4.5 Run a Summary Report

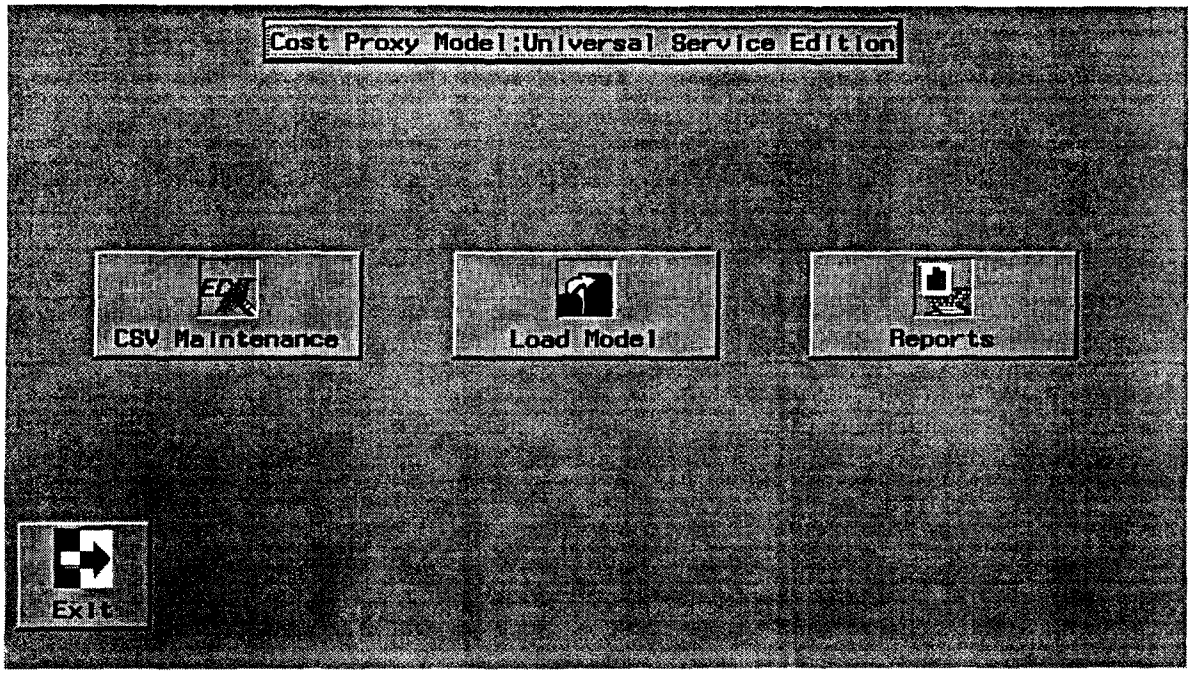

Figure 4-17 CPM: Universal Service Edition Main Menu

- CSV Maintenance - menu selection allows the user to edit/update the CPM data
- Load Model - menu selection allows the user to Initially load the CPM System or reload based on CSV changes
- Reports - menu selection allows user to produce various types of output.

STEP 1. Click the Reports button.

4.5.1 Report Menu - Company Selection

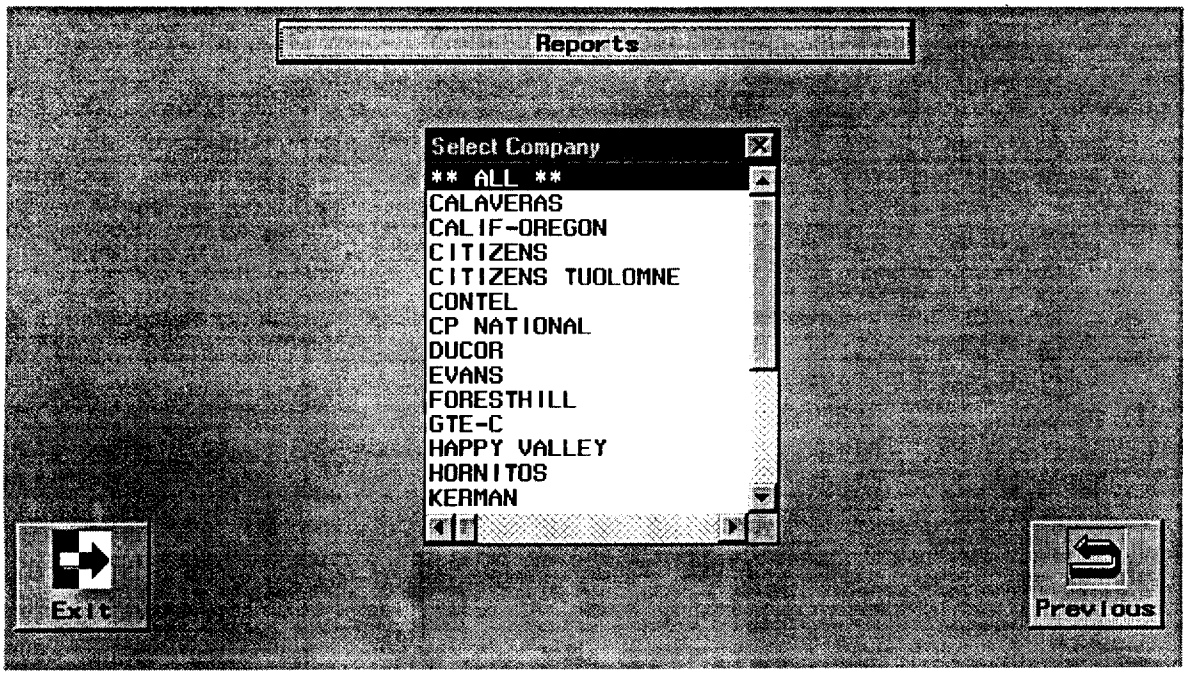

Figure 4-15 - Company Selection Screen

STEP 2. Double-click on the company you want to analyze.

Selecting ALL will use all of the companies' data in developing the reports. Selecting a single company will limit the report to data for just that company.

4.5.2 Reports Main Menu

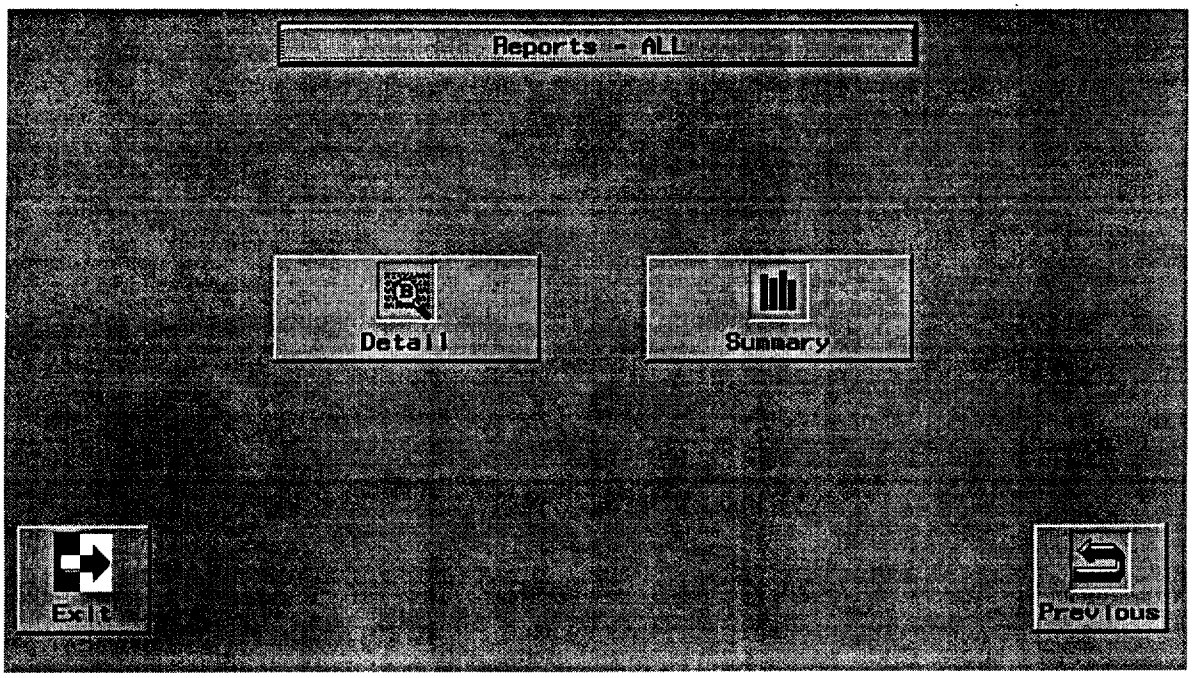

Figure 4-16 - Reports Main Menu

STEP 3. Click the Summary button.

