMATE REQUEST NO. 10874

## TITLE:

BROWNSVILLE, TEXAS - LINCOLN (542, 546) OFFICE: Additional No. 1  
Sten-by-Sten Eant.

## NATURE AND NECESSITY

Estimate 2973 provided for the addition of 1400 lines and 1500 terminals of **No. 1 Sten-by-Sten Equipment in the Brownsville Lincoln 542 Central Office.** As revised by this supplement, the project now provides for increased switching capacity as well as the addition of 1600 lines and 1500 terminals.

This project has a service date of August 6, 1972, and is being revised for the following reasons:

- a. Recent Traffic usage studies indicate a significant increase in CCS per M. T., thus requiring major switching relief not provided under the original estimate.
- b. The need to maintain the August 6, 1972, service date and to minimize the cost of providing relief can best be served by supplementing the original estimate since Western Electric Engineering work on the original project has already begun.

F.C.C. AUTHORIZATION REQUIRED YES  NO  INITIALS

## SERVICE DATE

## COMPLETION DATE

## GROSS EXPENDITURES

## PLANT RETIREMENTS

## NET ADDITIONS

## MAINTENANCE

## RECOMMENDED:

DATE

## APPROVED:

DATE

DIV. PLT. ENG. . EQUIP. ENG. . ARCH.ENG. OR SPCL. SERV. ENG.

ASSISTANT VICE PRESIDENT AND GENERAL MANAGER

## APPROVED:

VICE PRESIDENT AND GENERAL MANAGER

DIV. PLT. SUPT. . BLDG. & EQPT. ENG. . ENG. BLDG. OR ENG. EQPT.  
CUST SERV ENG. -- ENG. OF O S P -- ENG. MGR. - FAC.

VICE PRESIDENT-TEXAS VICE PRESIDENT - MO. - ILL.

CHIEF ENGINEER

VICE PRESIDENT - ENGINEERING

GENERAL PLANT MANAGER

LISTED ON WEEKLY SUMMARY - FORM SN-861

GENERAL COMMERCIAL MANAGER

AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)AUTHORIZATION, ESTIMATE NO. 973 Supplement #1 Page 2 of 2AREA San Antonio DIVISION San Antonio (2) ESTIMATE REQUEST NO. 10874

TITLE:

BROWNSVILLE, TEXAS - LINCOLN (542,546) OFFICE: Additional No. 1  
Step-by-Step Eamt.

NATURE AND NECESSITY

	ORIGINAL ESTIMATE	SUPPLEMENT #1	TOTAL
GROSS ADDITIONS	\$186,850	\$124,700	\$311,550

REFERENCES:

1. Facility Report dated 11-9-71
2. Annual Gain Trend (Typical Illustrated in Figure 13)
3. Outline of Plan (Typical Illustrated in Fig. 32)
4. Traffic Orders 71-S-104C, 71-S-55R
5. Wire Center Area Forecast dated 2-11-71  
(Verified 10-1-1971)
6. Specification 0458.68 Appendix #1

Estimate Prepared By \_\_\_\_\_

Estimate Reviewed By \_\_\_\_\_

F.C.C. AUTHORIZATION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	INITIALS <i>APD</i>
SERVICE DATE <u>August, 1972</u>		COMPLETION DATE <u>August, 1972</u>		
GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE	
<u>124,700</u>	- - -	<u>124,700</u>	- - -	
RECOMMENDED:		DATE	APPROVED:	DATE
DIV. PLT. ENG. . EQUIP. ENG. . ARCH. ENG. OR SPCL. SERV. ENG.			ASSISTANT VICE PRESIDENT AND GENERAL MANAGER	
APPROVED:			VICE PRESIDENT AND GENERAL MANAGER	
DIV. PLT. SUPT., BLDG. & EQPT. ENG., ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. -- ENG. OF O.S.P. -- ENG. MGR. - FAC.			VICE PRESIDENT TEXAS VICE PRESIDENT - MO. - ILL.	
CHIEF ENGINEER			VICE PRESIDENT - ENGINEERING	
GENERAL PLANT MANAGER			LISTED ON WEEKLY SUMMARY - FORM SN-861	
GENERAL COMMERCIAL MANAGER			AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860	

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10874 EST./R.O. NO. 2073

LOCATION CODE (C & X) X6030 LOCATION CODE (R & M) X6030

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  ENGINEERED BY                      -TEL. CO.

CURRENTLY READY FOR SERVICE  -W.E. CO.

SHEET 1 OF 2

DATE 11-2-71

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE                     

B A S I C	SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
	Exch: COE SXS Eqpt.		37	\$305,000	\$	\$	\$	\$
	Exch: Circuit Eqpt.		57	1,700				
S S P E R								
A M A	Auto. Number Identification		437T	4,890				
P O W E R								
P B X								
TOTAL EXPENDITURES				(A) \$311,590	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)				YEAR 19 71 AMOUNT 8,600	YEAR 19 72 AMOUNT 302,000	YEAR 19	YEAR	AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS					
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE				GROSS EXPENDITURES (A + B) \$ 311,500	
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS							PLANT RETIREMENTS (C) \$ -	
						CONTROL LOC. REQ. NO.			NET REQUIREMENTS (A + B - D) \$ 311,500						
									GROSS ADDITIONS (A) \$ 311,500						
29	3	11	12	71	73	2973	X6030			769666	NET ADDITIONS (A - C) \$ 311,500				
CD ID	LOCATION					RI	COMPL. DATE			NET CAPITAL REQUIREMENTS (A + B - E) \$ 311,500					
38	Brownsville 542					E	2 08 30 72								

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES		
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.			
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70								
4	CR	X6030		37	C	101200	46800	25000			5000	500	6000	184,500		
4	DR	X6030		37	C	166400	76900	41700			8500	1500	10000	305,000		
4	CR	X6030		57	C	-	-	-						-		
4	DR	X6030		57	C	1000	400	200			100			1,700		
4	CR	X6030		437	TC	250	150	150			100			650		
4	DR	X6030		437	TC	2850	1150	600			200			4,800		
4	CR	X6030		37	M		10000	3000			700			13,700		
4	DR	X6030		37	M		9000	4000			700			13,700		
4																
4																
4																
4																
2		TOTAL											9500	2000	16000	325,200
3		CHANGE TOTAL											170,250	88,450	45,500	

PREPARED BY:                     

EXPLANATION: To revise distribution of charges to include

TEL. NO.                     

