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STAFF'S 2ND REQUEST  
for UNBUNDLED LOOPS COST STUDY

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FPSC-RECORDS/REPORTING

# ***FLORIDA***



## ***UNBUNDLED LOOPS***

- ***2-WIRE ANALOG VOICE GRADE LOOP***
- ***4-WIRE ANALOG VOICE GRADE LOOP***
- ***2-WIRE ISDN DIGITAL GRADE LOOP***

## ***TELRIC COST STUDY DOCUMENTATION***

***SECTIONS A THRU 7***

**FLORIDA  
UNBUNDLED LOOP  
COST STUDY DOCUMENTATION**

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**SECTION A**

**FLORIDA UNBUNDLED LOOP**

**PROPRIETARY RATIONALE**

The Unbundled Loop Cost Study for the 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop contains actual unit cost information for discrete cost elements. Public disclosure of this information would provide BellSouth's competitors with an advantage. The data is valuable to competitors and potential competitors in formulating strategic plans for entry, pricing, marketing and overall business strategies. This information relates to the competitive interests of BellSouth and disclosure would impair the competitive business of BellSouth. For these reasons, the Unbundled Loop Cost Study is considered proprietary.

**SECTION 1**

## SECTION 1

### FLORIDA UNBUNDLED LOOP

#### INTRODUCTION AND OVERVIEW

This Total Element Long Run Incremental Cost (TELRIC) study is being provided to support 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop. The costs presented in this study are based on the TELRIC methodology established by the FCC's First Report and Order in CC Docket 96-98(FCC Order) released August 8, 1996.

The Unbundled cost elements referred to as a 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop represent the cost of the physical transmission facilities (or channel or group of channels on such facility) which extend from the main distributing frame connection in the end office to a demarcation point at the customer's premises, (i.e., the network interface). The cost of each facility is determined by loop characteristics as follows:

- type of cable(fiber or copper)
- plant type (aerial, buried, underground)
- size/gauge
- length
- electronic equipment

Loop costs represent both feeder and distribution outside plant in a single line residence/single line business serving environment. The transmission facility terminates on the main distributing frame and does not enter the BellSouth switch. If the loop is served via digital loop carrier, a central office digital loop carrier terminal is required to convert the digital signal to voice grade analog for delivery to the Alternative Local Exchange Carrier (ALEC).

The Loop Cost Model is a database tool that houses all the facility characteristics described above and produces an average investment. Spreadsheets are used to convert the loop investments into a recurring cost.

A long run analysis is performed to ensure that the time period is sufficient to capture all forward looking costs affected by the business decision. The recurring costs presented in this study are levelized so as to be appropriate for the 1997 - 1999 study period. Nonrecurring costs follow the same convention and represent 1997 - 1999 level costs also. These costs are developed by using 1996 level TELRIC loadings, annual cost factors and labor rates designed to produce TELRIC results.

**SECTION 2**

## SECTION 2

### FLORIDA UNBUNDLED LOOP

#### DESCRIPTION OF STUDY PROCEDURES

This section describes the general principles for the development of Total Element Long Run Incremental Costs (TELRIC) supporting the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop.

The purpose of the TELRIC methodology established by the FCC order is to set the rates for interconnection and unbundled network elements. The basis for a TELRIC study is forward-looking long run economic cost methodology. TELRIC methodology anticipates pricing of elements in a wholesale network company. Many costs regarded as common or shared would be included as directly attributable in a TELRIC study. The FCC pricing methodology also specifies that, over and above TELRIC, the additional portion of forward looking common costs that cannot be directly attributed to any particular network element will be allocated among the cost elements. This TELRIC study includes both recurring (capital and operating expenses) and nonrecurring (provisioning) costs.

#### DEVELOPMENT OF RECURRING COSTS

The monthly costs to BellSouth Telecommunications, Inc., resulting from the capital investments necessary to provide a cost element are called recurring costs. Recurring costs represent a forward-looking view of technology and deployment and include capital and operating costs. While capital costs include depreciation, cost of money and income tax, operating costs consist of plant specific expenses and ad valorem taxes. These expenses contribute to the ongoing cost to the Company associated with the initial capital investment. Also included in the recurring TELRIC are shared and common costs directly attributable to the network element. Gross receipts tax is calculated on the TELRIC.

The first step in developing a TELRIC recurring cost study for the Unbundled Loop is to determine the forward-looking network architecture. Material prices for the cables and associated equipment are defined. Next, account specific Telephone Plant Indices are applied, when necessary, to trend investments to the base study period. In-plant factors are applied to material prices to develop installed investments which include engineering and installation (both telephone company and contractor) labor. The deployment probabilities and a reasonable projection of the actual fill utilization are also considered.



Plant account specific Investment Inflation Factors are applied to the installed investments to trend the base year, or study year, investments to levelized amounts that are valid for a three year planning period. Miscellaneous loadings are then applied.

Next, 1996 level TELRIC Annual Cost Factors are used to calculate the direct cost of capital, plant specific expenses and taxes. Account specific factors for each Uniform System of Accounts - Field Reporting Code (USOA - FRC) are applied to levelized investments by account code, yielding an annual cost per account code which includes directly attributable shared and common costs. Annual Total Element Long Run Incremental Costs by account codes are then summed and divided by twelve to arrive at a monthly cost per cost element.

The directly attributable shared and common cost components of the TELRIC annual cost factors are calculated as follows. First, a detailed analysis of the forward-looking directly assigned costs associated with the unbundled network elements is performed. The remaining costs of doing business are then analyzed to determine whether they are directly attributable shared and common costs that cannot be reasonably attributed to network elements.

Next, the directly attributable shared and common costs are projected forward and segregated by the functional areas to which they are related. The functional areas are wholesale operations, retail services operations, and combined wholesale and retail services operations. Attribution factors based on the specific wholesale functional area, such as central office equipment (COE) investment, COE salary and wages, etc. are then developed and applied to the respective costs. These attributed costs are accumulated by related network investment category, such as pair gain equipment, buried cable, etc. and attributed shared cost factors are developed. These attributed shared cost factors are then included as a component of the TELRIC annual cost factors by investment category. All directly attributed costs related to retail services operations are excluded.

The common cost allocation factor is applied to TELRIC to produce the forward-looking economic cost, as defined by the FCC Order, which includes an appropriate share of common costs. The common cost allocation factor is calculated by summing all wholesale costs that cannot be reasonably attributed to specific elements, services or functions and dividing by the sum of the directly assignable and directly attributable wholesale costs.

## DEVELOPMENT OF NONRECURRING COSTS

Nonrecurring costs are "one-time" costs incurred as a result of provisioning, installing, and disconnecting the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop. The first step in developing nonrecurring costs is to determine the cost elements related to the study. These cost elements are then described by all of the individual work functions required to provision the cost element. The work functions can be grouped into four categories. These are service order, engineering, connect and test, and technician travel time. The work function times, as identified by individuals knowledgeable about and/or responsible for performing these functions, are used to describe the flow of work within the various work centers involved. Installation and provisioning costs are developed by multiplying the work time for each work function by the TELRIC labor rate for the work group performing the function.

The TELRIC labor rates are calculated as follows. Salary and wages, as used in the determination of TELRIC annual cost factors, are accumulated on a basis consistent with specific force groups. Shared costs attributable to salaries and wages are then accumulated on a basis consistent with the development of the respective force group's labor rate. A factor is then developed for each force group by dividing the attributed shared costs (human resources, office equipment, motor vehicles, land and building space, etc.) by the related salaries and wages. This factor is then applied to the salary and wage portion of the incremental labor rate for each force group, and the result is added to the incremental labor rate to determine the TELRIC labor rate.

Utilizing work functions, work times, and TELRIC labor rates, disconnect costs are calculated in the same manner as the installation costs. Since the labor costs will occur in the future, the current TELRIC labor rates are inflated to that future period in time and then discounted to the present. The discounted disconnect cost is added to the installation cost and gross receipts tax is applied to develop the nonrecurring cost.

The common cost allocation factor is applied to the nonrecurring TELRIC to produce the forward-looking nonrecurring economic cost, as defined by the FCC Order, which includes an appropriate share of common costs.

**SECTION 3**

### SECTION 3

#### FLORIDA UNBUNDLED LOOP

##### SUMMARY OF RESULTS

This section contains a cost summary for the 1997-1999 Total Element Long Run Incremental Costs (TELRIC) for both recurring and nonrecurring cost elements studied for the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop.

SECTION 3  
 FLORIDA UNBUNDLED LOOP

SUMMARY OF RESULTS

	<u>Monthly Cost</u>	<u>Nonrecurring Cost</u>	
		<u>First</u>	<u>Additional</u>
<b>2-Wire Analog Voice Grade Loop</b>			
TELRIC	\$22.35	\$274.21	\$137.34
Common Cost Allocation Factor	1.0804	1.0804	1.0804
<b>Total</b>	<b>\$24.15</b>	<b>\$296.26</b>	<b>\$148.38</b>
<b>4-Wire Analog Voice Grade Loop</b>			
TELRIC	\$40.76	\$539.96	\$190.99
Common Cost Allocation Factor	1.0804	1.0804	1.0804
<b>Total</b>	<b>\$44.04</b>	<b>\$583.37</b>	<b>\$206.35</b>
<b>2-Wire ISDN Digital Grade Loop</b>			
TELRIC	\$35.68	\$499.71	\$424.64
Common Cost Allocation Factor	1.0804	1.0804	1.0804
<b>Total</b>	<b>\$38.55</b>	<b>\$539.89</b>	<b>\$458.78</b>