Produces a report with only a single line of data for each item within a variable.

4.5.3 Variable Selection

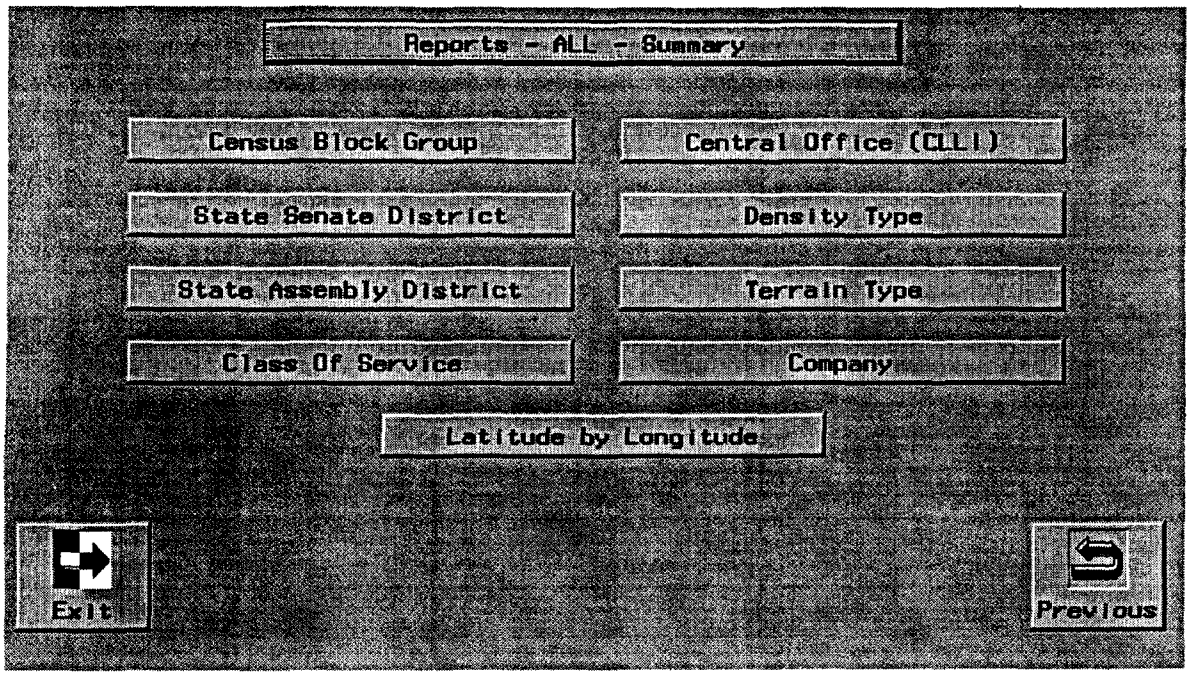

Figure 4-17 - Report Variable Selection Screen

STEP 4. **Click on the button for the desired report variable.**

4.6 Report Output

	GPC_IS	1.00		0.00	$0.00	
	MISC	1.00		0.00	$0.00	
	NREC	1.00		0.00	$0.00	
	NVS_EXP	1.00		0.00	$0.00	
	NVS_INV	1.00		0.00	$0.00	
	OCS	1.00		0.00	$0.00	
	O_MINUS	1.00		0.00	$0.00	
	PMO_DIFF	1.00		0.00	$0.00	
	REPR_MTC	1.00		0.00	$0.00	
	SALES	1.00		0.00	$0.00	
	SEC_INV	1.00		0.00	$0.00	
	SHARED	1.00		0.00	$0.00	
	TESTING	1.00		0.00	$0.00	
	WP_LIST	1.00		0.00	$0.00	
---	---		---	---	---	--
STDSVC	xxx			0.00	$0.00	$
SW/IO	SW_LT	1.00		112.88	$0.00	
	SW_MSG_F	119.22		117.88	$0.00	
	SW_SHR	8.36		8.36	$0.00	
---	---		---	---	---	--
SW/IO	xxx			239.13	$0.00	
xxx	xxx		12,861	864.56	$15.60	$

Figure 4-18 - Report Output Screen

STEP 1. From this screen, you can:

- Print the report
  1. Click the Printer Icon
  2. In the Print Box screen, click OK.

- Save the report to a file
  1. Select File from the Menu Bar
  2. Select Save As
  3. Type in a filename and location
  4. Click Save

- Press F8 to return to the CPM menus.

4.6.1 Sample Detail Report

COST PROXY MODEL: Universal Service Edition
STATEWIDE AVERAGE

STATEWIDE AVERAGE LINES : 12794983
MISSING LINES : 0

FAMILY	ELEMENT	NON-CABLE QUANTITY	CABLE LENGTH (FT)	INVESTMENT ($)	REVENUE ($/MO)	OPERATING EXPENSE ($/MO)	CAPITAL COST ($/MO)
DST	AER_CU		342	19.04	$0.00	$0.00	$0.30
	BUR_CU		1,623	153.12	$0.00	$0.00	$2.16
	COND_CU	538(FT)		23.49	$0.00	$0.00	$0.24
	DROP	1.00		51.98	$0.00	$0.00	$0.73
	POLE_CU	342(FT)		18.17	$0.00	$0.00	$0.20
	TERMINAL	1.00		53.38	$0.00	$0.00	$0.77
	UGD_CU		538	19.88	$0.00	$0.00	$0.29
DST	XXX		2,503	339.07	$0.00	$0.00	$4.69
FDR	AER_CU		214	4.70	$0.00	$0.00	$0.07
	AER_FO		839	6.28	$0.00	$0.00	$0.08
	BUR_CU		51	2.25	$0.00	$0.00	$0.03
	BUR_FO		221	3.12	$0.00	$0.00	$0.04
	COND_CU	2,655(FT)		25.24	$0.00	$0.00	$0.26
	COND_FO	3,852(FT)		8.39	$0.00	$0.00	$0.08
	COND_FO9	2,523(FT)		6.90	$0.00	$0.00	$0.07
	PAIR_GN	0.43		141.88	$0.00	$0.00	$2.45
	POLE_CU	214(FT)		3.20	$0.00	$0.00	$0.04
	POLE_FO	839(FT)		10.55	$0.00	$0.00	$0.12
	SAI	1.00		22.96	$0.00	$0.00	$0.33
	UGD_CU		2,655	39.43	$0.00	$0.00	$0.57
	UGD_FO		6,374	11.35	$0.00	$0.00	$0.14
FDR	XXX		10,355	286.27	$0.00	$0.00	$4.27
REVENU	REVENU_T	0.00		0.00	$15.60	$0.00	$0.00
STDSVC	ACCT	1.00		0.00	$0.00	$0.00	$0.00
	ADV_MKT	1.00		0.00	$0.00	$0.00	$0.00
	BILLING	1.00		0.00	$0.00	$0.22	$0.00
	COMMON	1.00		0.00	$0.00	$2.98	$0.00
	DA	1.00		0.00	$0.00	$1.02	$0.00
	EMPSUPT	1.00		0.00	$0.00	$0.09	$0.00
	ENG_MV	1.00		0.00	$0.00	$0.00	$0.00
	GPC_IS	1.00		0.00	$0.00	$0.13	$0.00
	MISC	1.00		0.00	$0.00	$0.16	$0.00
	NREC	1.00		0.00	$0.00	$0.37	$0.00
	NVS_EXP	1.00		0.00	$0.00	$0.04	$0.00
	NVS_INV	1.00		0.00	$0.00	$0.00	$0.00
	OCS	1.00		0.00	$0.00	$0.07	$0.00
	O_MINUS	1.00		0.00	$0.00	$0.12	$0.00
	PMO_DIFF	1.00		0.00	$0.00	$0.00	$0.00
	REPR_MTC	1.00		0.00	$0.00	$3.61	$0.00
	SALES	1.00		0.00	$0.00	$0.05	$0.00
	SEC_INV	1.00		0.00	$0.00	$0.00	$1.11
	SHARED	1.00		0.00	$0.00	$4.01	$0.00
	TESTING	1.00		0.00	$0.00	$0.00	$0.00
	WP_LIST	1.00		0.00	$0.00	$0.34	$0.00
STDSVC	XXX			0.00	$0.00	$13.23	$1.12
SW/IO	SW_LT	1.00		112.88	$0.00	$0.00	$1.65
	SW_MSG_F	119.22		117.88	$0.00	$0.00	$1.73
	SW_SHR	8.36		8.36	$0.00	$0.00	$0.12
SW/IO	XXX			239.13	$0.00	$0.00	$3.50
XXX	XXX		12,858	864.46	$15.60	$13.23	$13.58

