BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SUPPLEMENTAL REBUTTAL TESTIMONY OF

JOHN C. DONOVAN

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

And

MCI WORLDCOM, INC.

Docket No. 990649A-TP

February 11, 2002

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JCD-9 Engineering Factors (Proprietary).

JCD-10 Manhole Drawings.

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is John C. Donovan. I am President of Telecom Visions, Inc., a telecommunications consulting company. My business address is 11 Osborne Road, Garden City, NY 11530.

Q. ARE YOU THE SAME JOHN C. DONOVAN THAT PREVIOUSLY FILED TESTIMONY IN THIS DOCKET?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to comment on BellSouth's January 28, 2002 revised cost studies and direct testimony. As such, this testimony should be taken together with my December 10, 2001 rebuttal testimony to identify all of the changes I support to BellSouth's original filing. Second, I have withheld from commenting on BellSouth's surrebuttal testimony because I understand it is outside the scope of this additional testimony. However, my silence on those issues should not imply agreement with anything stated in the surrebuttal testimony of BellSouth's witnesses. Third, since BellSouth

still continues to provide information requested in discovery, I would like to reserve the opportunity to comment on that information as it is supplied between now and the time of the hearing.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. In Section II, I address the fact that although BellSouth made a mistake in claiming that BSTLM estimated engineering costs in the same manner as its Outside Plant Construction Management Program ("OSPCM"), the error discovered has not been adequately repaired, despite BellSouth's alteration of model code to use a new factor, and that the engineering factors submitted are unreasonable for a TELRIC model. In Section III, I discuss the fact that although BellSouth's new cost study alleges to have fixed some admitted shortcomings in calculating manhole investments, BellSouth still has failed to appropriately capture forward looking costs. In Section IV, I address BellSouth's application of a 40-percent factor that is inappropriate and should be rejected. In Section V, I summarize this testimony.

II. BELLSOUTH STILL INCORRECTLY CALCULATES ENGINEERING COSTS AND FAILS TO ADHERE TO TELRIC REQUIREMENTS.

Q. DID BELLSOUTH ADMIT THERE WAS AN ERROR IN ITS ENGINEERING FACTOR?

A. Yes. In my rebuttal testimony, I pointed out the three ways that engineering costs are related to direct labor costs: 1) by sheath feet of cable placed by technicians, 2) by number of splice locations created by technicians, and, 3) by the number of pairs spliced by technicians. In its January 24, 2002 letter to the Commission, BellSouth admitted that "the engineering factors BellSouth used in its original cost study are the same factors used in BellSouth's internal cost estimating system, OSPCM." In the letter, BellSouth also admitted: "In gathering information for a Staff-requested late-filed deposition exhibit, BellSouth learned of a discrepancy in the way the OSPCM system applies the factors and the way the BSTLM applies the factors." Not surprisingly, BellSouth discovered that its own internal cost estimating system calculated engineering costs following the philosophy that, "The engineering factors in the OSPCM are applied to Telco labor plus contractor costs." (January 24, 2002 BST letter).

Q. DID BELLSOUTH ALTER THE BSTLM MODEL CODE APPROPRIATELY TO CALCULATE ENGINEERING COSTS CONSISTENT WITH GENERALLY ACCEPTED OUTSIDE PLANT ENGINEERING PRACTICE?

A. No. Although BellSouth revised its BSTLM model code, it amazingly failed to do it consistent with the OSPCM practice described in its January 24, 2002 letter. As expressed in my rebuttal testimony, and as revealed by its own internal outside plant engineering practices, BellSouth should have created an engineering cost that correlates with technician labor. BellSouth has muddied the waters by creating a factor that treats engineering cost to be proportional to labor costs plus material costs. This inappropriately includes the cost of materials in the allocation of engineering costs. Engineers create Engineering Work Orders to instruct *technicians* what to do. They do not create Engineering Work Orders to instruct materials. Engineering Work Orders are the "how to build it" documents that BellSouth and the industry recognize as the work product of the outside plant engineer.

