GENERAL PLANNING CONSULTANT
TECHNICAL MEMORANDUM 3.5.2

DOCUMENTATION OF THE BUS OPERATING COST MODEL PROGRAM--- BUSCOST

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BUSCOST : SCRTD BUS OPERATING COST MODEL PROGRAM (220CT84)

SUMMARY

BUSCOST is a UTPS compatable FORTRAN program which applies the Bus Operating Cost model developed for long-range planning at the Southern California Rapid Transit District. This model design and structure is completely documented in Technical Memorandum 5.1.2 entitled "Specification Of The Bus Operating Cost Model". The model was designed to compute annual operating expenses for bus operations associated with future alternatives and reports this information both in base year(1984) and inflated dollars. The model generates these estimates from projections of annual bus operating statistics based upon the quantity of service derived from the travel demand model forecasts. These operating cost estimates are sensitive to level of service measures such as annual vehicle miles, service hours, and peak vehicle requirements. They are also sensitive to the quantity of service utilitized, annual passengers.
The input to the model is provided primarily by the total system and individual route level operating statistics generated by the URAP3 program. The only other input is provided through the use of user controlled parmeters defined on two control cards. The program generates system costs at the department level expressed in both base year and future dollars, and will optionally compute route level costs using systemwide unit cost values.

REPORTS

BUSCOST produces four basic reports. The first three are generated without user option. The four report, route level statistics, is produced only if the route level file is provided(see input section).

(1) USER PARAMETERS ANO OPTIONS

This report summarizes both the user selected and default parmeters and options used by the program.

(2) ANNUAL OPERATING COST REPORT

This report summarizes annual system operating costs, by department, for both the base year(1984) and the future year.

DEPARTMENT	1984	2000

(3) UNIT COST VALUES

This report computes annual system unit operating costs, for both reporting periods, for each of the system variables, and are differentiated by those costs which are fixed versus those that are variable.

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TYPE OF COST	ANNUAL MILES	ANNUAL HOURS	PEAK VEHICLES	ANNUAL PASSENCERS

(4) ROUTE LEVEL ANNUAL OPERATINC COSTS

MODE= ROUTE=

1984 COSTS YEAR 2000 COSTS

FILE TABLE

	File Name	DD Name	Function or Contents
	TOTCOST	FT01F001	Total system cost statisitcs generated by the URAP3 program(1.0)
I	LINECOST	FT02F001	Individual route level cost statistics generated by the URAP3 program.(2.0)
N P U T	SCRATCH	FT20F001	The system scratch file for title and control cards
	LOG	FT21F001	The UTPS log file
	SYSIN	FT05F001	Title and namelist of parameters
O U T P U T	SYSOUT	FT06F001	Program messages and reports.

KEYWORD TABLE

The program accepts a title card, &INFLC card. All of these control cards must be present and in this order. The &SELECT card allows the user to specify the desired modes and company number to be considered in the cost model run. The &INFLC card defines the incremental inflation factors used in the calculation of future year cost estimates.

	Keyword	Format	Default	Explanation
&SELECT	MODE	I(5)	4,5	The mode numbers to be included in this cost model run.
	COMPNY	I	1	The company number to be included in this cost model run.
	BASE	R	1.0	Average all item consumer price index value.
&INFLC	WAGE	R	0.9314	The incremental wage rate.
	FRINGE	R	1.2753	The incremental fringe rate.
	FUEL	R	1.5107	The incremental fuel rate.
	PART	R	1.0105	The incremental bus part rate.
	OTHER	R	1.0000	The incremental other direct cost rate.

NOTES

1.0 If the total system cost dataset is not provided, the program will utilize 1984 system level totals for each model variable: annual miles, annual hours, peak vehicles, and annual passengers.
2.0 If the route level cost dataset is not provided, the program will not produce Report 4.