**SECTION 4**

## SECTION 4

### FLORIDA UNBUNDLED LOOP

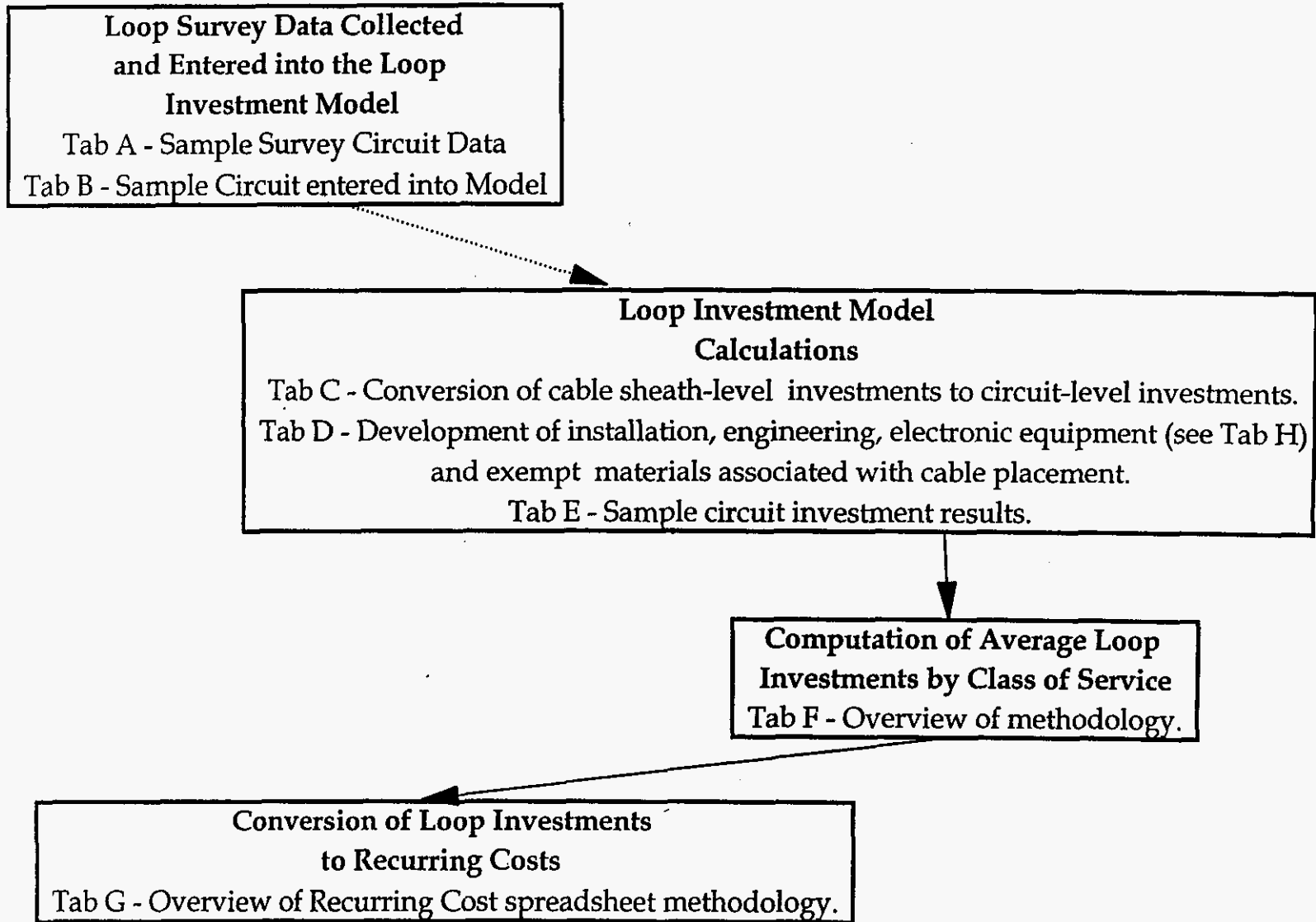
#### COST DEVELOPMENT - RECURRING

This section describes the development of the recurring Total Element Long Run Incremental Costs (TELRIC) for the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop.

Generally, cost development is outlined in Section 2. Network architecture is determined, the necessary equipment is identified, material prices are obtained, factors, utilization and loadings are applied and the result is levelized for the study period. TELRIC annual cost factors are then applied to convert the investment to cost.

The following workpapers show how a typical loop investment is developed. From all loop investments an average loop investment is created and then, as described above, annual and monthly costs are developed.

# LOOP COST DEVELOPMENT PROCEDURES





**TAB A**

# : 0002  
 Circuit : 3053609149  
 SVC Cat.: RESIDENCE

District: Broward - Fort Lauderdale

W.C.: DRBFLMA  
 USOC: 1FR

	F1 Information	F2 Information	F3 Information
Cable	P628	5751WPB	
Pair	3930	1056	
Addr	5751 WINSTON PARKBLVD	NR 5460 NW 55TH BLVD	

FRC	Facility	Sec.	Size	Ga.	Length	Plat
Z57C	REGENERATOR	F				
F5C	CABLE	F	60		971	
F5C	CABLE	F	60		845	
F5C	CABLE	F	60		991	
F5C	CABLE	F	60		3256	
F5C	CABLE	F	60		3386	
F5C	CABLE	F	36		3149	
F5C	CABLE	F	36		2359	
F5C	CABLE	F	36		4653	
F5C	CABLE	F	36		3757	
F5C	CABLE	F	36		62	
F5C	CABLE	F	30		2860	
F5C	CABLE	F	30		1600	
F5C	CABLE	F	30		740	
F5C	CABLE	F	18		1818	
F5C	CABLE	F	18		1652	
F5C	CABLE	F	18		700	
F5C	CABLE	F	18		2232	
F5C	CABLE	F	18		509	
F5C	CABLE	F	18		482	

CM4X

FRC	Facility	Sec.	Size	Ga.	Length	Flat	
FASC	CABLE	F	18		572		
F3C	CABLE	F	12		692		
F45C	CABLE	F	12		2604		
F22C	CABLE	F	12		2934		
FASC	CABLE	F	12		909		
FASC	CABLE	F	12		790		
F3C	CABLE	F	18		5276		
Z57C	REGENERATOR	F				CLL 1	MUX # RT.
5C	CABLE	F	600	26	40		
3C	CABLE	F	600	24	25		
45C	X BOX	I	3600				

"9543609149",2,1,"45C","Buried Copper Cable",1,600,24,20,"", ""  
"9543609149",2,2,"45C","Buried Copper Cable",1,900,26,950,"", ""  
"9543609149",2,3,"45C","Buried Copper Cable",1,400,26,325,"", ""  
"9543609149",2,4,"45C","Buried Copper Cable",1,200,26,1700,"", ""  
"9543609149",2,5,"12C","Building Entrance Copper Cable",1,50,26,190,"", ""  
"9543609149",2,6,"12C","Building Entrance X-Box",1,50,0,0,"MR 5460 NW 55TH BLVD", ""  
"9543609149",3,1,"5C","Underground End Section or Bridged Tap",4,600,26,1990,"", "TW"  
"9543609149",3,2,"45C","Buried End Section or Bridged Tap",4,600,26,645,"", "=D"  
"9543609149",3,3,"45C","Buried End Section or Bridged Tap",4,600,24,20,"", ""  
"9543609149",3,4,"5C","Underground End Section or Bridged Tap",4,1200,26,20,"", ""

**TAB B**

## FLORIDA LOOP SAMPLE #: 2

LOOP #: 200 STATE: FL SVC DESC: Florida Loop Survey Circuit CIRCUIT ID: 3053609149 CLLI: DRBHFLMA  
 CIRCUIT TYPE: V CIRCUIT LEVEL: DS0 DESIGN: 7 CLASS OF SVC: RESIDENCE DLC & MUX LOADINGS: B  
 ROUTE LENGTH: 52,908 ROUTE MILE: 10.02 AIR MILES: 6.16

Seg	Item	Category	Field Code	Pid	Description	Feeder/Dist	Size	Gauge/Mode	Plcement/DB	Units	Unit Inv
1	1	Fiber	F5C	FOCALL40DB60	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40db	971.00	\$1.69
2	1	Fiber	F5C	FOCALL40DB60	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40db	845.00	\$1.69
3	1	Fiber	F5C	FOCALL40DB60	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40db	951.00	\$1.69
4	1	Fiber	F5C	FOCALL40DB60	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40db	3,256.00	\$1.69
5	1	Fiber	F5C	FOCALL40DB60	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40db	3,886.00	\$1.69
6	1	Fiber	F5C	FOCALL40DB36	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40db	3,148.00	\$0.45
7	1	Fiber	F5C	FOCALL40DB36	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40db	2,359.00	\$0.45
8	1	Fiber	F5C	FOCALL40DB36	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40db	4,653.00	\$0.45
9	1	Fiber	F5C	FOCALL40DB36	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40db	3,757.00	\$0.45
10	1	Fiber	F5C	FOCALL40DB36	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40db	62.00	\$0.45
11	1	Fiber	F5C	FOCALL40DB30	CABLE FB-OPT ALL 40DB 30	F	30	Sgl	.40db	2,860.00	\$0.50
12	1	Fiber	F22C	FOCALL40DB30	CABLE FB-OPT ALL 40DB 30	F	30	Sgl	.40db	1,600.00	\$0.50
13	1	Fiber	F5C	FOCALL40DB30	CABLE FB-OPT ALL 40DB 30	F	30	Sgl	.40db	240.00	\$0.50
14	1	Fiber	F5C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	1,818.00	\$0.48
15	1	Fiber	F5C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	1,652.00	\$0.48
16	1	Fiber	F45C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	700.00	\$0.48
17	1	Fiber	F22C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	2,232.00	\$0.48
18	1	Fiber	F22C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	509.00	\$0.48
19	1	Fiber	F22C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	482.00	\$0.48
20	1	Fiber	F45C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	572.00	\$0.48
21	1	Fiber	F5C	FOCALL40DB12	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40db	692.00	\$0.48
22	1	Fiber	F45C	FOCALL40DB12	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40db	2,604.00	\$0.48
23	1	Fiber	F22C	FOCALL40DB12	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40db	2,834.00	\$0.48
24	1	Fiber	F45C	FOCALL40DB12	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40db	909.00	\$0.48
25	1	Fiber	F45C	FOCALL40DB12	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40db	790.00	\$0.48
26	1	Fiber	F5C	FOCALL40DB18	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40db	5,276.00	\$0.48
28	1	Fiber	F5C	85CAVG	Underground Fiber Cable - Aver	F	60	Sgl	.40db	40.00	\$1.69
29	1	Fiber	F45C	845CAVG	Buried Fiber Cable - Average Siz	F	30	Sgl	.40db	25.00	\$0.50
31	1	Copper	45C	600BTELRIC	26 Gauge Cable - TELRIC	D	600	26	B	20.00	\$2.92
32	1	Copper	45C	900BTELRIC	26 Gauge Cable - TELRIC	D	900	26	B	950.00	\$4.29
33	1	Copper	45C	400BTELRIC	26 Gauge Cable - TELRIC	D	400	26	B	325.00	\$2.07
34	1	Copper	45C	200BTELRIC	26 Gauge Cable - TELRIC	D	200	26	B	1,700.00	\$1.04
35	1	Copper	12C	50ATELRIC	26 Gauge Cable - TELRIC	D	50	26	R	190.00	\$0.38

**TABC**

TAB C

**Conversion of Cable Sheath Investments to DS0-equivalent Investments**

The Loop Investment Model stores cable investments at the actual price which BellSouth Telecommunications, Inc. currently pays for each cable type. The investments are maintained at a "sheath foot" level and must be converted to a circuit-level (DS0-equivalent) investment before loop costs can be developed.