supplemental amounts

FORM SN-4C

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

Supplement 1

EST. REQ. NO. 10774 EST./R.O. NO. 2973  
LOCATION CODE (C & X) X6030 LOCATION CODE (R & M) \_\_\_\_\_  
SHEET 2 OF 2  
DATE 11-18-71

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  -TEL. CO.   
CURRENTLY READY FOR SERVICE  ENGINEERED BY \_\_\_\_\_ -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

	SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
			\$	\$	\$	\$	\$
B A S I C	Exch: COE SXS Eqpt.	37	\$ 120,500	\$	\$	\$	\$
S S P E R							
A M A	Auto. Number Identification	437T	4,200				
P O W E R							
P B X							
TOTAL EXPENDITURES			(A) \$ 124,700	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			19 YEAR AMOUNT 3,600	19 YEAR AMOUNT 121,100	19 YEAR AMOUNT	19 YEAR AMOUNT	19 YEAR AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADR ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 124,700	
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$ -		NET REQUIREMENTS (A + B - D) \$ 124,700	
							CONTROL LOC	REQ. NO.	GROSS ADDITIONS (A) \$ 124,700			
									NET ADDITIONS (A - C) \$ 124,700			
27	3	45	6-7	8-9	10-11	12-19	20-26	27-37	NET CAPITAL REQUIREMENTS (A + B - E) \$ 124,700			
CD ID	LOCATION				RI	COMPL. DATE						
38	39-72				73-74	75-80						
1					E							

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT SPE. ETC	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS		INT. DUR. CONSTR.
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		X6030		37	C	65,200	30,100	16,700		3,500	1,000	4,000	120,500	
4				437	TC	2,600	1,000	500		100			4,200	
4		X6030		37	M		(1,000)	1,000					--	
4														
4														
4														
4														
4														
4														
4														
2		TOTAL				67,800	31,100	17,200		3,600	1,000	4,000	124,700	
3		CHANGE TOTAL												

EXPLANATION: \_\_\_\_\_  
PREPARED BY: \_\_\_\_\_  
TEL. NO. \_\_\_\_\_

FIGURE 31

CIRCUIT ESTIMATE

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)

AUTHORIZATION, ESTIMATE NO. \_\_\_\_\_

AREA Houston DIVISION Beaumont (5) ESTIMATE REQUEST NO. 11843

TITLE: GROVETON-HUNTSVILLE: Toll Circuit Equipment for the Independent Company's new ESS Office at Groveton

NATURE AND NECESSITY

This estimate provides eight "O" carrier terminals and associated equipment for the Independent Company's new ESS office and the removal of all toll circuit equipment from the old office at Groveton, Texas. Also equipment is included for the toll center at Huntsville, Texas, including one "O" terminal. Channels are provided for ten circuits.

Plug-in units will be either reused from the old office or furnished from Central Stock under the annual plug-in estimate.

Displaced equipment not held for reuse will be returned to the Western Electric Company for best allowance or junked.

REFERENCES:

Method of Procedure 73-41  
Specification 4H78.01 (not attached)  
4A09.26 (not attached)

F.C.C. AUTHORIZATION REQUIRED				YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	INITIALS	
SERVICE DATE				January, 1974		COMPLETION DATE	
				February, 1974			
GROSS EXPENDITURES		PLANT RETIREMENTS		NET ADDITIONS		MAINTENANCE	
\$23,400		\$19,500		\$1,100		\$200	
RECOMMENDED:				DATE		APPROVED:	
DATE				APPROVED:		DATE	
DIV. PLT. ENG. . EQUIP. ENG. . ARCH.ENG. OR SPCL. SERV. ENG.				ASSISTANT VICE PRESIDENT AND GENERAL MANAGER			
APPROVED:							
DIV. PLT. SUPT. BLDG. & EQPT. ENG. . ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.				VICE PRESIDENT AND GENERAL MANAGER			
CHIEF ENGINEER				VICE PRESIDENT TEXAS VICE PRESIDENT - MO. - ILL.			
GENERAL PLANT MANAGER				VICE PRESIDENT - ENGINEERING			
GENERAL COMMERCIAL MANAGER				LISTED ON WEEKLY SUMMARY - FORM SN-861			
				AUTHORIZED BY BOARD OF DIRECTORS - FORM SN 860			

ERE 11843  
Page 1 of 2OUTLINE OF PLAN  
INDEPENDENT COMPANY OFFICE  
GROVETON, TEXAS

Major items to be added in new office.

Circuit Equipment

- 8 - 0 carrier terminal mountings
- 8 - 1 type terminating set mountings
- 1 - 40B transmission measuring system
- 1 - VF patch bay (6 wire)
- 1 - Toll testboard (less lower unit)
- 1 - Combined distributing frame

Power Equipment

- 1 - Positive (660A) 130 Volt power plant with 2 converters

Major items to be removed from present office after conversion to new office.

- 6 - 0 carrier terminal mountings
- 1 - Positive 130 volt power plant with batteries
- 1 - Toll Testboard (less lower unit)
- 1 - Lot miscellaneous open wire terminating equipment

Rearrangements and Changes

Huntsville 295 Office:

- 57M "O" carrier terminal modifications per EL 2115 to reduce failures of the R21 resistors. \$200

ERE 11843  
Page 2 of 2OUTLINE OF PLAN CONTINUED  
HUNTSVILLE, TEXASMajor items to be added:Circuit Equipment:

1 - 0 carrier terminal mounting

Reused in place

1 - 0 carrier terminal mounting (this terminal is in place and unassigned. The HF leads will require recabbling.)

CARRIER CHANNEL UTILIZATION

	<u>New Message</u>	<u>Verification Trunks</u>	<u>Total</u>
Groveton-Huntsville *102-OB	0	2	2
103-CB,104-OA	$\frac{8}{8}$	$\frac{0}{2}$	$\frac{8}{10}$

\*Plug-in units only. Mounting is in place from a previous job at Huntsville. Plug-in units only required.

TOLL MESSAGE CIRCUIT DATA

	<u>No. of Circuits</u>			<u>Schedule</u>		<u>BH</u>	<u>CCS</u>
	<u>Pres. Total</u>	<u>Proposed Growth</u>	<u>Total</u>	<u>Pres 1972</u>	<u>Prop 1973</u>	<u>Act 1972</u>	<u>Est 1973</u>
Huntsville, Groveton	21	8	29	03	01	480	620
Verification Trunks	0	2	2	--	01	---	4

The above data was furnished by Traffic on October 9, 1972.