SUBSIDY PER LINE: $11.20
TOTAL COMPANY SUBSIDY: $143,347,588

4.6.2 Sample Summary Report

Cost Proxy Model: Universal Service Edition
Statewide Average
DENSITY TYPE SPECIFIC DATA - ALL COMPANIES

DENSITY TYPE	CABLE LENGTH (ft)	INVESTMENT ($/line)	REVENUE ($/line/mo)	OPERATING EXPENSE ($/line/mo)	CAPITAL COST ($/line/mo)	SUBSIDY ($/line/mo)	LINES
Z1	47,557.15	$7,648.61	$16.55	$16.47	$103.24	$103.17	77,082
Z2	35,548.46	$2,763.73	$16.20	$16.26	$39.89	$39.96	268,128
Z3	24,257.52	$2,170.22	$15.98	$15.04	$31.66	$30.72	348,418
Z4	18,103.45	$1,259.70	$16.03	$14.31	$19.58	$17.85	768,422
Z5	13,385.93	$934.43	$15.90	$13.40	$14.80	$12.30	3,260,958
Z6	11,421.61	$656.61	$15.52	$12.93	$10.66	$8.07	5,820,827
Z7	8,379.08	$460.57	$15.08	$12.63	$7.61	$5.16	2,251,089

4.7 Running Sensitivity Analysis / What If Reports

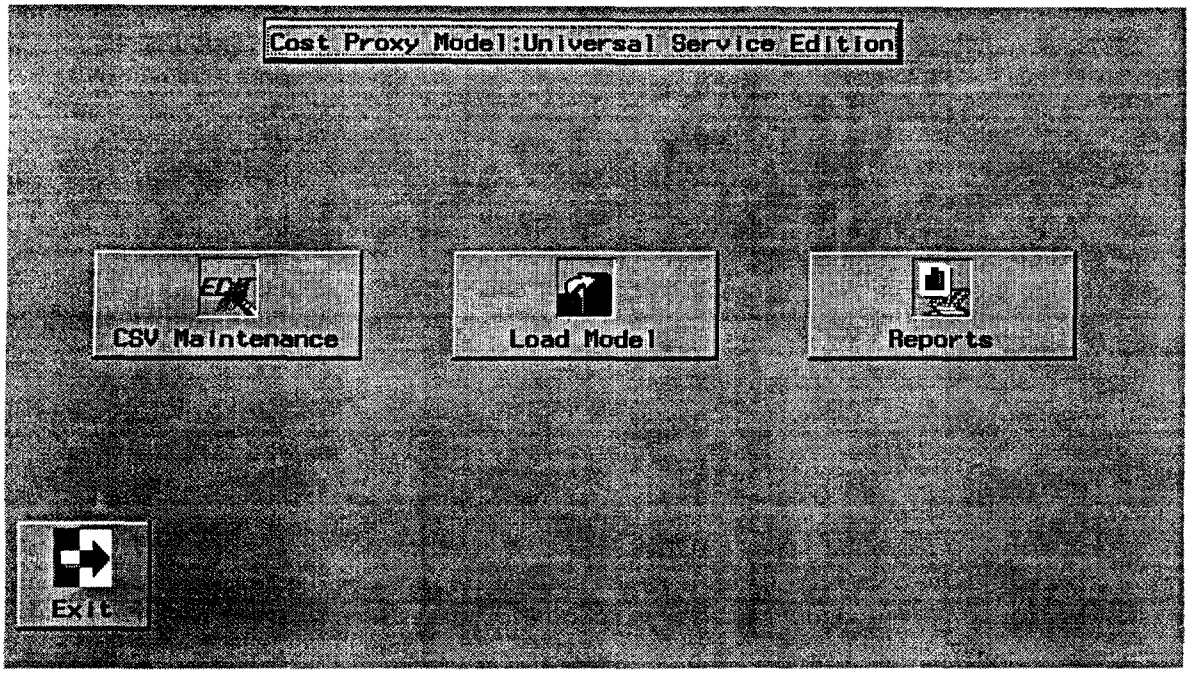

Figure 4-22 - CPM: Universal Service Edition Main Menu

- CSV Maintenance - menu selection allows the user to edit/update the CPM data
- Load Model - menu selection allows the user to Initially load the CPM System or reload based on CSV changes
- Reports - menu selection allows user to produce various types of output.

STEP 1. Click the CSV Maintenance button.

4.7.1 CSV Maintenance

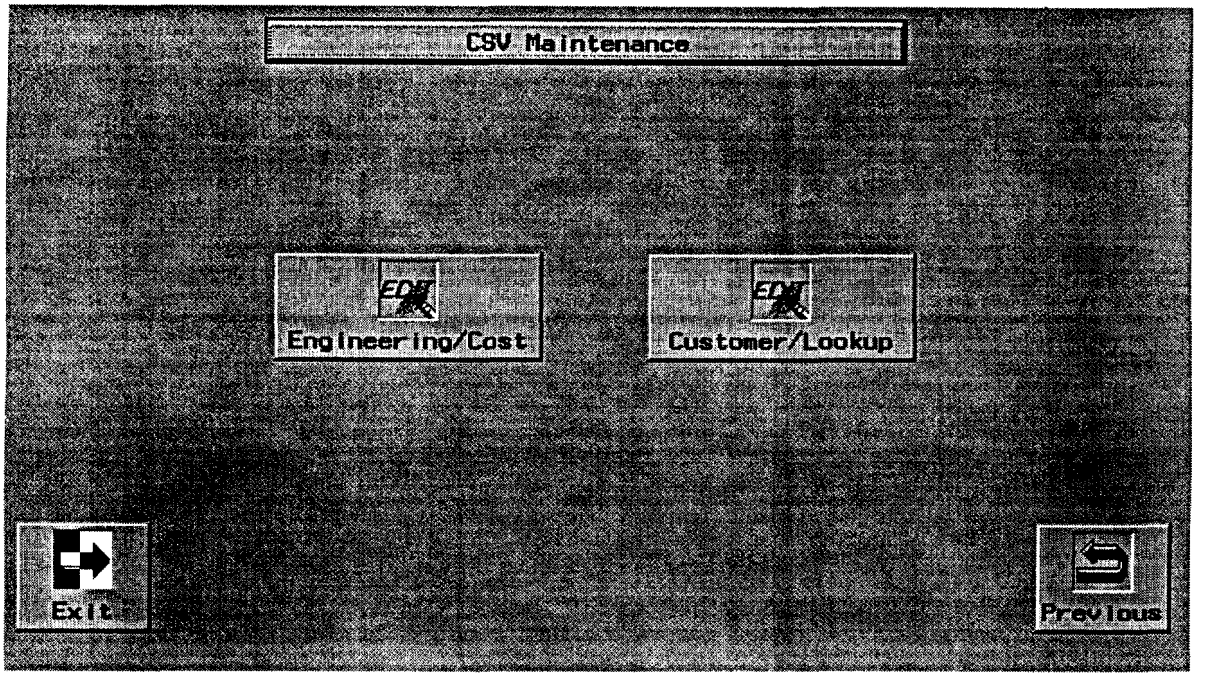

Figure 4-23 - CSV Maintenance Screen

- Engineering/Cost - menu selection will allow user to modify the data referred to in Section 3.1.3
- Customer/Lookup - menu selection will allow user to modify the data referred to in Section 3.1.2 (certain input files are on the screen)

STEP 2. **Click the appropriate button to access either the Engineering/Cost or Customer/Lookup selection screen.**