The **first step** in developing a circuit-level cable investment is to determine the number of copper pairs or fiber strands which are typically utilized for a given cable. This is accomplished by applying the following state-specific projected actual utilization percentages to the cable size (# of pairs or strands):

<u>Cable Type</u>	<u>Placement</u>	<u>Utilization Percentages</u>
Copper	Feeder	65.7%
Copper	Distribution	38.8%
Fiber	Feeder	74.0%

For example:

- 394 pairs will typically be utilized in a 600 pair copper cable when it is placed as feeder.
- 233 pairs will typically be utilized in a 600 pair copper cable when it is placed as distribution.
- 44.4 strands will typically be utilized in a 60 strand fiber cable when it is placed as feeder.

The **second step** in developing a circuit-level cable investment is to determine the number of DS0-level circuits supported by the utilized copper pairs or fiber strands as determined above. This is accomplished by applying the following typical DS0 circuit counts to the number of utilized copper pairs or fiber strands:

<u>Cable Type</u>	<u>Placement</u>	<u>2-wire DS0-equivalent Circuits</u>
Copper	Feeder	1.0
Copper	Distribution	1.0
Fiber	Feeder	165.0

For example:

- 394 pairs will support 394 DS0-equivalent circuits in a copper feeder cable.
- 44.4 strands will support 7,326 DS0-equivalent circuits in a fiber feeder cable.



The **third step** in developing a circuit-level cable investment is to divide the sheath foot investment by the DS0-equivalent count for the cable and multiply the circuit-foot investment by the number of cable feet.

For example:

600 pair buried copper distribution cable:	\$ 2.92 per sheath foot
# of DS0-equivalent circuits:	$600 \cdot 38.8\% = 232.8$ DS0-equivalent circuits
Conversion from sheath to circuit investment:	$\$ 2.92/232.8 = \$ .012543$ per circuit foot
# of cable feet:	20
Total circuit-level cable investment:	$20 \cdot \$ .012543 = \$ .25$

{Loop segment #31, Item #1 in the sample circuit data and results, Tab E}

60 strand underground fiber feeder cable:	\$ 1.69 per sheath foot
# of DS0-equivalent circuits:	$60 \cdot 74\% \cdot 165 = 7,326$ DS0-equivalent circuits
Conversion from sheath to circuit investment:	$\$ 1.69/7,326 = \$ .000231$ per circuit foot
# of cable feet:	971
Total circuit-level cable investment:	$971 \cdot \$ .000231 = \$ .22$

{Loop segment #1, item #1 in the sample circuit data and results, Tab E}

**TAB D**

**TAB D**

**Development of Installation, Engineering, Electronic Equipment and Exempt Material Investments Associated with Cable Placement**

After developing circuit-level cable investments, the model computes installation, engineering, and exempt material investments associated with cable placements. This is accomplished through the use of in-plant factors which are state and field reporting code specific.

For example:

	<i>A</i>	<i>B</i>	<i>C</i>
	Field Code	Investment Description	In-plant Factor
9	45C	Telco Installation Labor - buried copper cable	
11	45C	Telco Engineering Labor- buried copper cable	
13	45C	Contractor Installation Labor- buried copper cable	
15	45C	Exempt Material- buried copper cable	
18	45C	Support Loading Right of Way (ROW)	

Circuit-level cable investment: \$ .25  
 {20ft of 600 pair buried copper distribution cable; Loop segment #31, item #1  
 in the sample circuit data and results, Tab E}

Calculations:

Compute the Total Material Investment:  
 $\$ .25 / (1 - \text{exempt material factor}) =$   
 25  $\$ .25$

Exempt Material Investment:  
 Total material investment - Cable investment =  
 28

Telco Installation Labor Investment:  
 Total material investment \* Telco installation factor =  
 31

Telco Engineering Labor Investment:  
 Total material investment \* Telco engineering factor =  
 34

Private/Proprietary: No disclosure outside BellSouth except by written agreement.

Contractor Installation Labor Investment:

5 Total material investment \* Contractor installation factor =

Support Loading Investment:

8 Total material investment \* ROW factor =

TOTAL INVESTMENTS FOR THIS CABLE SEGMENT:

45C \$ 2.00

**ELECTRONIC EQUIPMENT:**

Following the development of total cable segment investments, the model pulls in electronic investments which have been developed in the Fundamental Digital Loop Carrier Investment Model and the Fundamental Multiplexer Investment Model (see Tab H for a description of these investment models). These investments are stored in the model at a DS0-equivalent level and are design specific.

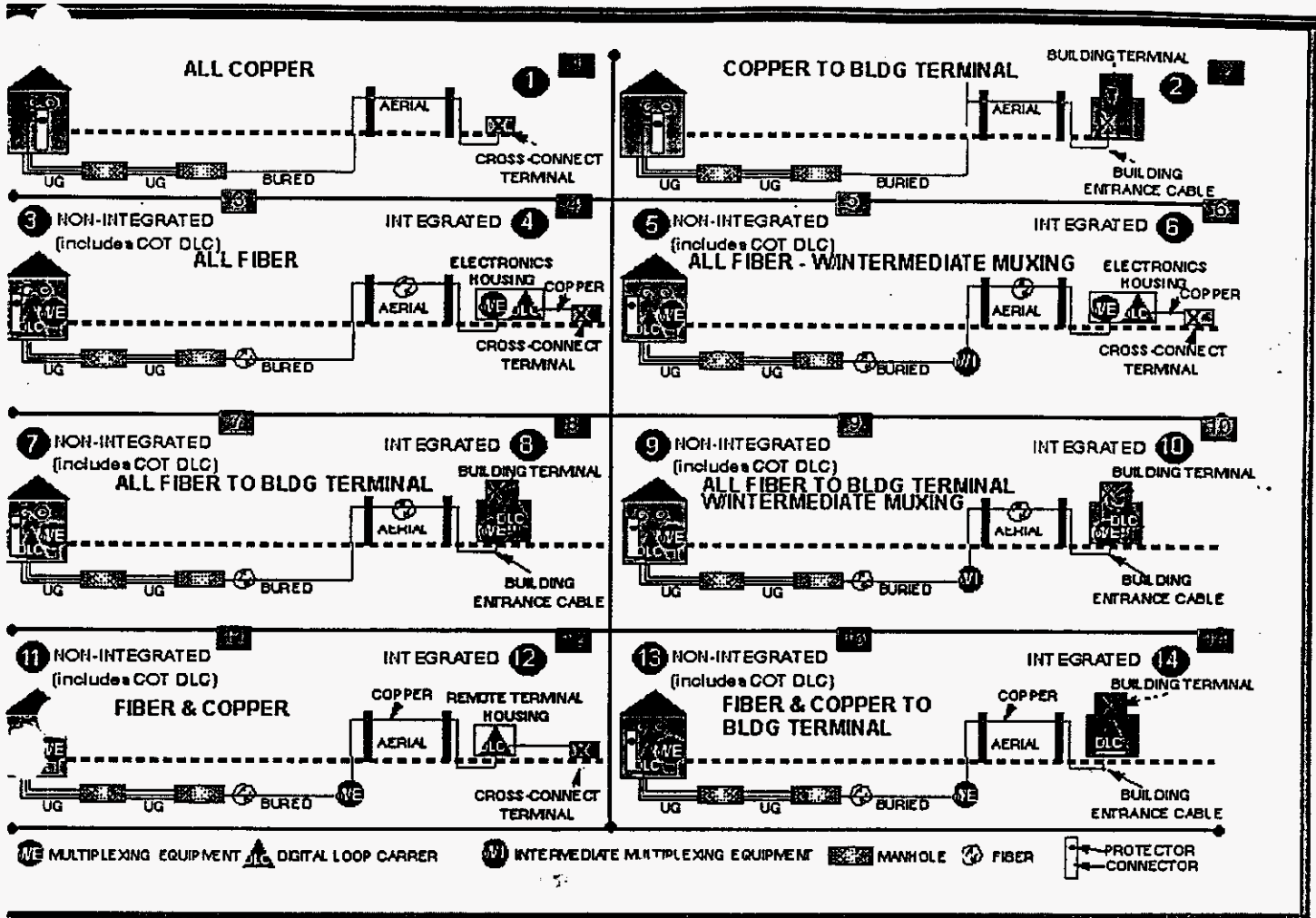
A loop design number is assigned to each survey circuit as it is initially loaded into the Loop Investment Model. Each survey circuit's design is determined by the characteristics of the feeder cable segments (copper/fiber, presence of a building terminal, presence of intermediate muxing, etc.) The fourteen possible designs are listed below:

- 1 All copper loop (no electronic equipment)
- 2 All copper loop which terminates in a building terminal  
(no electronic equipment)
- 3 All fiber in the feeder route - non-integrated digital loop carrier
- 4 All fiber in the feeder route - integrated digital loop carrier
- 5 #3 - with intermediate muxing
- 6 #4 - with intermediate muxing
- 7 #3 - terminates in a building terminal
- 8 #4 - terminates in a building terminal
- 9 #7 - with intermediate muxing
- 10 #8 - with intermediate muxing

**Design descriptions continued:**

- 11     **Fiber feeder to a remote terminal with copper feeder to the interface - non-integrated digital loop carrier**
- 12     **Fiber feeder to a remote terminal with copper feeder to the interface - integrated digital loop carrier**
- 13     **#11 - terminates in a building terminal**
- 14     **#12 - terminates in a building terminal**

**The sample circuit shown in this documentation is a design # 3. The electronic investments shown for this circuit are in Tab E, page 5, Segments #35 and #36. See page 4 (Tab D) for a diagram of these designs.**



**TAB E**

LOOP #: 2.00 STATE: FL SVC DESC: Florida Loop Survey Circuit CIRCUIT ID: 3053609149 CLLI: DRBHFLMA  
 CIRCUIT TYPE: V CIRCUIT LEVEL: D50 DESIGN: 7 CLASS OF SVC: RESIDENCE DLC & MUX LOADINGS: B