FORM SN-4E  
(10-73)

## Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. \_\_\_\_\_ ESTIMATE REQUEST NO. 11843

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
	<u>GROVETON</u>						
Z9270	NEW OFFICE	19,500					
Z9290	OLD OFFICE		2800	19,500	6,700		
	<u>HUNTSVILLE</u>						
Z9350	CIRCUIT	1,100					
Z9340	CIRCUIT						200
TOTAL		(A) 20,600	(B) 2,800	(C) 19,500	(D) 6,700	(E)	(F) 200
TOTAL EXPENDITURES IN	YEAR 1972	1,200	800				
	YEAR 1973	19,400	1000				200
	YEAR 1974		1200	19,500	6,700		
SUMMARY OF ESTIMATED REQUIREMENTS				NET REQUIREMENTS (A+B-D) \$ 16,700			
GROSS EXPENDITURES (A+B)		\$ 23,400		GROSS ADDITIONS (A)		\$ 20,600	
PLANT RETIREMENTS (C)		\$ 19,500		NET ADDITIONS (A-C)		\$ 1,100	
NET CAPITAL REQUIREMENTS (A+B-E)		\$ 23,400					

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.

CURRENTLY READY FOR SERVICE  -W.E. CO.

EST. REQ. NO. 11843 EST./R.O. NO. \_\_\_\_\_

LOCATION CODE (C & X) 29270 LOCATION CODE (R & M) \_\_\_\_\_

SHEET 1 OF 3

DATE 10-12-72

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	CIRCUIT EQUIPMENT		577	\$ 12,800	\$ -	\$ -	\$ -
S S P E R							
P O W E R	+ 130 VOLT POWER PLANT		7577	6,700	-	-	-
P B X							

TOTAL EXPENDITURES			(A) \$ 19,500	(B) \$ -	(C) \$ -	(D) \$ -	(E) \$ -
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			19 YEAR 72 AMOUNT 1000	19 YEAR 73 AMOUNT 18500	19 YEAR AMOUNT	19 YEAR AMOUNT	19 YEAR AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 19,500	
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$ -			
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.	NET REQUIREMENTS (A + B - D) \$ 19,500			
29	1	10	12	72	65		Z9270	729534	GROSS ADDITIONS (A) \$ 19,500			
CD ID	LOCATION				RI	COMPL. DATE		NET ADDITIONS (A - C) \$ 19,500				
38	39-72				73-74	75-80		NET CAPITAL REQUIREMENTS (A + B - E) \$ 19,500				
1	GROVETON IND. CO. (NEW)				E	5 02 28 74						

CD ID	ADJ.	ACCOUNTING CLASSIFICATION					W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EOPT.	LABOR INST. DIV. BILL	REMAINDER EOPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		Z9270		57 TC		6800	2800	1400		300	1300		200	12,800	
4				757 TC		3700	1200	700		400	600		100	6,700	
4															
4															
4															
4															
4															
4															
2		TOTAL					10500	4000	2100		700	1900	300	19,500	
3		CHANGE TOTAL													

PREPARED BY: I. B. Young  
TEL. NO. 521-8173

EXPLANATION: \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  ENGINEERED BY -TEL. CO.

CURRENTLY READY FOR SERVICE  -W.E. CO.

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE JAN. 1974

EST. REQ. NO. 11843 EST./R.O. NO. \_\_\_\_\_

LOCATION CODE (C & X) Z 9290 LOCATION CODE (R & M) \_\_\_\_\_

SHEET 2 OF 3

DATE 10-12-72

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	CIRCUIT EQUIPMENT		57T	\$ -	\$ 2,000	\$ 15,000	\$ 3,500
S S P E R							
A M A							
P O W E R	+ 130 VOLT POWER PLANT		757T	-	800	4,500	3,200
P B X							
TOTAL EXPENDITURES			(A) \$ -	(B) \$ 2,800	(C) \$ 19,500	(D) \$ 6,700	(E) \$ -
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19	AMOUNT	YEAR 19	AMOUNT	YEAR 19

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 2,800	
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$ 19,500			
						CONTROL LOC.		REQ. NO.	NET REQUIREMENTS (A + B - D) \$ (3,900)			
									GROSS ADDITIONS (A) \$ -0-			
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26		27-37	NET REQUIREMENTS (A - C) \$ (19,500)		
29	1	10	12	72	65	Z 9290		729533	NET CAPITAL REQUIREMENTS (A + B - E) \$ 2,800			
CD ID	LOCATION					RI	COMPL. DATE					
38	39-72					73-74	75-80					
1	GROVETON IND. CO. (OLD)					E	5 02 28 74					

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.						
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4		Z 9290		57	TX		1500			100	400		2,000	
4		↓		757	TX		600			50	150		800	
4														
4														
4														
4														
4														
4														
2		TOTAL					2,100			150	550		2,800	
3		CHANGE TOTAL												

PREPARED BY: Z. B. Young

TEL. NO. 521-8173

EXPLANATION: \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  - TEL. CO.

CURRENTLY READY FOR SERVICE  ENGINEERED BY - W.E. CO.

EST. REQ. NO. 11843 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) 29350 LOCATION CODE (R & M) 29340  
 SHEET 3 OF 3  
 DATE 10-12-72

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	CIRCUIT EQUIPMENT		57T	\$ 1100	\$ -	\$ -	\$ -
S S P E R							
A M A							
P O W E R							
P B X							
TOTAL EXPENDITURES			(A) \$ 1100	(B) \$ -	(C) \$ -	(D) \$ -	(E) \$ -
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 72 AMOUNT \$ 200	YEAR 19 73 AMOUNT \$ 900			

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS			
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ 1100		
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		CONTROL LOC.		REQ. NO.	PLANT RETIREMENTS (C) \$ -0-	
1-2	3	4-5	6-7	8-9	10-11	12-19			20-26		27-37	NET REQUIREMENTS (A + B - D) \$ 1100	
29	1	10	12	72	45		29350		729535			GROSS ADDITIONS (A) \$ 1100	
CD ID	LOCATION				RI	COMPL. DATE				NET ADDITIONS (A - C) \$ 1100			
38	39-72				73-74	75-80				NET CAPITAL REQUIREMENTS (A + B - E) \$ 1100			
1	HUNTSVILLE 295				E	5022874							

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			REMAINDER EOPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EOPT.	LABOR INST. DIV. BILL								
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		29350		57TG		500	300	100		50	100		100	1100	
4		↓		57M			50	50		50	50			200	
4															
4															
4															
4															
4															
4															
4															
2		TOTAL				500	350	150		100	150		100	1300	
3		CHANGE TOTAL													

PREPARED BY: J. B. YOUNG  
 TEL. NO. 521-8173

EXPLANATION: \_\_\_\_\_

(RESERVED FOR FUTURE USE)

FIGURE 32

## SUPPLEMENTAL ESTIMATE--AUTHORIZATION SHEET

SOUTHWESTERN BELL TELEPHONE COMPANY

FORM SN-4  
(REV. 1-73)AUTHORIZATION, ESTIMATE NO. 3789 Supplement 1AREA Houston DIVISION Beaumont (5) ESTIMATE REQUEST NO. 11843TITLE: Groveton-Huntsville - Toll Circuit Equipment for the Independent Company's New ESS Office at Groveton

## NATURE AND NECESSITY

The original estimate provided for toll circuit equipment in the Independent Company's new ESS Office and the removal of all toll circuit equipment from the old office at Groveton, Texas.