Q. WHAT DO YOU RECOMMEND BELLSOUTH BE REQUIRED TO ALTER IN ITS MODEL LOGIC?

A. BellSouth has already modified the logic of BSTLM to change the way it handles engineering costs; however, it has done so incorrectly. The Commission should require BellSouth to modify the logic of

BSTLM to have engineering costs reflect a correlation to internal direct labor plus contract direct labor, and to eliminate material cost as a driver of engineering allocations.

Q. WHAT SHOULD THE RATIO OF ENGINEERING TO TECHNICIAN LABOR BE?

A. I believe a ratio should be based on a realistic "span of control" of engineers to technicians. I have analyzed BellSouth's embedded base data for the years 1997 through 2000, and note that the "span of control" varies between 1 engineer per 5.2 technicians to a ratio of 1.1 engineers per technician. The ratio of 1.1 engineers per technician is absurd because such a ratio would indicate that as much time was spent on the engineering and paperwork as was spent on building a piece of outside plant. Based on my experience, a productive engineering force will create sufficient Engineering Work Orders to keep many construction technicians gainfully employed. I have provided my analysis in Attachment JCD-9. At the very least, I would expect that one engineer should be able to keep at least 6 technicians busy. Therefore, BellSouth's cost model should be modified to reflect a 16.7 percent engineering to labor ratio (1/6 = 16.7%).

Q. WHY WOULD EMBEDDED ENGINEERING COSTS VARY SO MUCH BETWEEN FIELD REPORTING CODES?

A. There are a number of reasons why embedded engineering costs would vary among Field Reporting Codes and might be higher than expected using a reasonable 1:6 "span of control." First, engineering costs will vary among Field Reporting Codes because the engineering involved is likely to be more complex for some types of construction than for others. Second, BellSouth has its stable of engineers on the payroll. If construction investment is reduced for a period of time, BellSouth still has to charge its engineering time to something, which can inflate engineering costs in any particular short period of time. By using a multi-year average, engineering costs are levelized and more accurately reflected.

Q. IS BELLSOUTH CORRECT IN CHOOSING ONE YEAR TO DETERMINE ITS ENGINEERING RATE?

A. No. Work must be planned by engineers, funding must be secured, and detailed engineering must be completed even before technicians begin work. Therefore it is unrealistic to assume that one year should be selected to determine an appropriate ratio. We have requested, and BellSouth has provided, data from 1997 through 2000. I recommend that an average be used to levelize those obvious year-to-year timing differences.

Q. DO YOU HAVE A RECOMMENDATION THAT COULD BE USED WITHOUT CHANGING THE MODEL LOGIC?

A. Yes. Exhibit JCD-9 indicates a "TELRIC BSTLM Engineering Factor Input" that can be used in lieu of a change in logic. Such a factor would result in an Engineering Factor Input, as currently allowed into the BSTLM logic, of between 5% and 12% depending on Field Reporting Code, with an overall average just under the 10% that I advocated in my rebuttal testimony. This variation takes into account engineering complexity differences based on BellSouth's actual costs.

III. BELLSOUTH'S MODEL STILL FAILS TO APPROPRIATELY CAPTURE MANHOLE COSTS.

Q. WHAT CHANGES DID BELLSOUTH MAKE TO ITS JANUARY 28, 2002 MODEL REGARDING MANHOLE COSTS?

A. By making changes to its model regarding manhole costs, BellSouth essentially admits that I was correct in my criticism that it had included an unrealistic cost of manhole covers and collars in its average cost of manholes. However, as part of its "fix", BellSouth simply attempts to manipulate the numbers to suit its own purposes,

rather than to accurately capture the TELRIC investments appropriate for manhole investment.

Q. WHAT ARE THE KEY ISSUES INVOLVED IN BELLSOUTH'S CHANGING ITS TREATMENT OF MANHOLE COSTS?

A. BellSouth admits that it made a mistake in its originally filed manhole costs, and is now trying to recoup its incorrect investment allocations. Particularly, BellSouth alleges that this Commission can now correct its 30 manhole cover per manhole assertion, but that BellSouth forgot to include other costs that more than account for the difference.