ROUTE LENGTH: 52.908 ROUTE MILE: 10.02 AIR MILES: 6.16

Seg	Item	M/I	FRC	Pid	Type	Description	F/D	Size	Gg/Md	P/db	Units	Unit Inv	Total Inv	
6	1	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40d	971	\$0.002	\$0.22
7	1	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
8	1	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
9	1	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
10	1	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
11	1	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
12	2	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40d	845	\$0.002	\$0.19
13	2	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
14	2	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
15	2	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
16	2	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
17	2	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
18	3	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40d	951	\$0.002	\$0.22
19	3	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
20	3	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
21	3	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
22	3	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
23	3	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
24	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40d	3,256	\$0.002	\$0.75	
25	4	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
26	4	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
27	4	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
28	4	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
29	4	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
30	5	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 60	F	60	Sgl	.40d	3,886	\$0.002	\$0.90
31	5	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
32	5	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
33	5	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
34	5	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
35	5	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
36	6	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40d	3,148	\$0.001	\$0.32
37	6	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
38	6	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
39	6	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
40	6	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
41	6	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
42	7	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40d	2,359	\$0.001	\$0.24
43	7	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
44	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1			
45	7	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
46	7	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		

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LOOP #: 2.00 STATE: FL SVC DESC: Florida Loop Survey Circuit

CIRCUIT ID: 3053609149

CLLI: DRBHFLMA

CIRCUIT TYPE: V

CIRCUIT LEVEL: DSO

DESIGN: 7

CLASS OF SVC: RESIDENCE

DLC & MUX LOADINGS: B

ROUTE LENGTH: 52.908

ROUTE MILE: 10.02

AIR MILES: 6.16

Seg	Item	M/I	FRC	Pid	Type	Description	F/D	Size	Gg/Md	Pl/db	Units	Unit Inv	Total Inv	
6	7	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
7	8	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40d	4,653	\$0.001	\$0.48
8	8	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
9	8	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
10	8	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
11	8	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
12	8	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
13	9	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40d	3,757	\$0.001	\$0.38
14	9	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
15	9	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
16	9	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
17	9	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
18	9	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
19	10	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 36	F	36	Sgl	.40d	62	\$0.001	\$0.01
20	10	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
21	10	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
22	10	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
23	10	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
24	10	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
25	11	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 30	F	30	Sgl	.40d	2,860	\$0.001	\$0.39
26	11	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
27	11	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
28	11	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
29	11	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
30	11	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
31	12	1	M	F22C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 30	F	30	Sgl	.40d	1,600	\$0.001	\$0.22
32	12	2	M	F22C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
33	12	3	B	1C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
34	12	4	L	F22C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
35	12	5	L	F22C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
36	12	6	L	F22C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
37	13	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 30	F	30	Sgl	.40d	240	\$0.001	\$0.03
38	13	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
39	13	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
40	13	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
41	13	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
42	13	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
43	14	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	1,818	\$0.002	\$0.40
44	14	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
45	14	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
46	14	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		

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LOOP #: 2.00 STATE: FL SVC DESC: Florida Loop Survey Circuit

CIRCUIT ID : 3053609149

CLLI : DRBHFLMA

CIRCUIT TYPE : V CIRCUIT LEVEL : D50 DESIGN : 7 CLASS OF SVC: RESIDENCE

DLC & MUX LOADINGS : B

A B C D E ROUTE LENGTH: 52,908 F G ROUTE MILE: 10.02 H I AIR MILES: 6.16 J K L M N

Seg	Item	M/I	FRC	Pid	Type	Description	F/D	Size	Gg/Md	Pl/db	Units	Unit Inv	Total Inv	
6	14	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
7	14	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
8	15	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	1,652	\$0.002	\$0.36
9	15	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
10	15	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
11	15	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
12	15	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
13	15	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
14	16	1	M	F45C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	700	\$0.002	\$0.15
15	16	2	M	F45C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
16	16	3	B	F45C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
17	16	4	L	F45C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
18	16	5	L	F45C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
19	16	6	L	F45C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
20	17	1	M	F22C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	2,232	\$0.002	\$0.49
21	17	2	M	F22C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
22	17	3	B	1C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
23	17	4	L	F22C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
24		5	L	F22C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
25	17	6	L	F22C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
26	18	1	M	F22C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	509	\$0.002	\$0.11
27	18	2	M	F22C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
28	18	3	B	1C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
29	18	4	L	F22C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
30	18	5	L	F22C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
31	18	6	L	F22C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
32	19	1	M	F22C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	482	\$0.002	\$0.11
33	19	2	M	F22C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
34	19	3	B	1C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
35	19	4	L	F22C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
36	19	5	L	F22C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
37	19	6	L	F22C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
38	20	1	M	F45C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	572	\$0.002	\$0.12
39	20	2	M	F45C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
40	20	3	B	F45C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
41	20	4	L	F45C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
42	20	5	L	F45C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
43	20	6	L	F45C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
44		1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40d	692	\$0.003	\$0.23
45	21	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
46	21	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		

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LOOP #: 200 STATE: FL SVC DESC: Florida Loop Survey Circuit

CIRCUIT ID: 3053609149

CLLI: DRBHFLMA

CIRCUIT TYPE: V CIRCUIT LEVEL: DS0

DESIGN: 7

CLASS OF SVC: RESIDENCE

DLC & MUX LOADINGS: B

ROUTE LENGTH: 52,908

ROUTE MILE: 10.02

AIR MILES: 6.16

Seg	Item	M/I	FRC	Pid	Type	Description	T/D	Size	Gg/Md	Pl/db	Units	Unit Inv	Total Inv	
6	21	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
7	21	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
8	21	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
9	22	1	M	F45C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40d	2,604	\$0.003	\$0.85
10	22	2	M	F45C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
11	22	3	B	F45C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
12	22	4	L	F45C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
13	22	5	L	F45C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
14	22	6	L	F45C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
15	23	1	M	F22C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40d	2,834	\$0.003	\$0.93
16	23	2	M	F22C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
17	23	3	B	1C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
18	23	4	L	F22C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
19	23	5	L	F22C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
20	23	6	L	F22C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
21	24	1	M	F45C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40d	909	\$0.003	\$0.30
22	24	2	M	F45C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
23	24	3	B	F45C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
24	24	4	L	F45C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
25	24	5	L	F45C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
26	24	6	L	F45C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
27	25	1	M	F45C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 12	F	12	Sgl	.40d	790	\$0.003	\$0.26
28	25	2	M	F45C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
29	25	3	B	F45C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1		
30	25	4	L	F45C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
31	25	5	L	F45C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
32	25	6	L	F45C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
33	26	1	M	F5C	FOCALL40D	DV	CABLE FB-OPT ALL 40DB 18	F	18	Sgl	.40d	5,276	\$0.002	\$1.15
34	26	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
35	26	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
36	26	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
37	26	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
38	26	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
39	28	1	M	F5C	85CAVG	DV	Underground Fiber Cable - Average Size	F	60	Sgl	.40d	40	\$0.002	\$0.01
40	28	2	M	F5C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		
41	28	3	B	4C	SUPPORT_L	DV	Conduit ldg for undg	F	n/a	n/a	n/a	1		
42	28	4	L	F5C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1		
43	28	5	L	F5C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1		
44	28	6	L	F5C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1		
45	29	1	M	F45C	845CAVG	DV	Buried Fiber Cable - Average Size	F	30	Sgl	.40d	25	\$0.001	\$0.00
46	29	2	M	F45C	EXEMPT_MA	DV	Exempt materials loadings	F	n/a	n/a	n/a	1		

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LOOP INVESTMENT RESULTS FOR LAFL2

LOOP #: 2.00 STATE: FL SVC DESC: Florida Loop Survey Circuit CIRCUI T ID : 3053609149 CLLI : DRBHFLMA  
 CIRCUIT TYPE: V CIRCUIT LEVEL: DSO DESIGN: 7 CLASS OF SVC: RESIDENCE DLC & MUX LOADINGS: B

A B C D E F G H I J K L M N  
 ROUTE LENGTH: 52,908 ROUTE MILE: 10.02 AIR MILES: 6.16

Seg	Item	M/I	FRC	Pid	Type	Description	F/D	Size	Gg/Md	Pl/db	Units	Unit Inv	Total Inv
6	29	3	B	F45C	SUPPORT_L	DV	Pole ldg for aerial	F	n/a	n/a	n/a	1	
7	29	4	L	F45C	INPLANT_E	DV	Telco engineering labor	F	n/a	n/a	n/a	1	
8	29	5	L	F45C	INPLANT_IN	DV	Telco installation labor	F	n/a	n/a	n/a	1	
9	29	6	L	F45C	INPLANT_C	DV	Contractor engineering & installation labor	F	n/a	n/a	n/a	1	
10	35	2	B	257C	DLC Equipm	DV	MCE&P	F	n/a	n/a	CO	1	
11	35	3	B	20C	DLC Equipm	DV	Land	F	n/a	n/a	CO	1	
12	35	4	B	10C	DLC Equipm	DV	Building	F	n/a	n/a	CO	1	
13	35	5	B	257C	DLC Equipm	DV	26 Gauge Cable - TELRIC	F	n/a	n/a	RT	1	
14	35	6	B	257C	DLC Equipm	DV	Power	F	n/a	n/a	RT	1	
15	36	1	B	257C	MUX Equipm	DV	Multiplexer, DSX-1 Panel, fiber terminal	F	n/a	n/a	CO	1	
16	36	2	B	257C	MUX Equipm	DV	MCE&P	F	n/a	n/a	CO	1	
17	36	3	B	20C	MUX Equipm	DV	Land	F	n/a	n/a	CO	1	
18	36	4	B	10C	MUX Equipm	DV	Building	F	n/a	n/a	CO	1	
19	36	5	B	257C	MUX Equipm	DV	Multiplexer, DSX-1 Panel, fiber terminal	F	n/a	n/a	RT	1	
20	36	6	B	257C	MUX Equipm	DV	Power	F	n/a	n/a	RT	1	