This supplement provides for additional expenditures to cover increased costs indicated by the contract proposals received from the Western Electric Company. An analysis of the contract proposals indicates the gross expenditures on this project will exceed those authorized by \$10,900 (47 percent). The primary reasons for the increase in costs are shown below:

Price increases and inadequate allowance for wire, cable and miscellaneous items. \$3,600

Price increase and additional installation charges for omitted material. \$2,200

Inadequate allowance for small job and additional charges for engineering the items omitted from the material list in the original estimate. \$5,100

Total \$10,900

	Original Estimate	Supplement No. 1	Total
Gross Additions	\$20,600	\$10,900	\$31,500
Cost of Removal	\$ 2,800		\$ 2,800
Plant Retirements	\$19,500		\$19,500
Maintenance	\$ 200	\$ 300	\$ 500
Salvage	\$ 6,700		\$ 6,700

REFERENCES: Outline of Plan

F.C.C. AUTHORIZATION REQUIRED YES  NO  INITIALS HEMSERVICE DATE March, 1974 COMPLETION DATE June, 1974

GROSS EXPENDITURES	PLANT RETIREMENTS	NET ADDITIONS	MAINTENANCE
\$10,900	-	\$10,900	\$300
RECOMMENDED:		APPROVED:	DATE
DIV. PLT. ENG. - EQUIP. ENG. - ARCH. ENG. OR SPCL. SERV. ENG.		ASSISTANT VICE PRESIDENT AND GENERAL MANAGER	
APPROVED:			
DIV. PLT. SUPT. BLDG. & EQPT. ENG. - ENG. BLDG. OR ENG. EQPT. CUST. SERV. ENG. - ENG. OF O.S.P. - ENG. MGR. - FAC.		VICE PRESIDENT AND GENERAL MANAGER	
CHIEF ENGINEER		VICE PRESIDENT - TEXAS VICE PRESIDENT - MO. - ILL.	
GENERAL PLANT MANAGER		VICE PRESIDENT - ENGINEERING	
GENERAL COMMERCIAL MANAGER		LISTED ON WEEKLY SUMMARY - FORM SN-861	
		AUTHORIZED BY BOARD OF DIRECTORS - FORM SN-860	

## OUTLINE OF PLAN

Estimate 3789, Supplement 1

MaintenanceHuntsville 295 Office:

Western Electric Company engineering and installation charges for the rearrangements necessary at Huntsville were higher than estimated.	\$ 300
--	--------

Other adjustments are shown on the revised SN4C's to bring the estimate into agreement with the contract analysis.

FORM SN-4E  
(10-73)

## Southwestern Bell Telephone Company

SUMMARY ACCOUNTS CHARGEABLE, ESTIMATE NO. 3789,51 ESTIMATE REQUEST NO. 11843

LOCATION CODE	CLASS OF PLANT	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	MAINTENANCE EXPENSE
Z9270 Z9290	GROVETON Original Original Supp. 1 Total	19500 <u>10000</u> 29500	2800	19500	6700		
Z9350	HUNTSVILLE Original Supp. 1 Total	1100 <u>900</u> 2000					200 300 500
	Combined Total	31500	2800	19500	6700		500
TOTAL	Supp 1.	(A) 10900	(B)	(C)	(D)	(E)	(F) 300
TOTAL EXPENDITURES IN	YEAR 19 72	1600	500				
	YEAR 19 73	19000	500				500
	YEAR 19 74	10900	1800	19500	6700		
SUMMARY OF ESTIMATED REQUIREMENTS				NET REQUIREMENTS (A+B-D) \$ 10,900			
GROSS EXPENDITURES (A+B)		\$ 10,900		GROSS ADDITIONS (A)		\$ 10,900	
PLANT RETIREMENTS (C)		\$		NET ADDITIONS (A-C)		\$ 10,900	
NET CAPITAL REQUIREMENTS (A+B-E)		\$ 10,900					

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

**COMBINED**

EST. REQ. NO. 11843 EST./R.O. NO. 3789  
LOCATION CODE (C & X) 29270 LOCATION CODE (R & M) \_\_\_\_\_  
SHEET 1 OF 6  
DATE 2-1-74

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  -TEL. CO.   
CURRENTLY READY FOR SERVICE  ENGINEERED BY \_\_\_\_\_  
-W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	TOLL CIRCUIT EQUIPMENT		57T	\$ 19,100	\$ -	\$ -	\$ -
S S P E R.							
A M A							
P O W E R	+ 130 VOLT		757	10,400			
P B X							
TOTAL EXPENDITURES			(A) \$ 29,500	(B) \$ -	(C) \$ -	(D) \$ -	(E) \$ -
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19 72 AMOUNT 1500	YEAR 19 73 AMOUNT 18000	YEAR 19 74 AMOUNT 10,000		

SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	SUMMARY OF ESTIMATED REQUIREMENTS		
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				GROSS EXPENDITURES (A + B)		
							CONTROL LOC.	REG. NO.			PLANT RETIREMENTS (C)		
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37			NET REQUIREMENTS (A + B - D)	\$ 29,500	
29	3	01	26	74	65	03789	29270	729534		GROSS ADDITIONS (A)	\$ 29,500		
CD ID	LOCATION				RI	COMPL. DATE				NET ADDITIONS (A - C)	\$ 29,500		
38	39-72				73-74	75-80				NET CAPITAL REQUIREMENTS (A + B - E)	\$ 29,500		
1	GROVETON IND. Co.				E	506 01 74							