Q. WHAT NEW EVIDENCE HAS BELLSOUTH ADDRESSED BY CHANGING ITS MANHOLE INVESTMENT VALUES?

A. BellSouth now alleges that its depiction of required manhole sizes, capacities, costs per cubic foot of space, and miscellaneous material costs are at issue.

Q. HOW HAS BELLSOUTH MANIPULATED THE COST OF DIFFERENT SIZED MANHOLES?

A. The key issue for manhole costs is the appropriate number of cables that can be accommodated by a particular sized manhole. In the tables on pages 25 and 26 of Ms. Caldwell's amended surrebuttal testimony,

she indicates manholes that can accommodate 1 cable, 2 cables, 3 to 4 cables, or 5 or more cables. Despite my rebuttal testimony to the contrary, BellSouth now claims that its single sample for Type M031A contractor costs represents multiple manholes, rather than a single manhole, at a higher cost per cubic foot than larger manholes. Interestingly, it has provided absolutely no evidence in support of that claim that would contradict my testimony that the cost is simply a single outlier manhole that should be excluded from the average cost per cubic foot in a very limited non-TELRIC sample. In fact, BellSouth's new input values indicate that a 4-foot by 8-foot by 7-foot (224 cubic-foot) manhole costs much more than a 6-foot by 12-foot by 7-foot (504 cubic-foot) manhole which is almost twice the size ($19,337.15 for a 224 cu. ft. manhole vs. $15,330.54 for a 504 cu. ft. manhole). The contention that a smaller manhole costs much more than a larger manhole is ludicrous. BellSouth is attempting to cleverly cloud the issue by using selective cost per cubic-foot values rather than simply providing the straightforward data – cost by type of manhole. In addition, a major issue is how many cables can be accommodated by a particular sized manhole in a TELRIC environment.

Q. HOW MANY CABLES CAN BE ACCOMMODATED IN A STANDARD MANHOLE?

A. BellSouth claims that its smallest manhole is 4 feet wide by 3 feet deep by 6 feet long (72 cubic-feet). Exhibit JCD-10 clearly shows that such a manhole can accommodate not 1, or 2, or 3, or 4, but far more than 4 cables. The manhole drawings that I provide show that such a manhole can support 4 cables plus a large opening for several additional cables. Even a smaller 3-feet wide by 3.5 feet deep by 5 feet long (52.5 cubic-foot) manhole can accommodate at least 4 cables.

Q. WHAT IS THE CORRECT COST OF A MANHOLE?

A. The correct cost of a manhole can be determined by the least-cost method. BellSouth has not presented any substantiated data for any volume purchases. Even its claim for higher costs per cubic-foot of manhole space is unsupported by data, and fails the test of logic in looking at the comparison between a 224 cubic-foot and 504 cubic-foot manhole presented above. In addition, BellSouth stacks costs upon costs to drive up its final value far beyond using reason by using a 75.6% adder (1.2543 x 1.40 = 1.756). I discussed BellSouth's 25.43% "fudge factor" in my rebuttal testimony so I will not repeat that discussion here, except to mention that the grab-bag of alleged contractor items have nothing to do with manholes, and certainly

nothing to do with manhole covers. One must ask, "How many dump trucks does it take to place a manhole cover?"

Besides the 25.43% closure factor, BellSouth advocates multiplying the inflated total by another 40% "fudge factor" to account for additional alleged costs, which I will address in the next section. However, I note that the majority of BellSouth's claimed basis for the 40% factor is exorbitant engineering costs and a double-counting of exempt material loadings. BellSouth has produced new information in discovery that reveals that manhole covers and collars are actually listed as exempt material. (BellSouth reply to AT&T/WorldCom 1st Set of Interrogatories, Item No. 5).