INVESTMENT SUBTOTAL FOR INV TYPE: DV \$282.01

INVESTMENT SUBTOTAL FOR: FEEDER \$282.01

Seg	Item	M/I	FRC	Pid	Type	Description	F/D	Size	Gg/Md	Pl/db	Units	Unit Inv	Total Inv	
24	31	1	M	45C	600BTELRIC	DV	26 Gauge Cable - TELRIC	D	600	26	B	20	\$0.125	\$0.25
25	31	2	M	45C	EXEMPT_MA	DV	Exempt materials loadings	D	n/a	n/a	n/a	1		
26	31	3	B	45C	SUPPORT_L	DV	ROW ldg for buried	D	n/a	n/a	n/a	1		
27	31	4	L	45C	INPLANT_E	DV	Telco engineering labor	D	n/a	n/a	n/a	1		
28	31	5	L	45C	INPLANT_IN	DV	Telco installation labor	D	n/a	n/a	n/a	1		
29	31	6	L	45C	INPLANT_C	DV	Contractor engineering & installation labor	D	n/a	n/a	n/a	1		
30	32	1	M	45C	900BTELRIC	DV	26 Gauge Cable - TELRIC	D	900	26	B	950	\$0.123	\$11.67
31	32	2	M	45C	EXEMPT_MA	DV	Exempt materials loadings	D	n/a	n/a	n/a	1		
32	32	3	B	45C	SUPPORT_L	DV	ROW ldg for buried	D	n/a	n/a	n/a	1		
33	32	4	L	45C	INPLANT_E	DV	Telco engineering labor	D	n/a	n/a	n/a	1		
34	32	5	L	45C	INPLANT_IN	DV	Telco installation labor	D	n/a	n/a	n/a	1		
35	32	6	L	45C	INPLANT_C	DV	Contractor engineering & installation labor	D	n/a	n/a	n/a	1		
36	33	1	M	45C	400BTELRIC	DV	26 Gauge Cable - TELRIC	D	400	26	B	325	\$0.133	\$4.33
37	33	2	M	45C	EXEMPT_MA	DV	Exempt materials loadings	D	n/a	n/a	n/a	1		
38	33	3	B	45C	SUPPORT_L	DV	ROW ldg for buried	D	n/a	n/a	n/a	1		
39	33	4	L	45C	INPLANT_E	DV	Telco engineering labor	D	n/a	n/a	n/a	1		
40	33	5	L	45C	INPLANT_IN	DV	Telco installation labor	D	n/a	n/a	n/a	1		
41	33	6	L	45C	INPLANT_C	DV	Contractor engineering & installation labor	D	n/a	n/a	n/a	1		
42		1	M	45C	200BTELRIC	DV	26 Gauge Cable - TELRIC	D	200	26	B	1,700	\$0.134	\$22.78
43	34	2	M	45C	EXEMPT_MA	DV	Exempt materials loadings	D	n/a	n/a	n/a	1		
44	34	3	B	45C	SUPPORT_L	DV	ROW ldg for buried	D	n/a	n/a	n/a	1		

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LOOP INVESTMENT RESULTS FOR LAFL2

LOOP #: 2.00 STATE: FL SVC DESC: Florida Loop Survey Circuit CIRCUID ID: 3053609149 CLLI: DRBHFLMA  
 CIRCUI TYPE: V CIRCUI LEVEL: DSO DESIGN: 7 CLASS OF SVC: RESIDENCE DLC & MUX LOADINGS: B

A B C D E F G H I J K L M N  
 ROUTE LENGTH: 52,908 ROUTE MILE: 10.02 AIR MILES: 6.16

Seg	Item	M/L	FRC	Pid	Type	Description	F/D	Size	Gg/Md	P/db	Units	Unit Inv	Total Inv	
6	34	4	L	45C	INPLANT_E	DV	Telco engineering labor	D	n/a	n/a	n/a	1		
7	34	5	L	45C	INPLANT_IN	DV	Telco installation labor	D	n/a	n/a	n/a	1		
8	34	6	L	45C	INPLANT_C	DV	Contractor engineering & installation labor	D	n/a	n/a	n/a	1		
9	35	1	M	12C	50ATELRIC	DV	26 Gauge Cable - TELRIC	D	50	26	R	190	\$0.0196	\$3.72
10	35	7	M	12C	EXEMPT_MA	DV	Exempt materials loadings	D	n/a	n/a	n/a	1		
11	35	8	L	12C	INPLANT_E	DV	Telco engineering labor	D	n/a	n/a	n/a	1		
12	35	9	L	12C	INPLANT_IN	DV	Telco installation labor	D	n/a	n/a	n/a	1		
13	35	10	L	12C	INPLANT_C	DV	Contractor engineering & installation labor	D	n/a	n/a	n/a	1		

INVESTMENT SUBTOTAL FOR INV TYPE: DV \$349.20

INVESTMENT SUBTOTAL FOR: DISTRIB  
 UTION \$349.20

LOOP MAKEUP INVESTMENT TOTAL: \$631.21

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**TAB F**

### Computation of Average Loop Investments by Class of Service

After developing investments for each circuit in the loop survey, investment dollars are totaled by field reporting code for Residence and Business circuits separately. The totals are then divided by the number of survey circuits for residence and business. The results represent the average or typical investment for each field reporting code for a Residence and Business circuit.

The weighted loop investment is developed by multiplying the average investment for Residence and Business by the percent of residence and business lines in service at the time the survey circuits were randomly selected for the loop survey. For example, the resulting average investment for aerial metallic cable (12C & 22C - feeder and distribution) is for the 2-Wire Analog Voice Grade Unbundled Loop.

**TAB G**



**Overview of Recurring Cost Spreadsheet Methodology**

The following spreadsheets reflect the Unbundled 2-wire Analog Voice Grade Loop cost, the 4-Wire Analog Voice Grade Loop cost, and the 2-Wire ISDN Digital Grade Loop cost. The cost methodology is as follows:

Cost Methodology:

- 1) The average investment (Column D) by Field Reporting Code (FRC) is provided by the loop investment model for Residence and Business. The average investment represents the combined feeder and distribution investment per circuit. The average investment per circuit includes the appropriate state sales tax. The investments are then summed.

The spreadsheet provides a Weighted Average Residential and Business Loop Cost. The average investment (Column D) is developed by weighting the combined feeder and distribution average investment for Residence and the combined feeder and distribution average investment for Business by the respective residence or business percentage of access lines in service at the time the circuits were randomly selected for the loop survey.

- 2) Each average investment is multiplied by a levelized investment inflation factor to determine the forward-looking levelized investment over a three year period.
- 3) The annual TELRIC associated with each investment is determined by multiplying the levelized investment by the TELRIC annual cost factors. The annual cost for all FRCs is summed and then divided by 12 to determine the monthly cost.
- 4) The total levelized monthly cost includes loop associated cost additives (i.e., subscriber line testing and distributing frame cost) as well as Gross Receipts Tax.

	A	B	D	E	F	G	H	I	
97	Combined Feeder & Distribution								
98	TELRIC / 100% Nonintegrated - 2 Wire Analog Voice Grade								
99	Weighted Residential & Business Loop Cost								
100									
101	State:	Florida							
102									
103	Levelized Investment								
104	Average Investment								
105	Inflation Factor								
106	Levelized Investment								
107	TELRIC ACF								
108	TELRIC (F*G)								
109	(D*E)								
110	Land	20C		1.059		0.1493			
111	Buildings	10C		1.059		0.1720			
112	Digital Circuit-Pair Gain	257C,D257C,F257C		0.953		0.2695			
113	Poles	1C		1.036		0.2163			
114	Aerial Cable-Metallic	22C, 12C		1.022		0.3400			
115	Aerial Cable-Fiber	822C, D22C, F22C, T22C, F22C 812C, D12C,F12C,T12C		0.999		0.2137			
116	Underground Cable-Metallic	5C		1.019		0.2791			
117	Underground Cable-Fiber	85C, D5C,F5C,T5C		0.980		0.2001			
118	Buried Cable-Metallic	45C		1.020		0.2950			
119	Buried Cable-Fiber	845C, D45C, F45C, T45C		1.038		0.1973			
120	Submarine Cable-Metallic	6C		1.013		0.2304			
121	Submarine Cable-Fiber	86C, D6C,F6C,T6C		1.030		0.2310			
122	Intrabldg Ntwk-Metallic	52C		1.012		0.2338			
123	Intrabldg Ntwk-Fiber	852C,D52C,F52C,T52C		0.989		0.2113			
124	Conduit Systems	4C		1.050		0.1554			
125	Aerial Drop	22C		1.022		0.3400			
126	Buried Drop	45C		1.020		0.2950			
127	Annual Total	Sum(D108.D141)							
128	Monthly Total								
129	Monthly Subscriber Line Testing Cost							\$0.63	
130	Monthly Distributing Frame Cost							\$0.23	
131	Total Levelized Monthly Cost	Sum(H144.H146)							
132	Gross Receipts Tax (GRT) Factor							1.0153	
133	Total Levelized Monthly Cost (incl GRT) (H147*H148)							\$22.35	

	A	B	D	E	F	G	H	I
1	Combined Feeder & Distribution							
2	TELRIC / 100% Nonintegrated - 4 Wire Analog Voice Grade							
3	BUSINESS LOOP							
4								
5	State:	Florida						
6								
7								
8								
9								
10								
11								
12	Land	20C		1.059		0.1493		
13								
14	Buildings	10C		1.059		0.1720		
15								
16	Digital Circuit-Pair Gain	257C,D257C,F257C		0.953		0.2695		
17								
18	Poles	1C		1.036		0.2163		
19								
20	Aerial Cable-Metallic	22C, 12C		1.022		0.3400		
21								
22	Aerial Cable-Fiber	822C, D22C, F22C, T22C, F22C		0.999		0.2137		
23		812C, D12C,F12C,T12C						
24								
25	Underground Cable-Metallic	5C		1.019		0.2791		
26								
27	Underground Cable-Fiber	85C, D5C,F5C,T5C		0.980		0.2001		
28								
29	Buried Cable-Metallic	45C		1.020		0.2950		
30								
31	Buried Cable-Fiber	845C, D45C, F45C, T45C		1.038		0.1973		
32								
33	Submarine Cable-Metallic	6C		1.013		0.2304		
34								
35	Submarine Cable-Fiber	86C, D6C,F6C,T6C		1.030		0.2310		
36								
37	Intrabldg Ntwk-Metallic	52C		1.012		0.2338		
38								
39	Intrabldg Ntwk-Fiber	852C,D52C,F52C,T52C		0.989		0.2113		
40								
41	Conduit Systems	4C		1.050		0.1554		
42								
43	Aerial Drop	22C		1.022		0.3400		
44								
45	Buried Drop	45C		1.020		0.2950		
46								
47	Annual Total	Sum(D12..D45)						
48	Monthly Total							
49	Monthly Subscriber Line Testing Cost							
50	Monthly Distributing Frame Cost							
51	Total Levelized Monthly Cost	Sum(H48.H50)						
52	Gross Receipts Tax (GRT) Factor							
53	Total Levelized Monthly Cost (incl GRT)	(H51*H52)						