CD ID	ADJ.	ACCOUNTING CLASSIFICATION					W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38		41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4	CR	29270		57 TC		6800	2800	1400		300	1300		200	12,800	
4	DR					9200	4300	3900		300	1100		300	19,100	
4															
4	CR			757 TC		3700	1200	700		400	600		100	6,700	
4	DR				C	4800	1800	2600		400	600		200	10,400	
4															
4															
4															
4															
4															
4															
2		TOTAL									700	1700		500	29,500
3		CHANGE TOTAL					14000	6,100	6,500						

EXPLANATION: REVISED PER CONTRACT ANALYSIS PREPARED BY: I. B. YOUNG TEL. NO. 521-8173

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

SUPPLEMENT 1

EST. REQ. NO. 11843 EST./R.O. NO. 3789  
LOCATION CODE (C & X) 29270 LOCATION CODE (R & M) \_\_\_\_\_  
SHEET 2 OF 6  
DATE 2-1-74

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

CLASSIFICATION	SUB ACCOUNT DESCRIPTION		GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
	CODE						
B A S I C	TOLL CIRCUIT EQUIPMENT		57T \$ 6300	\$	\$	\$	\$
S S P E R							
A M A							
P O W E R	+130 VOLT		757T (6700)				
P B X	+130 VOLT		757 10400				
TOTAL EXPENDITURES			(A) \$ 10,000	(B) \$	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			1974 YEAR AMOUNT 10000	1974 YEAR AMOUNT	1974 YEAR AMOUNT	1974 YEAR AMOUNT	1974 YEAR AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS								
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE								
CD ID	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS							GROSS EXPENDITURES (A + B)	\$ 10000			
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.	20-26					27-37	PLANT RETIREMENTS (C)	\$ -		
CD ID	LOCATION				RI	COMPL. DATE								NET REQUIREMENTS (A + B - D)	\$ 10000			
38	39-72				73-74	75-80				GROSS ADDITIONS (A)	\$ 10000							
1					E					NET ADDITIONS (A - C)	\$ 10000							
SECTION 2 - DETAIL DISTRIBUTION										NET CAPITAL REQUIREMENTS (A + B - E) \$ 10000								

CD ID	ADJ.	ACCOUNTING CLASSIFICATION					W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD		MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		29270		57 TC		2400	1500	2500			(200)		100	6300	
4				757 TC		(3700)	(1200)	(700)		(400)	(600)		(100)	(6700)	
4				757 C		4800	1800	2600		400	600		200	10400	
2		TOTAL					3500	2100	4400		(200)		200	10000	
3		CHANGE TOTAL													

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

**COMBINED**

EST. REQ. NO. 11843 EST./R.O. NO. 3789  
LOCATION CODE (C & X) 29290 LOCATION CODE (R & M) \_\_\_\_\_  
SHEET 3 OF 6  
DATE 2-1-74

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 3-74

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL	
B A S I C	TOLL CIRCUIT EQUIPMENT		57T	\$ -	\$ 2300	\$ 15000	\$ 3500	
S S P E E R								
A M A								
P O W E R	+130 VOLT		75TT	-	500	4500	3200	
P B X								
TOTAL EXPENDITURES			(A) \$ -	(B) \$ 2800	(C) \$ 19500	(D) \$ 6700	(E) \$	
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19	AMOUNT	YEAR 19	AMOUNT	YEAR 19	AMOUNT

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS							
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE				GROSS EXPENDITURES (A + B) \$ 2800			
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS		PLANT RETIREMENTS (C) \$ 19500								
														NET REQUIREMENTS (A + B - D) \$ (3900)			
														GROSS ADDITIONS (A) \$ -			
SECTION 2 - DETAIL DISTRIBUTION										NET REQUIREMENTS (A - C) \$ (19500)							
										NET CAPITAL REQUIREMENTS (A + B - E) \$ 2800							
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37									
29	3	01	26	74	65	03789	29290	729533									
CD ID	LOCATION					RI	COMPL. DATE										
38	39-72					73-74	75-80										
1	GROVETON IND CO					E	5 06 01 74										

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDY & MISC. BILLS		INT. DUR. CONSTR.
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4	CR	29290		57 TX			1500			100	400			2000
4	DR						1500			100	400			2300
4														
4	CR			75T			600			50	150			800
4	DR						300			50	150			500
4														
4														
4														
4														
4														
4														
2		TOTAL								150	550			2800
3		CHANGE TOTAL					2100							

EXPLANATION: **REVISED PER CONTRACT ANALYSIS** PREPARED BY: **I. B. YOUNG**  
TEL. NO. **521-8137**

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

**SUPPLEMENT 1**

EST. REQ. NO. 11843 EST./R.O. NO. 3789  
LOCATION CODE (C & X) 29290 LOCATION CODE (R & M) 6  
SHEET 4 OF 6  
DATE 2-1-74

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY -TEL. CO X  
CURRENTLY READY FOR SERVICE  -W.E. CO.   
APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 3-74

SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
<b>TOLL CIRCUIT EQUIPMENT</b>	<b>57T</b>	\$ -	\$ 300			
<b>+130 VOLT</b>	<b>757T</b>	-	(300)			

TOTAL EXPENDITURES	(A) \$	(B) \$ -	(C) \$	(D) \$	(E) \$
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)	19 YEAR AMOUNT				

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS			
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B)		
CD ID	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS					\$	
	C						CONTROL LOC.	REQ. NO.					
1-2	3	4-5	6-7	8-9	10-11	12-19	20-26	27-37					
CD ID	LOCATION				RI	COMPL. DATE				GROSS ADDITIONS (A)			
38	39-72				73-74	75-80				\$			
SECTION 2 - DETAIL DISTRIBUTION										NET REQUIREMENTS (A + B - D)			
										\$			
										GROSS ADDITIONS (A)			
										\$			
										NET ADDITIONS (A - C)			
										\$			
										NET CAPITAL REQUIREMENTS (A + B - E)			
										\$			

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS				OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							300
4		29290		57	TX		300								300
4		↓		757	↓		(300)								(300)
2	TOTAL														
3	CHANGE TOTAL														

PREPARED BY: \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

TEL. NO. \_\_\_\_\_

**COMBINED**

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
 CURRENTLY READY FOR SERVICE  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

EST. REQ. NO. 11843 EST./R.O. NO. 3789  
 LOCATION CODE (C & X) 29350 LOCATION CODE (R & M) 29340  
 SHEET 5 OF 6  
 DATE 2-1-74

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
B A S I C	<b>TOLL CIRCUIT EQUIPMENT</b>		<b>57T</b>	<b>\$ 2000</b>			
S S P E C I A L							
TOTAL EXPENDITURES			(A) \$ <b>2000</b>	(B) \$	(C) \$	(D) \$	(E) \$

GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)		YEAR	AMOUNT	YEAR	AMOUNT	YEAR	AMOUNT
		19 <b>72</b>	<b>100</b>	19 <b>73</b>	<b>1000</b>	19 <b>74</b>	<b>900</b>

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS		
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$ <b>2000</b>	
CO. ID.	A	MO	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C) \$ <b>-</b>	
1-2	3	4-5	6-7	8-9	10-11	12-13	20-26	REQ. NO.			NET REQUIREMENTS (A + B - D) \$ <b>2000</b>	
<b>29</b>	<b>3</b>	<b>01</b>	<b>26</b>	<b>74</b>	<b>65</b>	<b>03789</b>	<b>29350</b>	<b>729535</b>			GROSS ADDITIONS (A) \$ <b>2000</b>	
CD ID	LOCATION						RI	COMPL. DATE			NET ADDITIONS (A - C) \$ <b>2000</b>	
<b>38</b>	<b>39-72</b>						<b>73-74</b>	<b>75-80</b>			NET CAPITAL REQUIREMENTS (A + B - E) \$ <b>2000</b>	
<b>1</b>	<b>HUNTSVILLE 295</b>						<b>E</b>	<b>50601 74</b>				

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES				TOTAL CHARGES
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.						
38		41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4	CR	<b>29350</b>		<b>57 TC</b>		<b>500</b>	<b>300</b>	<b>100</b>		<b>50</b>	<b>100</b>		<b>50</b>	
4	DR					<b>600</b>	<b>400</b>	<b>800</b>		<b>50</b>	<b>100</b>		<b>50</b>	
4														
4	CR	<b>29340</b>		<b>57 M</b>		<b>10</b>	<b>50</b>	<b>50</b>		<b>50</b>	<b>50</b>		<b>50</b>	
4	DR						<b>90</b>	<b>300</b>		<b>50</b>	<b>50</b>		<b>50</b>	
4														
4														
4														
4														
4														
2		TOTAL								<b>100</b>	<b>150</b>		<b>50</b>	
3		CHANGE TOTAL				<b>610</b>	<b>490</b>	<b>1100</b>					<b>2500</b>	

EXPLANATION **REVISED PER CONTRACT ANALYSIS** PREPARED BY: **J. B. YOUNG** TEL. NO. **521-8137**



FIGURE 33

MICROWAVE SYSTEM RELIABILITY STUDY						
STATION	PATH LENGTH ML	OUTAGE			RELIABILITY	TIME
		SHORT TERM	LONG TERM	TOTAL	***** PERCENT*****	MIN
LITTLE ROCK						
ENTER 6 GHZ TRANSMIT LEVEL						
? 30						
ENTER 6 GHZ REC SQUELCH LEV						
? - 72						
SUPPLY NUMBER OF HOPS PER SW SECTION						
? 1						
	22.3	0.91E-05	0.30E-02	0.30E-02	99.99699	16
HOP RECEIVE LEVEL						
6GIGAHERTZ REC LEVEL = -32.7						
BELFAST						
ENTER 6 GHZ TRANSMIT LEVEL						
? 30						
ENTER 6 GHZ REC SQUELCH LEV						
? -72						
	22.5	0.42E-02	0.18E-02	0.60E-02	99.99402	31
HOP RECEIVE LEVEL						
6GIGAHERTZ REC LEVEL = 32.2						
COVE CREEK						
ENTER 6 GHZ TRANSMIT LEVEL						
? 30						
ENTER 6 GHZ REC SQUELCH LEV						
? -72						
	14.6	0.18E-05	0.17E-02	0.17E-02	99.99829	9
HOP RECEIVE LEVEL						
6GIGAHERTZ REC LEVEL = -28.4						
HOT SPRINGS						
				PERCENT		MIN
TOTAL SHORT TERM OUTAGE				0.42E-02		22
LONG				0.65E-02		34
TOTAL OUTAGE				0.11E-01		56
SYSTEM RELIABILITY				99.98930		

FIGURE 34

## N CARRIER TRANSMISSION AND NOISE CALCULATIONS

LOC.	CABLE LENGTH	SLOPE	CHAN 2 LOSS	LOOP RESIS.
0	2.4	-4.5	17.9	202.
1	3.5	8.6	22.6	300.
2	4.3	-8.2	32.2	364.
3	4.9	11.9	31.3	416.
4	2.0	-3.8	15.1	171.

DO YOU WISH TO OBSERVE THE MANNER  
IN WHICH THE COMPUTER CHOOSES THE SLOPE SETTINGS  
TYPE 1 FOR YES, 0 FOR NO  
?0

LOC	FREQ	INPUT SLOPE	REP. SLOPE	OUTPUT SLOPE	INPUT LEVEL	SPAN PAD
0				-0.3		
	HI					
1		-4.8	B -2.3	-7.1	-16.5	36
	LO					
2		1.5	B 0.2	1.7	-27.4	20
	HI					
3		-6.5	B -2.3	-8.8	-32.3	20
	LO					
4		3.1	B 0.2	3.3	-35.5	12
	HI					
5		-0.5	A 1.0	0.4	-16.2	40

LOC	MESSAGE NOISE	NOISE CH 2	RATING CH 13,	IMPULSE NOISE	NOISE CH 2	RATING CH 13
1	-27.	0.0	0.0	5.	0.0	0.0
2	-27.	0.0	0.0	5.	0.0	0.0
3	-27.	0.1	0.5	5.	0.0	0.03
4	-27.	0.2	0.1	5.	0.01	0.0
5	-7.	0.3	0.3	28.	0.03	0.03
		<u>0.6</u>	<u>0.9</u>		<u>0.04</u>	<u>0.06</u>
TOTAL C/N RATIO	77.2		75.5		44.91	43.71

LOC.	CABLE LENGTH	SLOPE	CHAN 2 LOSS	LOOP RESIS.
5	2.0	4.9	12.9	171.
4	4.9	-9.3	36.8	416.
3	4.3	10.4	27.4	364.
2	3.5	6.7	26.5	300.
1	2.4	5.3	15.2	202.
0				

DO YOU WISH TO OBSERVE THE MANNER  
IN WHICH THE COMPUTER CHOOSES THE SLOPE SETTINGS  
TYPE 1 FOR YES, 0 FOR NO  
? 0

LOC	FREQ	INPUT SLOPE	REP. SLOPE	OUTPUT SLOPE	INPUT LEVEL	SPAN PAD
5			364D	0.2		
4	L3	5.1	B 0.2	5.3	-20.7	28
3	HI	-4.0	B -2.3	-6.3	-39.0	14
2	LO	4.1	B 0.2	4.3	-32.5	16
1	HI	-2.4	B -2.3	-4.7	-28.2	26
0	LB	1.1	B 0.0	0.5	-20.9	26
			364D			