4.7.2 CSV Maintenance - either Engineering/Cost or Customer Lookup

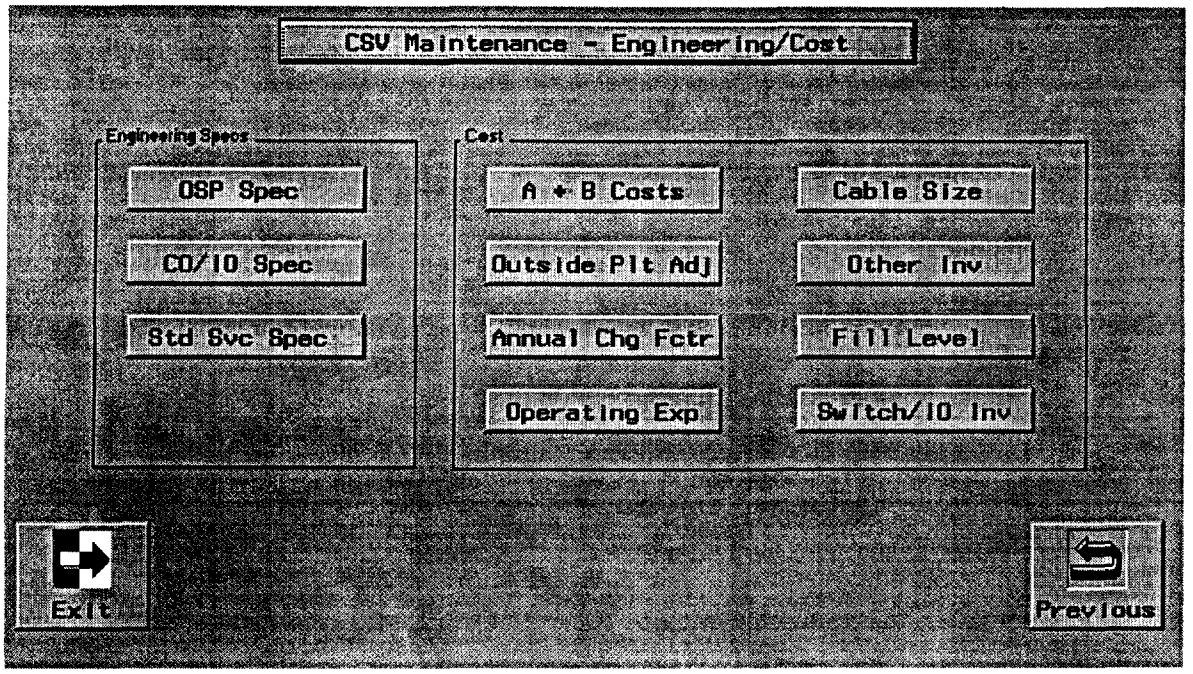

Figure 4-24 - CSV Maintenance Engineering/Cost Screen

- Description of files can be found in Section 3.1.3 or Appendix E

STEP 3. **Click the appropriate button depending upon the changes you want to make. This launches Microsoft® Excel so you can edit the CSV file.**

STEP 4. **Once the CSV has been modified, return to the Main Menu.**

4.7.3 Load CPM System

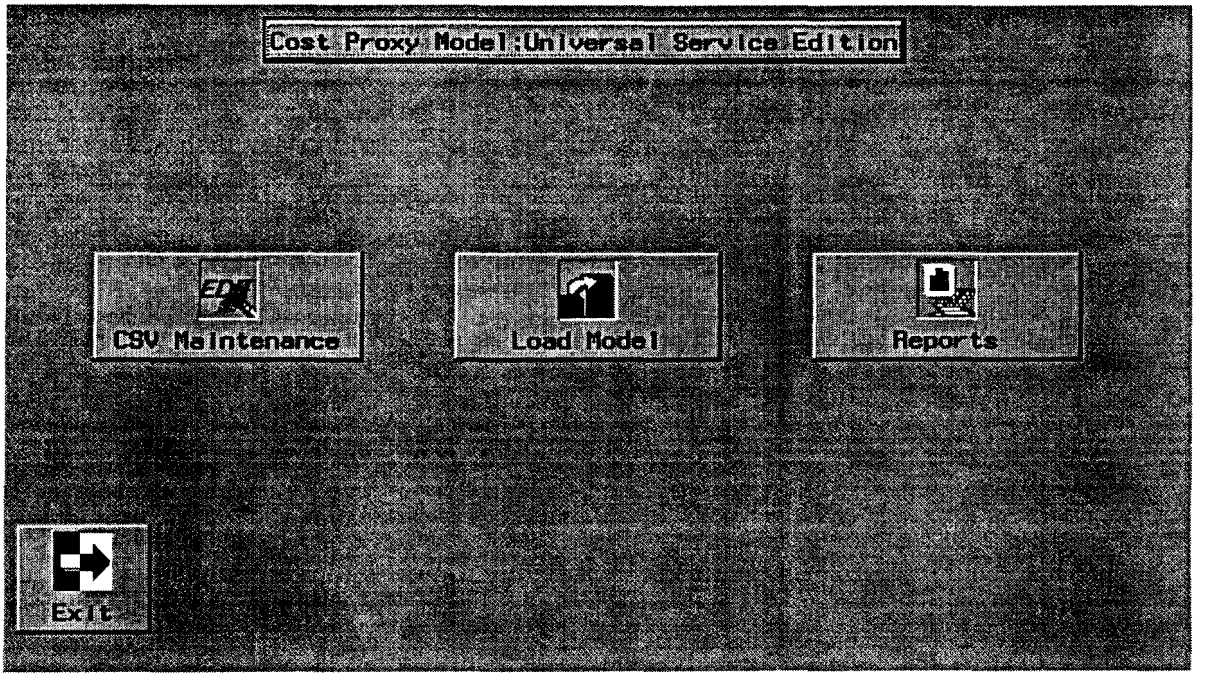

Figure 4-25 - CPM: Universal Service Edition Main Menu

- CSV Maintenance - menu selection allows the user to edit/update the CPM data
- Load Model - menu selection allows the user to Initially load the CPM System or reload based on CSV changes
- Reports - menu selection allows user to produce various types of output.

STEP 5. Click the Load Model button.

4.7.4 Load Model Screen

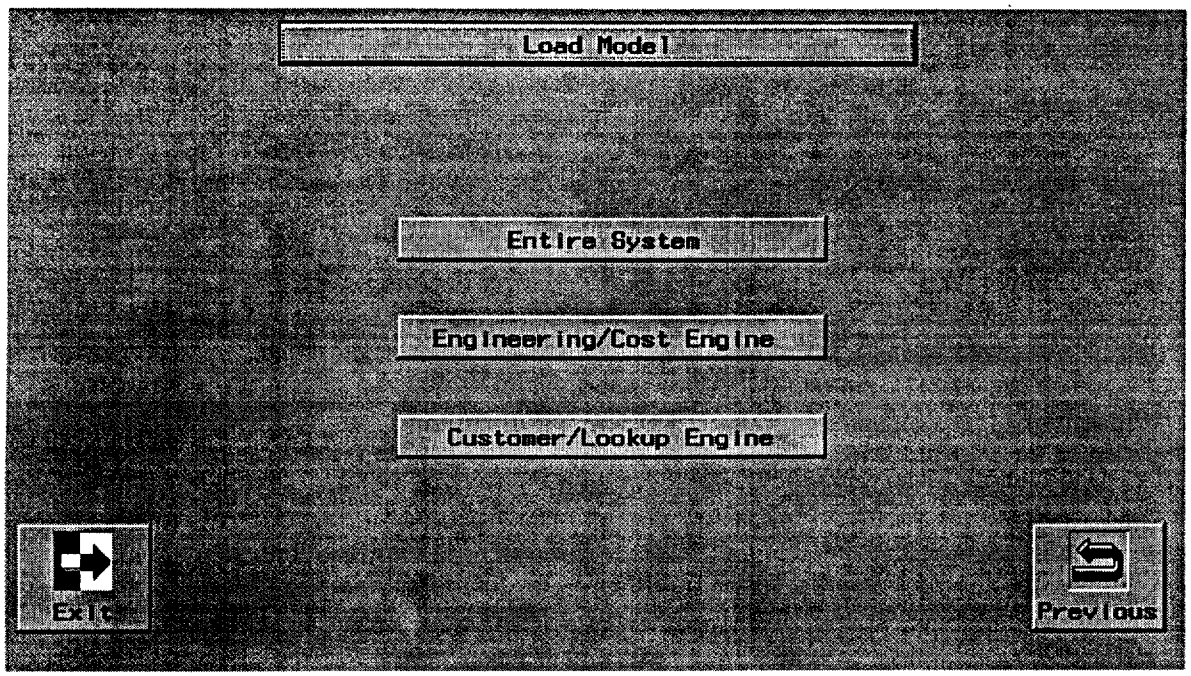

Figure 4-26 - Load Model Screen

-
- The Entire System loads/reloads the entire system.
- The Engineering/Cost Engine reloads the Engineering/Cost system tables based on changes made to the Engineering/Cost CSV files.
- The Customer/Lookup Engine reloads the Customer/Lookup system tables based on changes made to the Customer/Lookup CSV files

Loading the Entire System or Customer/Lookup Engines takes approximately 1-2 (or more) hours (based on type of machine used) and requires additional system resources.

STEP 6. Click on the appropriate button depending on which model you want to load.

- For What If Modeling it is recommended that the user focus on the Engineering/Cost Engine

STEP 7. Return to the Main Menu.