	A	B	D	E	F	G	H	I
97	Combined Feeder & Distribution							
98	TELRIC / 100% Nonintegrated - 2 Wire Digital ISDN							
99	Weighted Residential & Business Loop Cost							
100								
101	State:	Florida						
102								
103								
104								
105								
106								
107								
108	Land	20C		1.059		0.1493		
109								
110	Buildings	10C		1.059		0.1720		
111								
112	Digital Circuit-Pair Gain	257C,D257C,F257C		0.953		0.2695		
113								
114	Poles	1C		1.036		0.2163		
115								
116	Aerial Cable-Metallic	22C, 12C		1.022		0.3400		
117								
118	Aerial Cable-Fiber	822C, D22C, F22C, T22C, F22C		0.999		0.2137		
119								
120								
121	Underground Cable-Metallic	5C		1.019		0.2791		
122								
123	Underground Cable-Fiber	85C, D5C,F5C,T5C		0.980		0.2001		
124								
125	Buried Cable-Metallic	45C		1.020		0.2950		
126								
127	Buried Cable-Fiber	845C, D45C, F45C, T45C		1.038		0.1973		
128								
129	Submarine Cable-Metallic	6C		1.013		0.2304		
130								
131	Submarine Cable-Fiber	86C, D6C,F6C,T6C		1.030		0.2310		
132								
133	Intrabldg Ntwk-Metallic	52C		1.012		0.2338		
134								
135	Intrabldg Ntwk-Fiber	852C,D52C,F52C,T52C		0.989		0.2113		
136								
137	Conduit Systems	4C		1.050		0.1554		
138								
139	Aerial Drop	22C		1.022		0.3400		
140								
141	Buried Drop	45C		1.020		0.2950		
142								
143	Annual Total							
144	Monthly Total							
145	Monthly Subscriber Line Testing Cost							\$0.63
146	Monthly Distributing Frame Cost							\$0.23
147	Total Levelized Monthly Cost							
148	Gross Receipts Tax (GRT) Factor							1.0153
149	Total Levelized Monthly Cost (incl GRT) (H147*H148)							\$35.68

**TAB H**

**FUNDAMENTAL DIGITAL LOOP CARRIER INVESTMENT MODEL**

The Fundamental Digital Loop Carrier Investment Model develops the investment for digital loop carrier systems. Investments are calculated for the system (which includes the system hardwired equipment, common plug-ins, and DSX-1 panel), deferrable plug-ins and housing (cabinets, huts and Controlled Environment Vaults). Network data is used to determine the vendor and system types which will be deployed, as well as the probability of occurrence for each system. Calculated investments are combined appropriately for the various designs specified in the Loop Investment Model.

**Illustrative Example Investment Calculations:**

**Central Office Terminal and Remote Terminal**

	\$ 20,000.00	Material Price (Hardwire, commons, DSX-1 Panel)
x	<u>1.7842</u>	In-Plant Factor
=	\$ 35,684.00	Installed Investment
+	<u>200</u>	# Circuits per System
=	\$ 178.42	Per Circuit Investment
x	<u>0.40</u>	Probability of System
=	\$ 71.37	Weighted Investment
+	<u>0.70</u>	Utilization
=	\$ 101.95	Utilized Investment
x	<u>0.955</u>	Levelized Inflation Factor
=	\$ 97.36	Levelized Investment
x	<u>0.0117</u>	MCE&P Factor
=	\$ 1.14	MCE&P Investment
	\$ 97.36	Levelized Investment
+	\$ <u>1.14</u>	MCE&P Investment
=	\$ 98.50	
x	<u>0.0042</u>	Land Factor
=	\$ 0.41	Land Investment
	\$ 97.36	Levelized Investment
+	\$ <u>1.14</u>	MCE&P Investment
=	\$ 98.50	
x	<u>0.0706</u>	Building Factor
=	\$ 6.95	Building Investment

FUNDAMENTAL DIGITAL LOOP CARRIER INVESTMENT MODEL

	<b>Plug-in</b>		
	\$	150.00	Plug-in Material Price
x		<u>1.0604</u>	In-Plant Factor
=	\$	159.06	Installed Investment
+		<u>2</u>	# Channels per Plug-in
=	\$	79.53	Per Circuit Investment
x		<u>0.40</u>	Probability of System
=	\$	31.81	Weighted Investment
x		<u>1.06</u>	Spare Stock Factor
=	\$	33.72	Plug-in Investment
x		<u>0.955</u>	Levelized Inflation Factor
=	\$	32.20	Levelized Investment
x		<u>0.0117</u>	MCE&P Factor
=	\$	0.38	MCE&P Investment
	\$	32.20	Levelized Investment
+	\$	<u>0.38</u>	MCE&P Investment
=	\$	32.58	
x		<u>0.0042</u>	Land Factor
=	\$	0.14	Land Investment
	\$	32.20	Levelized Investment
+	\$	<u>0.38</u>	MCE&P Investment
=	\$	32.58	
x		<u>0.0706</u>	Building Factor
=	\$	2.30	Building Investment

**FUNDAMENTAL MULTIPLEXER INVESTMENT MODEL**

The Fundamental Multiplexer Investment Model develops the investment for SONET Multiplexers deployed in the Outside Plant loop. Investment data used to develop calculations for this model are taken from the SONET Fundamental Investment Model described on Page 3 of 3. Investments are developed for the hardwired equipment, common plug-ins and the DS1 working card at the DS1 level. Network data is used to determine the vendor and system types which will be deployed, as well as the probability of occurrence for each system. These investments are then combined appropriately for the various designs specified in the Loop Investment Model.

**Illustrative Example Investment Calculations:  
Central Office and Remote Terminal**

	\$	250.00	Hardwire and Common Investment (per DS1)
+	\$	200.00	DS1 Card (per DS1)
+	\$	2.50	Fiber Terminal (per DS1)
+	\$	0.50	Pigtails (per DS1)
+	\$	<u>1.00</u>	Fiber Jumpers (per DS1)
=	\$	454.00	Total Investment per system (per DS1)
x		<u>0.50</u>	System probability of occurrence
=	\$	227.00	Weighted Investment
÷		<u>0.70</u>	Utilization
=	\$	324.29	Utilized Investment
÷		<u>24</u>	# Circuits per DS1
=	\$	13.51	Circuit Investment



**SONET FUNDAMENTAL INVESTMENT MODEL**

The SONET Fundamental Investment Model develops investments for SONET lightwave multiplexing equipment, associated circuit equipment, such as DSX panels, and the fiber facilities connecting the SONET equipment.

**Illustrative Example Investment Calculations:**

	\$ 50,000.00	Material Price
x	<u>0.98</u>	TPI
=	\$ 49,000.00	Current Material Price
x	<u>1.7842</u>	In-Plant Factor
=	\$ 87,425.80	Installed Investment
x	<u>1.00</u>	Quantity of Items
=	\$ 87,425.80	Total Installed Investment
+	<u>2,000</u>	Unit Capacity
=	\$ 43.71	Unit Investment
x	<u>0.955</u>	Levelized Inflation Factor
=	\$ 41.75	Levelized Investment
+	<u>0.70</u>	Utilization
=	\$ 59.64	Study Period Investment
x	<u>0.50</u>	Probability of Occurrence
=	\$ 29.82	Total Investment
x	<u>0.0117</u>	MCE&P Factor
=	\$ 0.35	MCE&P Investment
	\$ 29.82	Total Investment
+	\$ <u>0.35</u>	MCE&P Investment
=	\$ 30.17	
x	<u>0.0042</u>	Land Factor
=	\$ 0.13	Land Investment
	\$ 29.82	Total Investment
+	\$ <u>0.35</u>	MCE&P Investment
=	\$ 30.17	
x	<u>0.0706</u>	Building Factor
=	\$ 2.13	Building Investment

**SECTION 5**

## SECTION 5

### FLORIDA UNBUNDLED LOOP

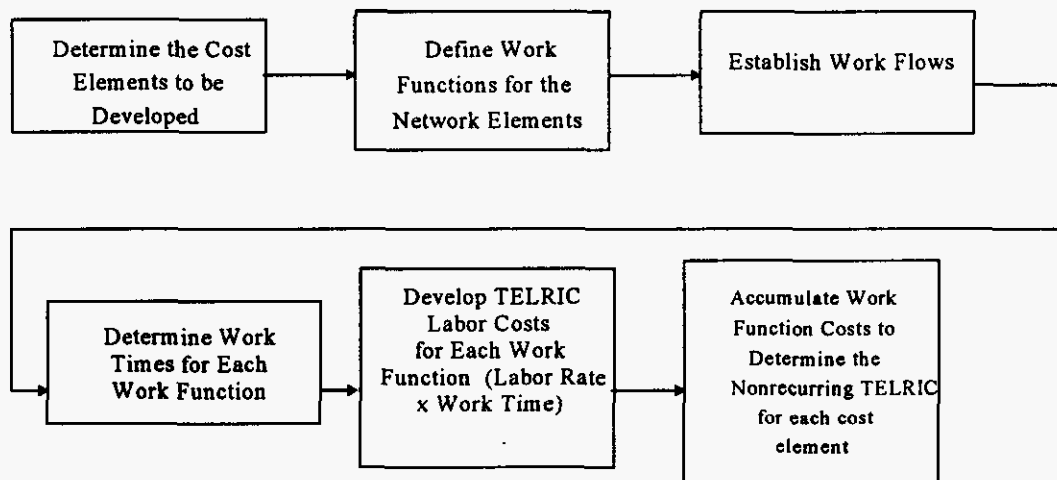
#### COST DEVELOPMENT - NONRECURRING

Nonrecurring Total Element Long Run Incremental Costs (TELRIC) are one-time costs incurred as a result of provisioning, installing, disconnecting and completion of orders initiated by a customer request for the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and 2-Wire ISDN Digital Grade Loop. The Nonrecurring Cost Study is performed to determine the service order, provisioning and disconnect costs associated with the cost element. Calculations for the nonrecurring costs are included in this section.

Figure 5-1 shows a generalized flow of the steps necessary for developing nonrecurring costs. Each part of this flow will be explained in more detail in this section.