LOC	MESSAGE NOISE	NOISE RATING CH 2	NOISE RATING CH 13,	IMPULSE NOISE	NOISE RATING CH 2	NOISE RATING CH 13
4	-27	0.0	0.0	5.	0.0	0.0
3	-27.	0.5	1.3	5.	0.03	0.11
2	-27.	0.1	0.0	5.	0.0	0.0
1	-27	0.0	0.1	5.	0.0	0.0
0	-7	0.6	0.6	28.	0.15	0.10
		<u>1.4</u>	<u>2.0</u>		<u>0.18</u>	<u>0.21</u>
TOTAL C/N RATIO		73.5	72.0		40.46	40.01

STOP  
15:42 TIME 34.664 UNITS

FIGURE 35

## ROUTINE ORDER EXAMPLE

SOUTHWESTERN BELL TELEPHONE COMPANY						SN-4488 (8-66)		
ROUTINE ORDER AUTHORIZATION - NUMBER <u>50564</u>								
DIVISION		DISTRICT		EXCHANGE CO., AREA OR TOLL REFERENCE				
Springfield		Springfield		Sherwood 2 Willard, D4844				
ASSOCIATED ORDER AND NUMBER		TAX DISTRICT(S)		RECOMMENDED				
37-729166								
RECORD REFERENCE		MANHOURS			APPROVED		ENGINEER	DATE
EM-118-7 T.C.M821, COER EM24-8		PL.	SPL.	OTHER	TOTAL			
GROSS ADDITIONS		5,800				DIST. ENGINEER OR SENIOR ENGINEER		DATE
COST OF REMOVAL		50		FACILITY SERVICE DATE		ARCH. ENGINEER OR EQUIP. ENGINEER		DATE
GROSS EXPENDITURE		5,850		WORK STARTED		DIVISION PLANT ENGINEER		DATE
PLANT RETIRED		100		WORK COMPLETED		DIVISION PLT. SUPT. OR BLDG. EQUIP. ENG.		DATE
SALVAGE		-		COMPLETED BY		ENGINEER OF EQUIP. OR ENGINEER OF BLDGS.		DATE
MAINTENANCE		100		PREPOST		GENERAL PLANT MANAGER		DATE
				YES NO		CHIEF ENGINEER		DATE

This order provides for the installation of 20 subscribers' lines, 100 connector terminals, 2 extended area service trunks, a 7A recorded announcement system, a #3 test cabinet and an additional supplementary rectifier for the 105D power plant in the community dial office at Willard, Missouri.

The equipment is required to care for the estimated growth of 95 stations by 12/31/65, to provide a mechanical intercent arrangement for vacant terminals, to provide adequate charging equipment to care for the increased power load and to replace the present #2 test cabinet with one which will permit more adequate test of subscribers plant thereby effecting a saving in maintenance effort.

	<u>Lines</u>	<u>Terminals</u>
Installed	330	800
Added	20	100
Total	350	900
Working 8/1/63	209	716
Required 12/31/65	304	832

## Reference

Specification 4H06.13 (not attached)

**SOUTHWESTERN BELL TELEPHONE COMPANY**  
**ACCOUNTS CHARGEABLE**

FORM SN-4C  
(REVISED 11-73)

F.C.C. AUTHORIZATION REQ'D YES  NO

UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.

CURRENTLY READY FOR SERVICE  -W.E. CO.

EST. REQ. NO. \_\_\_\_\_ EST./R.O. NO. 50564

LOCATION CODE (C & X) \_\_\_\_\_ LOCATION CODE (R & M) \_\_\_\_\_

SHEET 1 OF 1

DATE \_\_\_\_\_

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT DESCRIPTION		CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL							
			(A) \$	(B) \$	(C) \$	(D) \$	(E) \$							
B														
A														
S														
P														
E														
R														
A														
M														
A														
P														
O														
W														
E														
R														
P														
B														
X														
TOTAL EXPENDITURES			(A) \$	(B) \$	(C) \$	(D) \$	(E) \$							
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)			YEAR 19	YEAR 19	YEAR 19	YEAR 19	AMOUNT							
ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE				SUMMARY OF ESTIMATED REQUIREMENTS										
SECTION 1 - HEADER DATA				ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE										
CO. ID.	A	MO.	DAY					YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS			
									CONTROL LOC.	REQ. NO.				
1-2	3	4-5	6-7					8-9	10-11	12-19	20-26 27-37			
29	1	4	25					73	31	50564	D4844 7-29166			
CD ID	LOCATION			RI	COMPL. DATE									
38	39-72				73-74 75-80									
1	Sherwood 2			E 4	1 15 74									
SECTION 2 - DETAIL DISTRIBUTION				OTHER TELEPHONE CO. CHARGES										
CD ID	ADJ.	ACCOUNTING CLASSIFICATION			W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES			TOTAL CHARGES			
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS		TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70						
4	DR	D4844		37	C	2000	1100			150	750			4,000
4	DR	D4844		57	C	800	100				100			1,000
4	DR	D4844		637	C	600	100			50	50			800
4	DR	D4844		37	M	10	40			25	25			100
4	DR	D4844		37	X		30			15	5			50
4														
4														
4														
4														
4														
4														
2		TOTAL				3,410	1,370			270	930			5,950
3		CHANGE TOTAL												

PREPARED BY: \_\_\_\_\_ TEL. NO. \_\_\_\_\_

EXPLANATION: \_\_\_\_\_

FIGURE 36

KEEP COST ORDER EXAMPLE

SOUTHWESTERN BELL TELEPHONE COMPANY						SN-4465 (6-65)	
KEEP COST ORDER AUTHORIZATION - NUMBER <u>31106</u>							
DIVISION		DISTRICT		EXCHANGE CO., AREA OR TOLL REFERENCE			
Springfield		Any		A Town D-5242			
ASSOCIATED ORDER AND NUMBER		TAX DISTRICT(S)		RECOMMENDED			
SSE Tele 12-2-66		M-105		Richard Doe		12/6/67	
RECORD REFERENCE		WORK UNITS		APPROVED			
		PL.	SPL.	OTHER	TOTAL	ENGINEER	
						12/6/67	
GROSS ADDITIONS		FACILITY SERVICE DATE		DIST. ENGINEER OR SENIOR ENGINEER			
300							
COST OF REMOVAL		WORK STARTED		ARCH. ENGR. OR EQUIP. ENGR. OR SPCL. SERV. ENGR.			
-							
GROSS EXPENDITURE		WORK COMPLETED		DIVISION PLANT ENGINEER			
300							
PLANT RETIRED		COMPLETED BY		DIVISION PLT. SUPT. OR BLDG. EQUIP. ENG.			
-							
SALVAGE		PREPOST		ENGINEER OF EQUIP. OR ENGINEER OF BLDGS.			
-		YES NO					
MAINTENANCE				GENERAL PLANT MANAGER			
-							
						CHIEF ENGINEER	
F. C. C. AUTHORIZATION REQUIRED						DATE	
						INITIALS	
						<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <u>BAN</u>	

Place X in box when F.C.C. approval is required

Initials of Engineer making F.C.C. Determination

This keep cost order provides a special service channel 3 on the 104-ON Jefferson City - Kansas City toll.