4.7.5 Run the appropriate Report

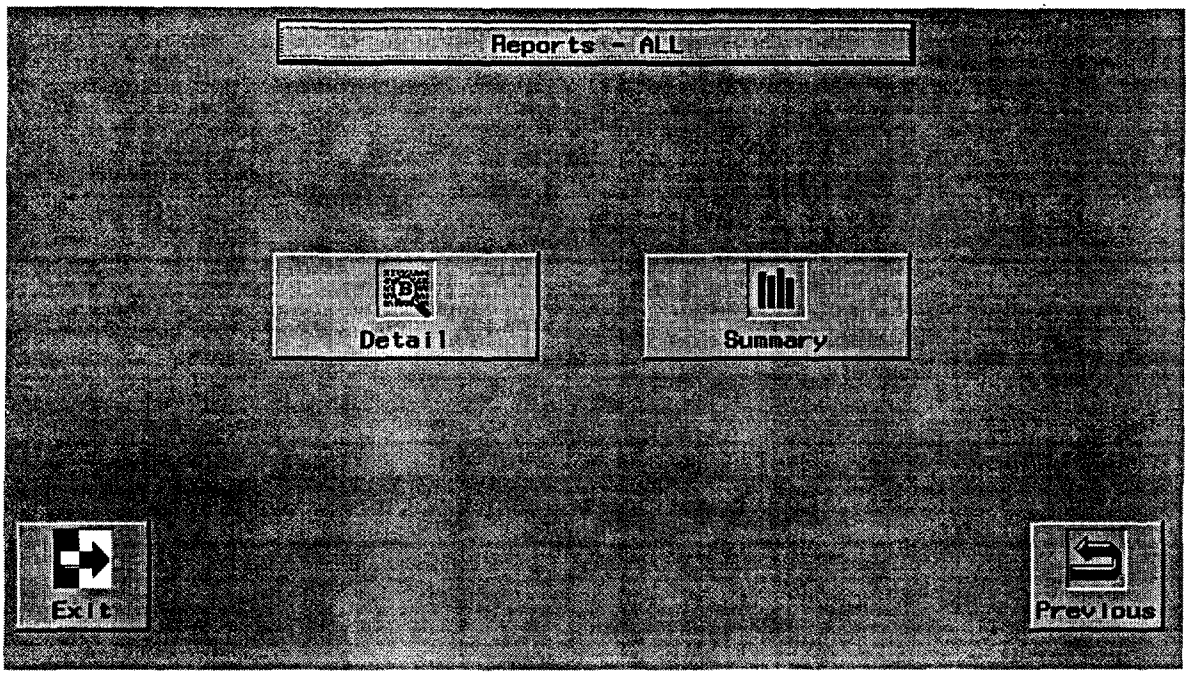

Figure 4-26 - Reports Main Menu

STEP 8. Click the appropriate button to run the desired report.

Refer to section 4.4 for Detail Reports and section 4.5 for Summary Reports.

STEP 9. Perform the above steps for each data change.