Figure 5-1

Generalized Flow Diagram for Developing Nonrecurring Costs



The first step in developing nonrecurring costs is to determine the cost elements to be studied. Each cost element is then described by all of the individual work functions required to provision the element.

The work functions required to provide the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop can be grouped into four categories. These are:

- 1) Service Order
- 2) Engineering
- 3) Connect and Test
- 4) Technician Travel Time

Work functions included in these categories range from clerical activities to installation activities.

The work functions and work times involved in the provisioning of the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop are identified by individuals knowledgeable about and/or responsible for performing the functions. These work functions and work times are then used to describe the flow of work within the various work centers involved in provisioning the element.

A spreadsheet model is used to incorporate the specific work functions and TELRIC labor rates. In order to arrive at the nonrecurring cost for the element studied, the work time for each work function required is multiplied by the appropriate leveled labor rate. The labor inflation factors (LIF) are used to bring the labor rates to the appropriate study period. The labor rates and the labor inflation factors are shown in Section 7. Next, the individual work function costs are accumulated into the installation cost for the element studied.

Utilizing work functions, work times and TELRIC labor rates, disconnect costs are calculated in the same manner as the installation costs. Since the labor costs will occur in the future, the current TELRIC labor rates are inflated to that future period in time and then discounted to the present. The discounted disconnect cost is added to the installation cost and gross receipts tax is applied to develop the nonrecurring cost.

Nonrecurring costs are calculated separately on a first and additional basis. "First" refers to the first item on a service order. "Additional" costs are the incremental costs of providing one or more duplicates of the first item on the same service order at the same time as the first.

The following workpapers reflect the cost development.

SUMMARY OF NONRECURRING TELRIC

STATE:  
 WORKPAPER:  
 PAGE:  
 DATE:

FLORIDA  
 600  
 1 OF 1  
 30-Sep-96

2 WIRE ANALOG VOICE GRADE LOOP

(1997-1999 Level Incremental Costs)

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
<u>DESCRIPTION</u>	<u>SOURCE</u>	<u>FIRST</u>	<u>ADDTL</u>
2			
3 Service Order	WP650 Col G LN7 thru LN15		
4			
5 Engineering	WP650 Col G LN18 thru LN20		
6			
7 Connect & Test	WP650 Col G LN23 thru LN27		
8			
9 Technician Travel Time	WP650 Col G LN30		
10			
11			
12 Nonrecurring TELRIC	Sum of LN3, LN5, LN7, LN9	\$274.21	\$137.34
13			
14			
15			
16			
17			
18			
19			
20			

DEVELOPMENT OF NONRECURRING TELRIC  
2 WIRE ANALOG VOICE GRADE LOOP

LEVEL 1997 - 1999

STATE: FLORIDA  
WORKPAPER: 650  
PAGE: 1 OF 1  
DATE: 30-Sep-96

	(A)		(B)		(C)	(D)		(E)		(F)		(G)		
	INSTALL		DISCONNECT		LEVELIZED	INSTALL		DISCONNECT		DISCOUNTED		TOTAL	TOTAL	
	WORKTIMES (HRS)		WORKTIMES (HRS)		TELRIC	COST (A*C)		COST (B*C)		COST (E*DDF)		(D+F)*(1+GRT)		
	FIRST	ADDTL	FIRST	ADDTL	LABOR	FIRST	ADDTL	FIRST	ADDTL	FIRST	ADDTL	FIRST	ADDTL	
	DESCRIPTION													
6	SERVICE ORDER													
7	CUSTOMER POINT OF CONTACT (CSC)													
8														
9	CIRCUIT PROVISIONING GROUP (CPG)													
10														
11	WORK MANAGEMENT CENTER (WMC)													
12														
13	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)													
14														
15	INSTALL & MTCE - SPEC SVCS (SSIM)													
16														
17	ENGINEERING													
18	ADDRESS & FACILITY INVENTORY (AFI)													
19														
20	CIRCUIT PROVISIONING GROUP (CPG)													
21														
22	CONNECT & TEST													
23	CO INSTALL & MTCE FIELD-CIRCUIT & FAC													
24														
25	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)													
26														
27	INSTALL & MTCE - SPEC SVCS (SSIM)													
28														
29	TRAVEL													
30	INSTALL & MTCE - SPEC SVCS (SSIM)													
31														
32														
33	NONRECURRING TELRIC													
34														
35														
												\$274.21	\$137.34	

52

**SUMMARY OF NONRECURRING TELRIC**

STATE:  
 WORKPAPER:  
 PAGE:  
 DATE:

FLORIDA  
 700  
 1 OF 1  
 30-Sep-96

**4 WIRE ANALOG VOICE GRADE LOOP**

(1997-1999 Level Incremental Costs)

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
<u>DESCRIPTION</u>	<u>SOURCE</u>	<u>FIRST</u>	<u>ADDTL</u>
2			
3 Service Order	WP750 Col G LN7 thru LN15		
4			
5 Engineering	WP750 Col G LN18 thru LN20		
6			
7 Connect & Test	WP750 Col G LN23 thru LN27		
8			
9 Technician Travel Time	WP750 Col G LN30		
10			
11			
12 Nonrecurring TELRIC	Sum of LN3, LN5, LN7, LN9	\$539.96	\$190.99
13			
14			
15			
16			
17			
18			
19			
20			

DEVELOPMENT OF NONRECURRING TELRIC  
4 WIRE ANALOG VOICE GRADE LOOP

LEVEL 1997 - 1999

STATE: FLORIDA  
WORKPAPER: 750  
PAGE: 1 OF 1  
DATE: 30-Sep-96

1 2 3 4 5	DESCRIPTION	(A)		(B)		(C)	(D)		(E)		(F)		(G)	
		INSTALL		DISCONNECT		LEVELIZED	INSTALL		DISCONNECT		DISCOUNTED		TOTAL	TOTAL
		WORKTIMES (HRS)	WORKTIMES (HRS)	WORKTIMES (HRS)	WORKTIMES (HRS)	TELRIC	COST (A*C)	COST (B*C)	COST (E*DDF)	COST (D+F)*(1+GRT)	ADDTL	ADDTL	FIRST	ADDTL
6	SERVICE ORDER	FIRST	ADDTL	FIRST	ADDTL	RATE	FIRST	ADDTL	FIRST	ADDTL	FIRST	ADDTL	FIRST	ADDTL
7	CUSTOMER POINT OF CONTACT (ICSC)					\$58.03								
8														
9	CIRCUIT PROVISIONING GROUP (CPG)					\$58.01								
10														
11	WORK MANAGEMENT CENTER (WMC)					\$56.17								
12														
13	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)					\$76.58								
14														
15	INSTALL & MTCE - SPEC SVCS (SSIM)					\$62.93								
16														
17	ENGINEERING													
18	ADDRESS & FACILITY INVENTORY (AFI)					\$56.14								
19														
20	CIRCUIT PROVISIONING GROUP (CPG)					\$58.01								
21														
22	CONNECT & TEST													
23	CO INSTALL & MTCE FIELD-CIRCUIT & FAC					\$63.68								
24														
25	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)					\$76.58								
26														
27	INSTALL & MTCE - SPEC SVCS (SSIM)					\$62.93								
28														
29	TRAVEL													
30	INSTALL & MTCE - SPEC SVCS (SSIM)					\$62.93								
31														
32														
33	NONRECURRING TELRIC												\$539.96	\$190.99
34														
35														

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SUMMARY OF NONRECURRING TELRIC

STATE:  
 WORKPAPER:  
 PAGE:  
 DATE:

FLORIDA  
 800  
 1 OF 1  
 Aug-96

2 WIRE ISDN UNBUNDLED LOOP

(1997-1999 Level Incremental Costs)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	<u>A</u> DESCRIPTION	<u>B</u> SOURCE	<u>C</u> FIRST	<u>D</u> ADDTL
	Service Order	WP850 COL G L8 THRU L10		
	Engineering	WP850 COL G L12 THRU L16		
	Connect & Test	WP850 COL G L18 THRU L26		
	Technician Travel Time	WP850 COL G L28		
	Nonrecurring TELRIC	L3+L5+L7+L9	\$499.71	\$424.64

DEVELOPMENT OF NONRECURRING TELRIC  
2 WIRE ISDN UNBUNDLED LOOP

LEVEL 1997 - 1999

STATE: FLORIDA  
WORKPAPER: 850  
PAGE: 1 OF 1  
DATE: Aug-96

	(A)		(B)		(C)	(D)		(E)		(F)		(G)	
	INSTALL WORKTIMES (HRS)		DISCONNECT WORKTIMES (HRS)		LEVELIZED TELRIC LABOR RATE	INSTALL COST (A*C)		DISCONNECT COST (B*C)		DISCOUNTED DISCONNECT COST (E*DDF)		(D+F) * (1+GRT) TOTAL TOTAL	
DESCRIPTION	FIRST	ADDTL	FIRST	ADDTL	RATE	FIRST	ADDTL	FIRST	ADDTL	FIRST	ADDTL	FIRST	ADDTL
1													
2													
3													
4													
5													
6													
7													
8 CUSTOMER POINT OF CONTACT-ICSC					\$58.03								
9													
10 INSTALLATION & MTCE CENTER (IMC)					\$57.23								
11													
12 CIRCUIT PROVISIONING GROUP (CPG)					\$58.01								
13													
14 ADDRESS & FACILITY INVENTORY (AFIG)					\$56.14								
15													
16 OUTSIDE PLANT ENGINEERING (OSPE)					\$83.15								
17													
18 NETWORK RELIABILITY CENTER (NRC)					\$76.51								
19													
20 NETWORK PLUG-IN ADMINISTRATION (PICS)					\$91.40								
21													
22 NETWORK SERVICES-CLERICAL					\$47.95								
23													
24 ACCESS CUSTOMER ADVOCATE CENTER (ACAC)					\$76.58								
25													
26 INSTALL & MTCE - SPECIAL SERVICES (SSIM)					\$62.93								
27													
28 INSTALL & MTCE - SPECIAL SERVICES (SSIM-TRAVEL)					\$62.93								
29													
30													
31 NONRECURRING TELRIC												\$499.71	\$424.64
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													
45													

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**SECTION 6**

SECTION 6

FLORIDA UNBUNDLED LOOP

SPECIFIC STUDY ASSUMPTIONS

The cost study for the Unbundled 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and 2-Wire ISDN Digital Grade Loop is based on the Total Element Long Run Incremental Cost (TELRIC) methodology prescribed by the FCC's First Report and Order in CC Docket 96-98 released August 8, 1996. Network deployment strategies, first choice provisioning guidelines, and equipment purchasing information are used to develop the Total Element Long Run Incremental Cost.