This equipment is required for special service circuit FL-8047-722.

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. \_\_\_\_\_ EST./R.O. NO. 31106  
LOCATION CODE (C & X) D5242 LOCATION CODE (R & M) D5242  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
DATE \_\_\_\_\_

F.C.C. AUTHORIZATION REQ'D YES  NO   
UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
CURRENTLY READY FOR SERVICE  -W.E. CO.

APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE \_\_\_\_\_

SUB ACCOUNT		GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
DESCRIPTION	CODE					
B		\$	\$	\$	\$	\$
A						
S						
P						
TOTAL EXPENDITURES		(A)	(B)	(C)	(D)	(E)
GROSS ADDITIONS BY YEARS (PLANT ADDITIONS)		YEAR 19	YEAR 19	YEAR 19	YEAR 19	YEAR 19

SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	SUMMARY OF ESTIMATED REQUIREMENTS		
ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE											GROSS EXPENDITURES (A + B)	\$	
CO. ID.	A	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS				PLANT RETIREMENTS (C)	\$	
29	1	12	6	67	31	31106	D5242	724758	NET REQUIREMENTS (A + B - D)			\$	
CD ID	LOCATION				RI	COMPL. DATE				GROSS ADDITIONS (A)	\$		
38	39-72				73-74	75-80				NET ADDITIONS (A - C)	\$		
1	A Town				E	4 01 01 68				NET CAPITAL REQUIREMENTS (A + B - E)	\$		

CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	REMAINDER EQPT. SPE., ETC.	TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	INT. DUR. CONSTR.		
38	3940	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4		D5242		357 TC		200				50	50				300
4															
4															
4															
4															
4															
4															
4															
4															
4															
2		TOTAL													
3		CHANGE TOTAL													

EXPLANATION: Initial SN-4C PREPARED BY: S. Clark  
TEL. NO. \_\_\_\_\_

EXHIBIT 37

MEMORANDUM RECORD--FORM SN-4C

MEMORANDUM RECORD

SOUTHWESTERN BELL TELEPHONE COMPANY  
ACCOUNTS CHARGEABLE

FORM SN-4C  
(REVISED 11-73)

EST. REQ. NO. 10957 EST./R.O. NO. \_\_\_\_\_  
 LOCATION CODE (C & X) U3040 LOCATION CODE (R & M) U3040  
 SHEET 3 OF 3  
 DATE 8-14-72

F.C.C. AUTHORIZATION REQ'D YES  NO   
 UNDER CONSTRUCTION  ENGINEERED BY \_\_\_\_\_ -TEL. CO.   
 CURRENTLY READY FOR SERVICE  -W.E. CO.   
 APPROXIMATE DATE OF WITHDRAWAL FROM SERVICE 3-73

B A S I C	S P E C I F I C	A M A	P O W E R	P B X	SUB ACCOUNT DESCRIPTION	CODE	GROSS ADDITIONS	COST OF REMOVAL	PLANT RETIRED	SALVAGE	REUSED MATERIAL
							\$	\$	\$	\$	\$
					NO. 12 SERVICE OBSERVING EQPT	17T	\$ 13,000	\$ 500	\$ 1,000		
					(EXPECTED IN SERVICE 3-73)						

TOTAL EXPENDITURES		(A) \$	(B) \$	(C) \$	(D) \$	(E) \$	
YEAR	AMOUNT	YEAR	AMOUNT	YEAR	AMOUNT	YEAR	AMOUNT
19		19		19		19	

ESTIMATED COMPOSITION OF EXPENDITURES ACCOUNT 725 - INPUT DATA FOR MASTER DISTRIBUTION FILE										SUMMARY OF ESTIMATED REQUIREMENTS										
SECTION 1 - HEADER DATA										ACTION CODE 1. NEW 2. CHANGE HEADER ONLY 3. CHANGE DETAIL DIS. 4. DELETE	GROSS EXPENDITURES (A + B) \$		PLANT RETIREMENTS (C) \$		NET REQUIREMENTS (A + B - D) \$		GROSS ADDITIONS (A) \$		NET ADDITIONS (A - C) \$	
CO. ID.	A C	MO.	DAY	YR.	OFC. NO.	AUTH. NUMBER	FILE ADDRESS													
1-2	3	4-5	6-7	8-9	10-11	12-19	CONTROL LOC.	REQ. NO.												
							20-26	27-37												
CD ID	LOCATION				RI	COMPL. DATE														
38	39-72				73-74	75-80														
1					E															

SECTION 2 - DETAIL DISTRIBUTION										OTHER TELEPHONE CO. CHARGES					TOTAL CHARGES
CD ID	ADJ.	ACCOUNTING CLASSIFICATION				W.E. CO. BILLS			REMAINDER		TEL. CO. MAT'L.	PLANT LABOR & ASSOC. COSTS	TEL. CO. ENGR'NG & ASSOC. COSTS	SUNDRY & MISC. BILLS	
		LOCATION CODE	MAIN ACCT.	CODE OR SUB ACCT.	LTR CD	MATERIAL COST OF EQPT.	LABOR INST. DIV. BILL	72-70	EQPT. SPE. ETC.						
38	39-40	41-47	48-50	51-53	54-55	56-63	64-71	72-70							
4				17 TC		7200	3100	1750			500	400		150	13000
4				17 TX		-	300	100			50	50			500
4				17 M		-	100	50			75	75			300
4															
4															
4															
4															
4															
2		TOTAL													
3		CHANGE TOTAL													

PREPARED BY: JOHN SMITH  
 TEL. NO. 534-1122

EXPLANATION: \_\_\_\_\_