Appendix A

Detailed System Flowcharts

Engineering Cost Engine Data Flow

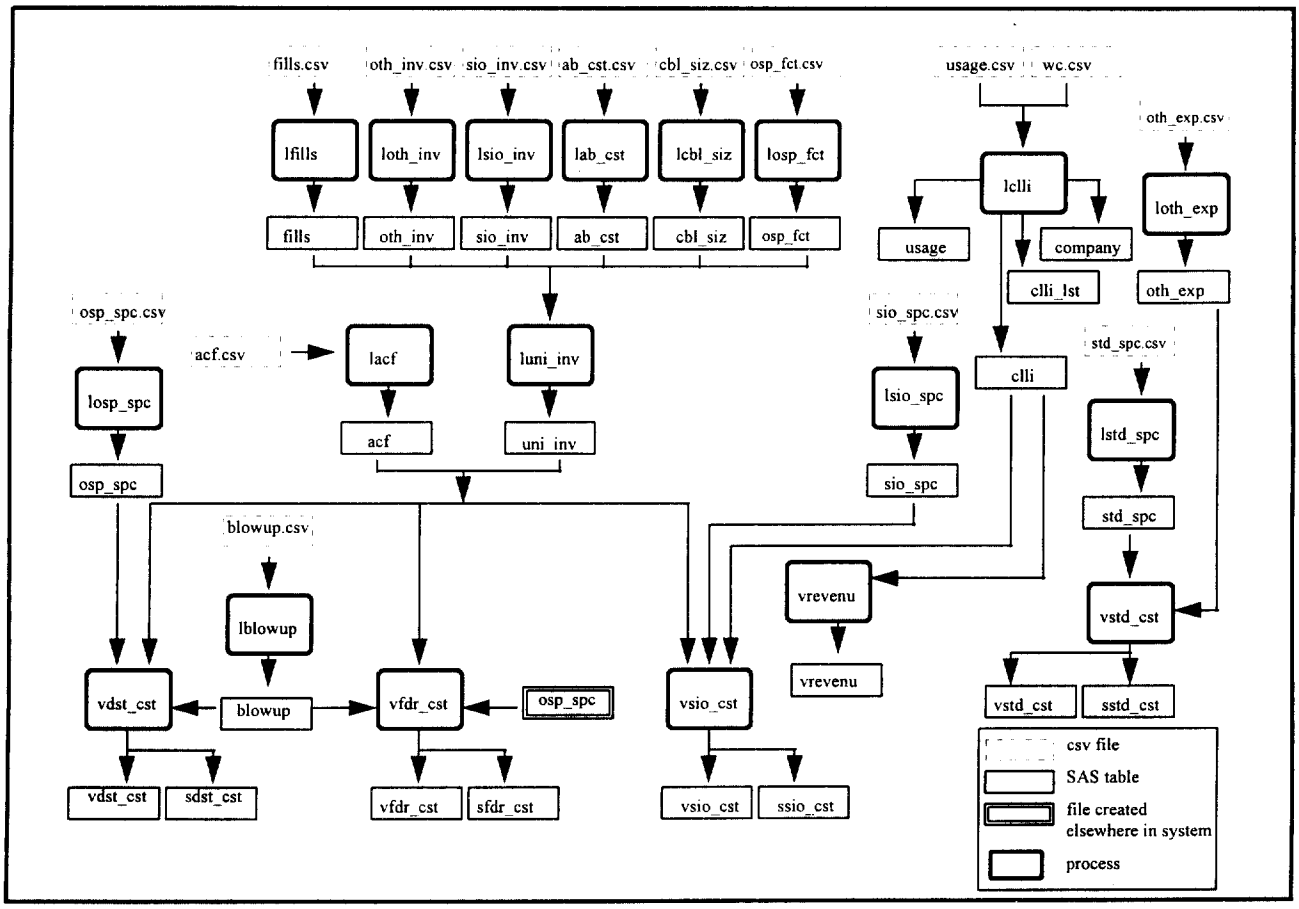

Figure A-1 - Engineering Cost Engine Data Flow

Customer Lookup Engine Data Flow

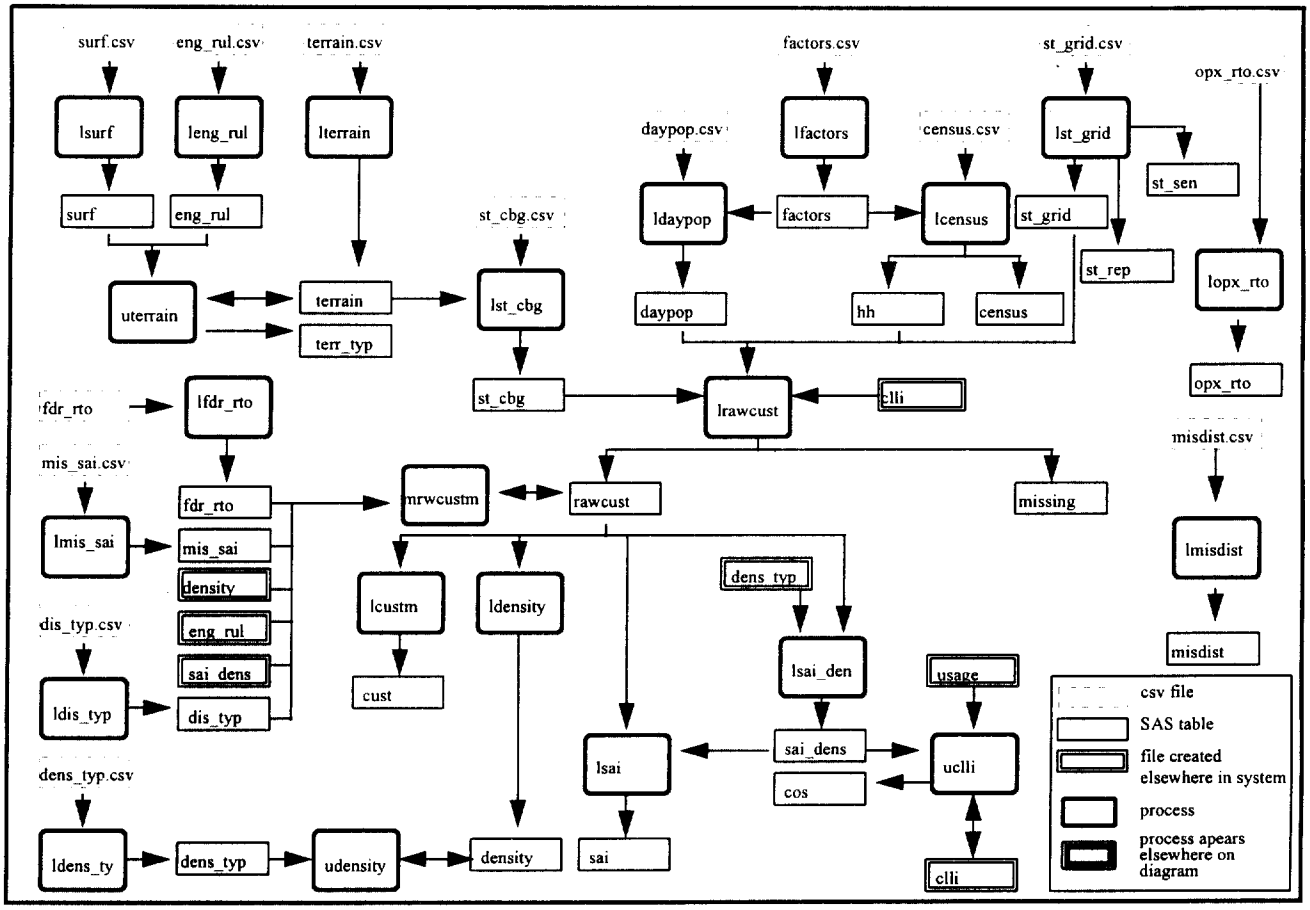

Figure A-2 - Customer Lookup Engine Data Flow

Summarization Data Flow

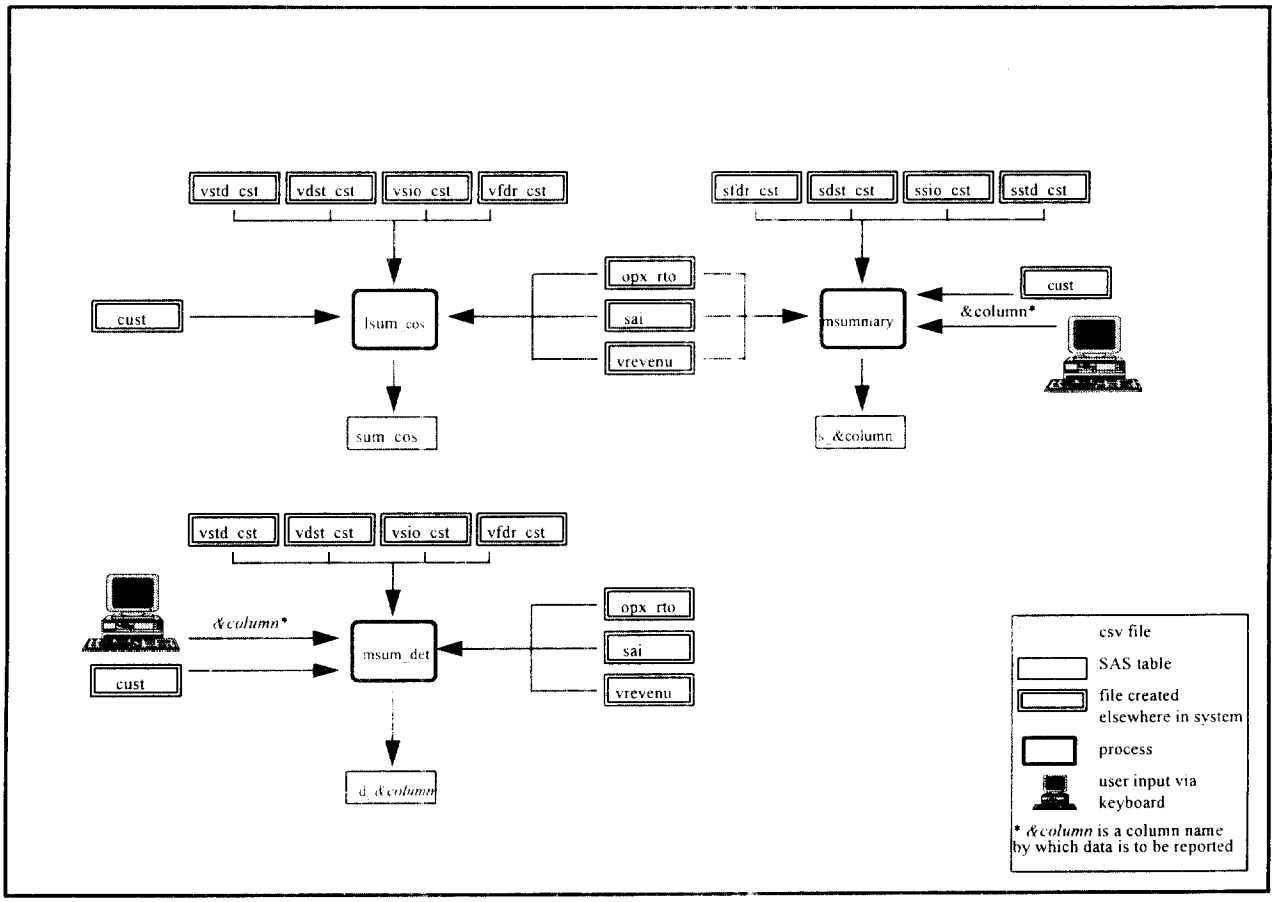

Figure A-3 -Summarization Data Flow

State Wide Average Report

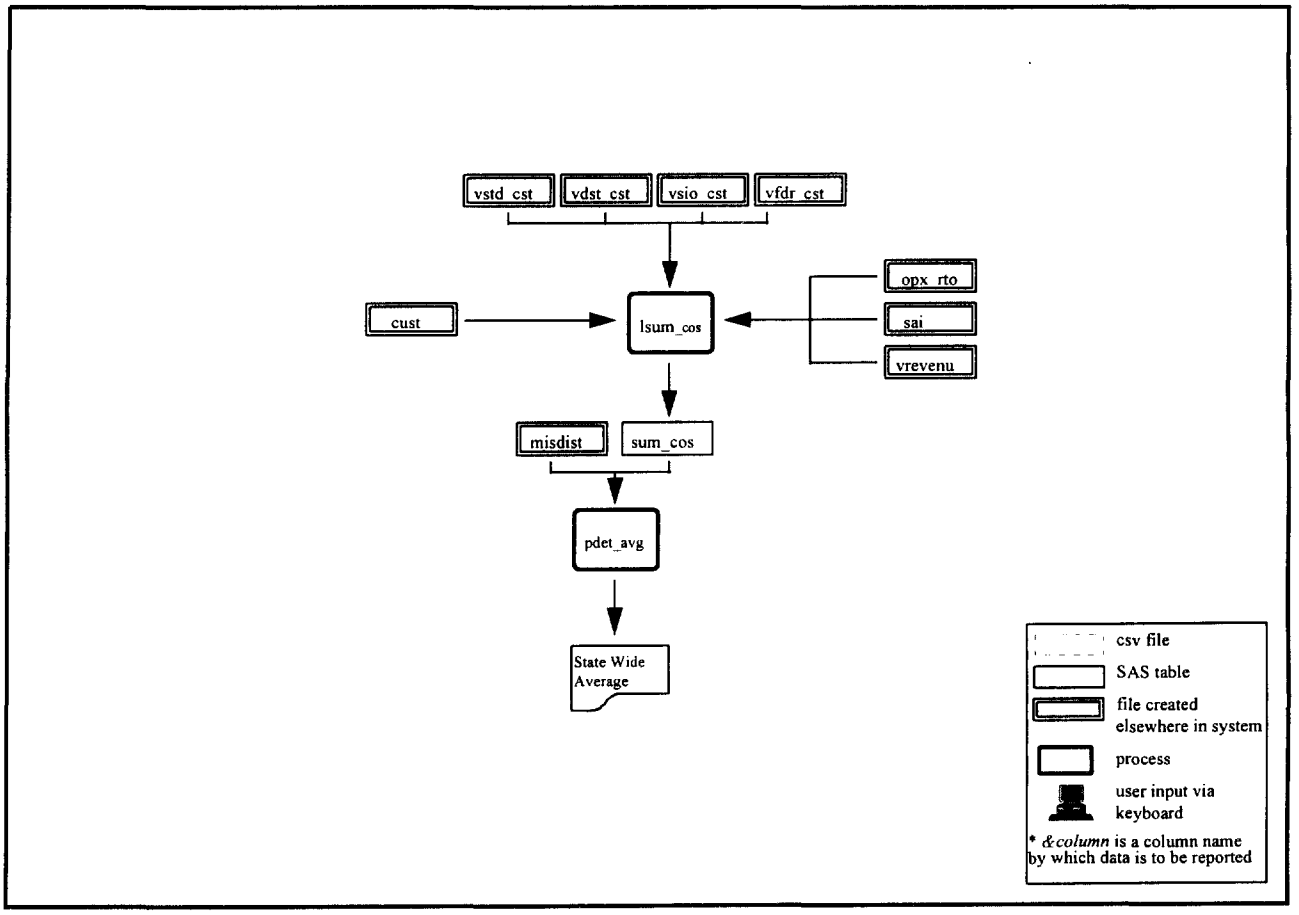

Figure A-4 - Statewide Average Report

Detail Reports Data Flow

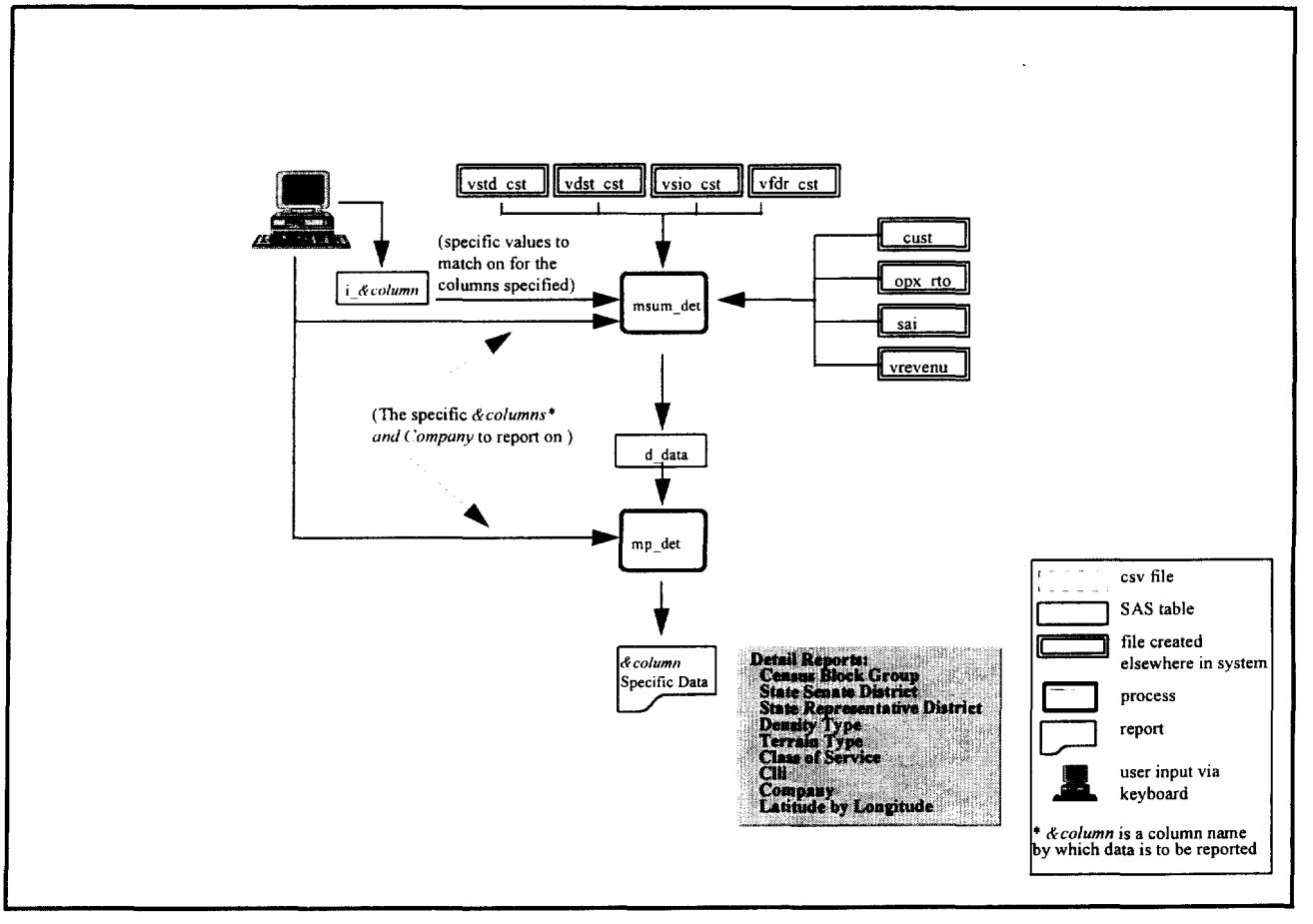

Figure A-5 - Detail Reports Data Flow

Summary Reports Data Flow

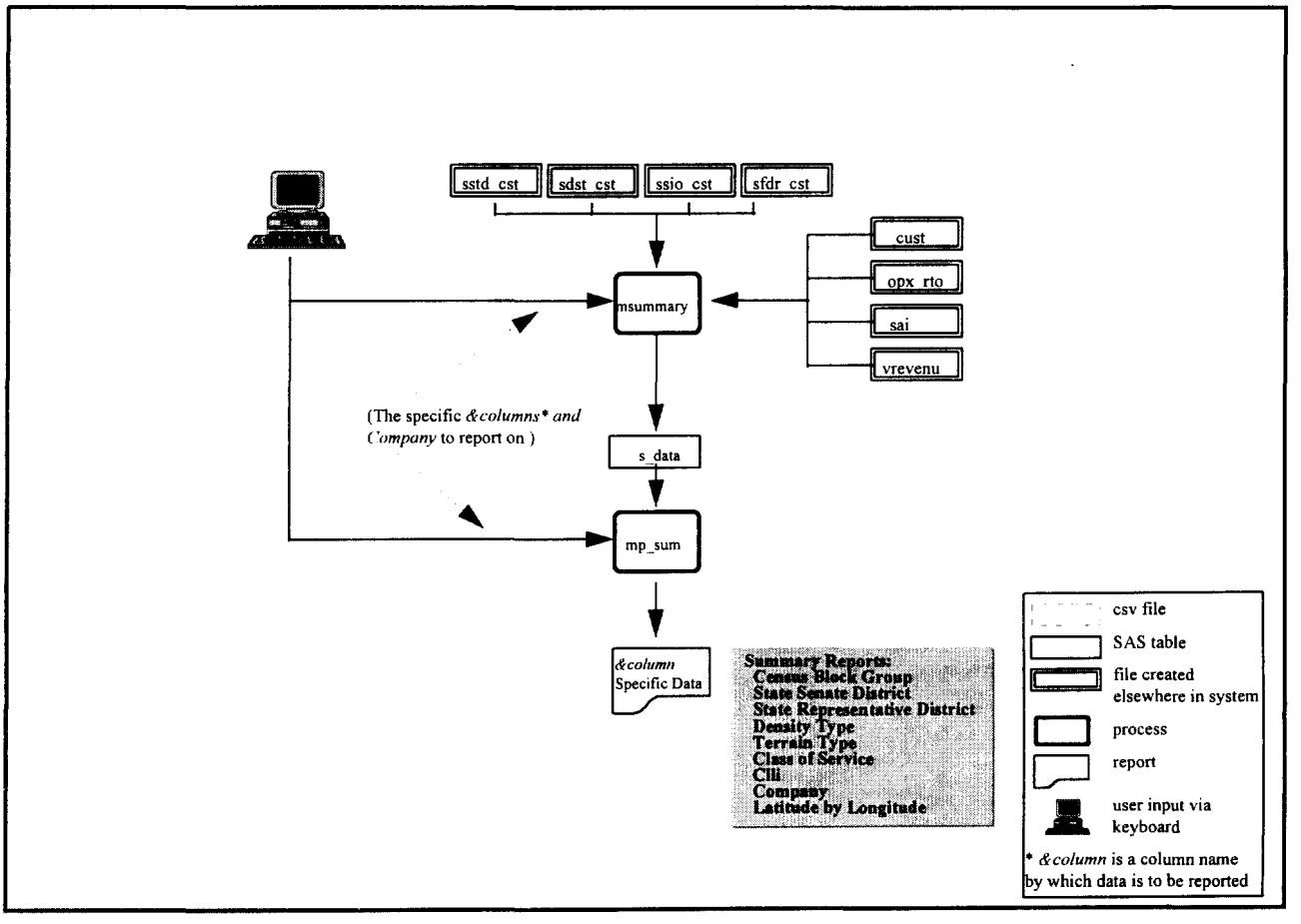

Figure A-6 - Summary Reports Data Flow

Appendix B

DATA DICTIONARY

Field	*Description*	*Type/Leng*	*Sample*
A	A cost	Num(12,4)	
A_cap	Capacity of 'A' component	Num(6)	
A_other	Other A costs	Num(9,4)	
A_uom	A cost unit of measure	Char(8)	
Act_fill	Actual fill level	Num(3,2)	
Adm_fill	Administrative fill level (objective)	Num(3,2)	
Asian	Asian	Num	
B	B cost	Num(9,4)	
B_uom	B cost unit of measure	Char(8)	
Bh_mou	Busy hour minutes of use	Num(8,5)	
Bh_msg	Busy hour messages (calls)	Num(8,5)	
Black	Black	Num	
Busline	Estimated business lines	Num	
Capc_amt	Total capital cost amount	Num(12,5)	
CBG	Census block group	Num(11)	
Cbl_siz	Cable size (# of cables)	Num(4)	
CLLI	CLLI	Char(8)	BSRNCA70
CLLine	Telephone lines per CLLI	Num	
Co_lines	Number of lines served by company	Num(12,0)	
Company	Company name	Char(20)	
COS	Class of Service	Char(5)	1FR
Count	Number of CBGs within a grid	Num	
CTC	CTC(BTN)	Num	5108239344085
Cust_typ	Customer type (R=Res, B=Bus)	Char(1)	
D_lower	Density Lower Limit	Num(8)	0
D_upper	Density Upper limit	Num(8)	5
Daypop	Daytime population value	Num	
Dens_ac	Density (All line/centroid/sqmi)	Num(7,1)	125.5
Dens_ag	Density (All line/grid/sqmi)	Num(7,1)	125.5
Dens_dsc	Density description	Char(30)	
Dens_rc	Density (Res line/centroid/sqmi)	Num(7,1)	125.5
Dens_rg	Density (Res line/grid/sqmi)	Num(7,1)	125.5
Dens_typ	Density Type	Char(2)	A
Density	Lines per square mile	Num	