1. Forward-looking technology is represented in the following manner:
  - . all loops less than 12,000 feet will be copper placements
  - . all loops greater than 12,000 feet will be fiber feeder placements and copper distribution placements
  - . all copper placements will be 26 gauge copper cable
2. Utilization of cable segments is based on projected actual state-specific data and is applied as follows:

Cable Pair/Strand  
Utilization

copper (feeder)	65.7% utilization
copper (distribution)	38.8% utilization
fiber (feeder)	74.0% utilization

3. In developing the nonrecurring costs for the 2-wire analog voice grade loop, it was assumed that 80% of the time the 2-wire residential/business line would be existing and no SSIM provisioning work time would be required.

**SECTION 7**

**SECTION 7**

**FLORIDA UNBUNDLED LOOP**

**FACTORS AND LOADINGS**

Following are the Total Element Long Run Incremental Cost (TELRIC) annual cost factors, miscellaneous loadings and labor rates used in the 2-Wire Analog Voice Grade Loop, the 4-Wire Analog Voice Grade Loop and the 2-Wire ISDN Digital Grade Loop.

**Florida Unbundled Loop  
Factors and Loadings**

Subscriber Line Testing Monthly Cost Per Loop		\$0.63
Distributing Frame Weighted Monthly Cost (2-Wire)		\$0.23
	(4-Wire)	\$0.46
Sales Tax		0.06
Loadings		
Land	20C	0.0047
Building	10C	0.0657
Pole	1C	0.2523
Conduit	4C	0.3894
Misc Common Equip & Power	257C	0.0134
Misc Power Equipment	257C	0.0056
Gross Receipts Tax (Gross-up Factor)		0.0153
Discounted Disconnect Factor (DDF)		
2-Wire Analog Voice Grade Loop		0.8689
4-Wire Analog Voice Grade Loop		0.8593
2-Wire ISDN Digital Grade Loop		0.7669

**Florida Unbundled Loop  
Factors and Loadings**

TELRIC Regional Hourly Labor Rates

	<u>1996</u>	<u>Levelized</u>
Customer Point of Contact - ICSC		
Interexchange Carrier Service Ctr	\$54.32	\$58.03
CO Install & Mtce Field - Ckt & Fac	\$59.61	\$63.68
Circuit Provision Group - CPG	\$54.30	\$58.01
Work Management Center - WMC	\$52.58	\$56.17
Address & Facility Inventory Group-AFIG	\$52.55	\$56.14
Install & Mtce - Spec Svcs - SSIM		
Special Services Install & Mtce	\$58.91	\$62.93
Install & Mtce Center - IMC	\$53.57	\$57.23
Outside Plant Engineering (OSPE)	\$78.00	\$83.15
Network Reliability Center - NRC	\$71.62	\$76.51
Network Plug-in Administration - PICS	\$85.74	\$91.40
Network Services - Clerical	\$44.88	\$47.95
Access Customer Advocate Center-ACAC	\$71.68	\$76.58

To create a Levelized labor rate from a 1996 Labor Rate:

$$1996 \text{ Labor Rate} * \left[ \frac{((1+\text{InflYr1})/(1+\text{com})^1) + ((1+\text{InflYr2})/(1+\text{com})^2) + ((1+\text{InflYr3})/(1+\text{com})^3)}{(1+\text{com})^1 + (1+\text{com})^2 + (1+\text{com})^3} \right]$$

Example:

$$\begin{aligned} & \$54.32 * (1.034/1.1125^1 + 1.034*1.035/1.1125^2 + \\ & 1.034*1.035*1.036/1.1125^3) / (1/1.1125^1 + 1/1.1125^2 + \\ & 1/1.1125^3) = \$58.03 \end{aligned}$$

Note: Infl = Labor inflation; COM = Cost of Money

Labor Inflation

Telco COE

Year 1	3.4%
Year 2	3.5%
Year 3	3.6%

Telco ENGR

Year 1	3.3%
Year 2	3.4%
Year 3	3.4%



1996  
FLORIDA  
ACCOUNT AVERAGE LEVELIZED INFLATION FACTORS  
FOR FORWARD-LOOKING STUDIES

		11.25%
Land	20C	1.059
Building	10C, 110C	1.059
Gen Purpose Computer	530C, 630C, 531C	0.839
Analog Switch	77C, 577C	1.059
Digital Switch	377C, 587C	0.999
Operator Systems	117C, 417C	0.993
Radio	67C, 167C, 527C, 567C	1.039
Circuit-DDS	157C	0.955
Circuit-Digital Pair Gain	257C, D, F257C	0.953
Circuit-Other Digital	357C, F, T357C, 557C	0.955
Circuit- Analog Pair Gain	457C	0.000
Circuit-Other Analog	57C, 597C	1.049
Large PBX	158C, 258NC, 458C, 468C	0.961
Public	298C, 988C, 998C	1.026
	198C, 188C, 288C	
Other Terminal	358NC, 378C, 558C	0.987
	828C, 858C, 928C, 968NC	
	B, D, F958C, 978NC	
Poles	1C	1.036
Aerial Cable-Copper	22C, 12C	1.022
Aerial Cable-Fiber	822C, D, F, T22C,	0.999
	812C, D, F, T12C	
Underground Cable-Copper	5C	1.019
Underground Cable-Fiber	85C, D, F, T5C	0.980
Buried Cable-Copper	45C	1.020
Buried Cable-Fiber	845C, D, F, T45C	1.038
Submarine Cable-Copper	6C	1.013
Submarine Cable-Fiber	86C, D, F, T6C	1.030
Intrbldg Ntwk Cable-Copper	52C	1.012
Intrbldg Ntwk Cable-Fiber	852C, D, F, T52C	0.989
Conduit	4C	1.050

1996 FLORIDA  
ACCOUNT AVERAGE ANNUAL COST FACTORS

\*\*\*\*\*  
\* FOR USE IN SERVICE COST STUDIES ONLY \*  
\*\*\*\*\*

Field Code	Depreciation	ACFC COM	ACFC Inc Tax	Cap Exp	ACFC Pft Specific Exp	ACFC Advnl Tax	Directly Attributed Shared and Common	TELRIC	
	a	b	c	d	e	f	g	i	
		11.25%		(a+b+c)				(d+e+f+g)	
LAND - COE	20C	0.0000	0.0947	0.0426	0.1373	0.0000	0.0120	0.0000	0.1493
BUILDINGS - COE	10C, 110C	0.0330	0.0826	0.0369	0.1525	0.0061	0.0120	0.0014	0.1720
DIGITAL ELEC SWITCH	377C, 587C	0.1157	0.0555	0.0254	0.1966	0.0236	0.0120	0.0434	0.2756
OPERATOR SYSTEMS	117C,417C	0.1157	0.0647	0.0296	0.2100	0.0033	0.0120	0.0500	0.2753
DIGTL CIRC-DDS	157C	0.1608	0.0575	0.0256	0.2439	0.0076	0.0120	0.0394	0.3029
DIGTL CIRC-PAIR GAIN	257C,D257C,F257C	0.1314	0.0564	0.0249	0.2127	0.0082	0.0120	0.0366	0.2695
DIGTL CIRC-OTHER	357C,T357C,F357C,557C	0.1314	0.0564	0.0252	0.2130	0.0093	0.0120	0.0372	0.2715
POLES	1C	0.0721	0.0599	0.0254	0.1574	0.0175	0.0120	0.0294	0.2163
AERIAL CA - METAL	22C, 12C	0.1023	0.0679	0.0254	0.1956	0.0705	0.0120	0.0619	0.3400
AERIAL CA - FIBER	822C, 812C,D22C, F22C,T22C,D12C,F12C,T12C	0.0746	0.0662	0.0281	0.1689	0.0029	0.0120	0.0299	0.2137
UNGROUND CA - METAL	5C	0.1184	0.0681	0.0263	0.2128	0.0192	0.0120	0.0351	0.2791
UNGROUND CA - FIBER	85C,D5C,F5C,T5C	0.0686	0.0655	0.0284	0.1625	0.0036	0.0120	0.0220	0.2001
BURIED CA - METAL	45C	0.0885	0.0678	0.0277	0.1840	0.0522	0.0120	0.0468	0.2950
BURIED CA - FIBER	845C, D45C, F45C, T45C	0.0613	0.0670	0.0295	0.1578	0.0040	0.0120	0.0235	0.1973
SUBMARINE CA-METAL	6C	0.0937	0.0688	0.0307	0.1932	0.0046	0.0120	0.0206	0.2304
SUBMARINE CA-FIBER	86C,D6C,F6C,T6C	0.0937	0.0688	0.0310	0.1935	0.0046	0.0120	0.0209	0.2310
INTRBLD NTWK-METAL	52C	0.0751	0.0669	0.0291	0.1711	0.0192	0.0120	0.0315	0.2338
INTRBLD NTWK-FIBER	852C,D52C,F52C,T52C	0.0751	0.0669	0.0292	0.1712	0.0011	0.0120	0.0270	0.2113
CONDUIT SYSTEMS	4C	0.0205	0.0727	0.0325	0.1257	0.0031	0.0120	0.0146	0.1554

Investment Inplant Factors

	A	B	C	D	E	F	G	H	I
SR	RC	State	Description	%Nonexempt	%Exempt	%Telco Eng	%Telco Inst	%Labor-Contr	%Support
4	12C	FL	Aerial Cable - Metallic (Entrance Cable)						
5	22C	FL	Aerial Cable - Metallic						
6	45C	FL	Buried Cable - Metallic						
7	52C	FL	Intrabldg Ntwk Cable - Metallic						
8	5C	FL	Underground - Metallic						
9	6C	FL	Submarine Cable - Metallic						
10	F12	FL	Aerial Cable - Non-Metallic (Entrance Cable)						
11	F22	FL	Aerial Cable - Non-Metallic						
12	F45	FL	Buried Cable - Non-Metallic						
13	F52	FL	Intrabldg Ntwk Cable - Non-Metallic						
14	F5C	FL	Underground Cable - Non-Metallic						
15	F6C	FL	Submarine Cable - Non-Metallic						

NOTICE: Not for use or disclosure outside BellSouth except under written agreement.