BellSouth should not be allowed to recover the costs of manhole covers and collars through its exempt material loading factors and also include the cost of that material directly in its computation of total manhole costs. The only appropriate exempt material associated with a manhole is the cover and collar. I have included that cost in my recommended input values. The table below is my recommended reconstruction of BellSouth's costs tables produced in Ms. Caldwell's amended surrebuttal testimony pages 25 and 26 and utilized in the most recent filing of its model.

Unit Cost Development from Contractor Table (as submitted by AT&T/WorldCom)			
Contract Unit Cost	Applicable Manhole sizes	Contractor costs without 25.43% Miscellaneous Loading Factor	Contractor costs without 25.43% Miscellaneous Loading or 40% Miscellaneous Material Loading Factor
$16.90	< 351 cu. ft.	$16.90/cu. ft.	$16.90/cu. ft.
$16.90	>= 351 cu. ft.	$16.90/cu. ft.	$16.90/cu. ft.
$246.48	Manhole Cover	$246.48 ea.	$246.48 ea.

BSTLM Input Development (as submitted by AT&T/WorldCom)					
Conduit Size	Manhole Dimensions	Applicable Cubic Foot Costs	Manhole costs based on Total Cubic Feet	Manhole Cover Costs	BSTLM Underground Contract Labor Inputs: Total Manhole Cost with Cover
1	72 cu. ft.	$16.90	$1,216.88	$246.48	$1,463.36
2	72 cu. ft.	$16.90	$1,216.88	$246.48	$1,463.36
3	72 cu. ft.	$16.90	$1,216.88	$246.48	$1,463.36
5	224 cu. ft.	$16.90	$3,785.60	$246.48	$4,032.08

Q. WHAT DO YOU RECOMMEND?

A. I believe that this Commission should require BellSouth to use the least-cost forward looking value for the most efficient cost per cubic foot. The fact that a 224-cubic foot manhole can support any number of cables modeled by the BSTLM indicates that an input value as low or lower than what I presented in my rebuttal testimony is reasonable and appropriate.

IV. BELLSOUTH'S USE OF A 40 PERCENT ADDITIONAL FACTOR FOR UNDERGROUND MANHOLES, CONDUIT, AND EXCAVATION COSTS IS INAPPROPRIATE.

Q. WHAT CHANGES DID BELLSOUTH MAKE TO ITS JANUARY 28, 2002 MODEL REGARDING LOADINGS ONTO MANHOLES, CONDUIT, AND EXCAVATION COSTS?

A. BellSouth claims that the 40% factor for Miscellaneous Material Loading Factor never made it through its model.

Q. WHAT IS THE BASIS OF BELLSOUTH'S CLAIM FOR THE 40% COST?

A. According to Ms. Caldwell's Attachment 5, the 40% consists of approximately 28% Engineering, 8% Exempt Material, and 4% Other (Plant Labor, Supply Expense, Contract Labor, Right of Way, and Interest During Construction).

Q. IS THE 28% ENGINEERING FACTOR REASONABLE?

A. No. As discussed in the engineering portion of this testimony, I recommend using a factor of 12% for the 4C Manhole, Conduit, and Excavation Field Reporting Code, as indicated in Attachment JCD-9.

Q. WHAT EXEMPT MATERIAL COSTS ARE APPROPRIATE FOR MANHOLES?

A. I have considered additional costs based on my experience in the industry. In my review of BellSouth's list of Exempt Material items as provided in response to AT&T/WorldCom's 1st Set of Interrogatories, Item No. 5, I found that BellSouth considers items such as manhole covers and collars to be exempt material, as indicated earlier in this testimony. We have included that cost already in the manhole cost table provided earlier in this testimony.

Q. WHAT EXEMPT MATERIAL COSTS ARE APPROPRIATE FOR PVC CONDUIT PIPE?

A. None. There are no exempt materials that are added to plain white pipe. A pipe is a pipe, and things such as nuts and bolts don't apply.