Depr_amt	Depreciation amount	Num(12,5)	25.00

Depr_rat	Depreciation Rate	Num(6,4)	0.10000
Dist_dsc	Distance description	Char(25)	
Dist_typ	Distance Type	Char(6)	ACTUAL
Distance	Feeder or Distribution Distance (ft)	Num(10,4)	12000
Educate	Mean years of education	Num	
Elem_qty	Element Quantity	Num(14,5)	1.50000
Elem_uom	Cost Element UOM	Char(6)	FOOT
Element	Cost Element	Char(8)	AER_CU
Eng_dsc	Engineering rule description	Char(50)	
Eng_rul	Engineering rule code	Char(8)	
Eng_value	Engineering rule value	Num(8)	
Family	Cost Family	Char(8)	DIST
Fct_dsc	Conversion factor description	Char(50)	
Fct_rul	Conversion factor code	Char(8)	
Fct_valu	Conversion factor value	Num(8,3)	
Fctover	Conversion factor for distances over Upt04	Num(7,5)	
Fctupt01	Conversion factor for distances up to Upt01	Num(7,5)	
Fctupt02	Conversion factor for distances up to Upt02	Num(7,5)	
Fctupt03	Conversion factor for distances up to Upt03	Num(7,5)	
Fctupt04	Conversion factor for distances up to Upt04	Num(7,5)	
FDR_dist	Feeder distance for customers w/o SAI	Num(10,4)	
FDR_rto	Air to actual feeder ratio	Num(7,4)	
Female	Females	Num	
FRC	FRC	Char(6)	22C
FRC_dsc	FRC description	Char(25)	
HH	Households	Num	
HH_OO	Owner occupied dwelling units	Num	
HH_OP	One person households	Num	
HH_RO	Renter occupied dwelling units	Num	
HH_SF	Single family dwelling units	Num	
Hispan	Hispanic	Num	
ID	ID	Num	
Impact	Does surface texture impact install. costs	Char(1)	
Income	Mean household income	Num	
Invest	Capitalized Investment	Num(12,5)	25.00
L_lower	The lower limit of a range of TN lines, used to establish switching costs.	Num(11,3)	
L_upper	The upper limit of a range of TN lines, used to establish switching costs	Num(11,3)	
Lat	Latitude	Num(7,2)	50.01
Lat_c	Centroid latitude	Num	
Lat_h	High latitude	Num	
Lat_l	Low latitude	Num	
Line_tot	Total telephone lines	Num(8,2)	

Lines	Telephone lines	Num(8,2)	
Loading	Loading Rate	Num(14,5)	0.10000
Long	Longitude	Num(7,2)	24.20
Long_c	Centroid longitude	Num	
Long_h	High longitude	Num	
Long_l	Low longitude	Num	
Male	Males	Num	
Misline	Missed lines (number of lines not passed)	Num(12,0)	