Q. WHAT EXEMPT MATERIAL COSTS ARE APPROPRIATE FOR TRENCHES?

A. None. There are no exempt materials that are added to an excavation trench. A trench is a ditch and things such as nuts and bolts don't apply.

Q. WHAT IS YOUR OVERALL RECOMMENDATION REGARDING THE 40% FACTOR?

A. I recommend reducing that factor to 16%, consisting of 12% Engineering and 4% Other, while excluding exempt material costs in a category where they have already been accounted for (in the case of manholes) or do not belong as being inappropriate (in the cases of conduit pipe and excavation trenches).

Also, as I indicated in my rebuttal testimony, it is both industry common practice and BellSouth's practice to apply exempt material loadings to labor costs, not to material costs. BellSouth uses contractors to build its manholes and conduit systems. Therefore exempt materials would not apply in any case, since it is not using telco labor.

However, the real crux of the issue is that the contractor costs for manholes and conduit pipes *already* include all of the costs, including sales tax and handling. The contractor prices used in this cost study were developed from vendor contracts and are inclusive of all additional materials that may be required. As such, the 40 percent adder is inappropriate and should be disallowed by this Commission.

V. SUMMARY

Q. WILL YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A. Engineering costs should be based on a "scorched node" TELRIC environment using a reasonable high productivity span of control based on one engineer per 6 technicians. Manhole costs should be based on available BellSouth data for the least cost per cubic foot and manhole sizes appropriate for the number of cables involved in a particular route. Conduit and manhole costs should not be increased by over 75% because BellSouth's 25% closure factor and 40% exempt material (and other miscellaneous loadings) should not apply to contractor bills for conduit and manhole construction.

Q. DOES THIS CONCLUDE YOU TESTIMONY?

A. Yes. However, as mentioned earlier in this testimony, I would like to reserve the right to comment on any future information provided by BellSouth.

Acct	Asset	Total 1997 - 2000 Labor	Total 1997 - 2000 Engineering	Embedded Ratio of Engineering to Labor		TELRIC Ratio of Engineering to Labor @ 1:6	TELRIC Engineering Cost	Total Less Engineering	TELRIC BSTLM Engineering Factor Input
822C	Aerial Fiber	9,274,574	1,795,914	19.4%	= 1 : 5.2	16.7%	1,545,762	23,393,488	7%
5C	Underground Copper	17,256,750	3,679,257	21.3%	= 1 : 4.7	16.7%	2,876,125	38,794,345	7%
845C	Buried Fiber	97,805,056	24,879,493	25.4%	= 1 : 3.9	16.7%	16,300,843	146,912,560	11%
4C	Conduit	26,011,264	6,802,758	26.2%	= 1 : 3.8	16.7%	4,335,211	36,205,300	12%
85C	Underground Fiber	16,635,134	5,003,841	30.1%	= 1 : 3.3	16.7%	2,772,522	60,019,443	5%
852C	Intrabuilding Fiber	256,303	77,751	30.3%	= 1 : 3.3	16.7%	42,717	465,166	9%
22C	Aerial Copper	28,991,677	9,258,892	31.9%	= 1 : 3.1	16.7%	4,831,946	66,220,452	7%
45C	Buried Copper	183,321,710	59,476,324	32.4%	= 1 : 3.1	16.7%	30,553,618	298,342,992	10%
812C	Aerial Fiber Entrance	3,412,076	1,535,331	45.0%	= 1 : 2.2	16.7%	568,679	6,546,037	9%
52C	Intrabuilding Copper	1,626,613	954,038	58.7%	= 1 : 1.7	16.7%	271,102	3,450,039	8%
1C	Poles	6,304,347	3,717,327	59.0%	= 1 : 1.7	16.7%	1,050,725	11,166,845	9%
12C	Aerial Copper Entrance	13,629,261	12,763,258	93.6%	= 1 : 1.1	16.7%	2,271,543	26,649,400	9%
	Total	**404,524,764**	**129,944,184**	32.1%	= 1 : 3.1	16.7%	**67,420,794**	**718,166,066**	9.4%

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