Nat_am	Native American	Num	
Opex_amt	Operating Expense amount	Num(12,5)	0.32000
Opx_rto	ARMIS based operating expense conversion factor	Num(7,2)	
OSP_adj	Outside plant adjustment factor	Num(5,2)	
OSP_typ	Outside plant type	Char(2)	
Otax_amt	Other tax amount	Num(12,5)	20.00
Otax_rat	Other Tax Rate	Num(6,4)	0.20000
Other	Other race	Num	
Pct_fdr1	Number of SAI loops (0-9k), % that is FDR)	Num(5,2)	
Pct_fdr2	Number of SAI loops (9-15k), % that is FDR)	Num(5,2)	
Pct_fdr3	Number of SAI loops (15-24k), % that is FDR)	Num(5,2)	
Pct_fdr4	Number of SAI loops (+24), % that is FDR)	Num(5,2)	
Pct_mix	% mix of aerial, buried underground	Num(5,3)	
Pop_1	Persons 00-01	Num	
Pop_11	Persons 06-11	Num	
Pop_17	Persons 12-17	Num	
Pop_20	Persons 18_20	Num	
Pop_24	Persons 21-24	Num	
Pop_34	Persons 25-34	Num	
Pop_44	Persons 35-44	Num	
Pop_49	Persons 45-49	Num	
Pop_5	Persons 02-05	Num	
Pop_54	Persons 50-54	Num	
Pop_64	Persons 55-64	Num	
Pop_65	Persons 65	Num	
Pop_tot	Total persons	Num	
Raw_dist	Distance measure from raw data	Num(8)	
Rent	Mean rent	Num	
Resline	Estimated residential access lines	Num	
Respop	Residential population value	Num	
Rev_1FR	1FR revenue	num(5,2)	11.45
Rev_1MR	1MR revenue	num(5,2)	11.45
Revenu_t	Tariff USO Revenue	Num(5,2)	11.45
Rit_amt	Return, interest, FIT amount	Num(12,5)	
Rit_rat	Return, interest, FIT rate	Num(6,4)	
Rock_dep	Rock Depth	Num(4)	40

Rock_hrd	Rock Hardness	Char(6)	HARD
Rooms	Mean rooms per unit	Num	
SAI	SAI	Num(6)	1234556
SQMI	Square miles in a grid	Num	
SQMI_G		Num	
St_rep	State representive district	Num(6)	
St_sen	State senate district	Num(6)	
State	State abbreviation	Char(2)	
State1		Num	
State2		Num	
State3		Num	
State4		Num	
Surf_dsc	Surface texture description	Char(35)	
Surf_txt	Surf Texture	Char(8)	SAND
Sw_shr	Shared switch investment per line	Num(8,2)	
Sw_typ	Switch Type	Char(6)	5E
Tech_typ	Technology type	Char(3)	
Terr_typ	Terrain Type	Char(1)	A
Tot_line	Estimated total access lines	Num	
U_inv_ac	Unit investment at actual fill	Num(13,4)	
U_inv_ad	Unit investment at administrative fill	Num(13,4)	
Uni_inv	Unit investment	Num(13,4)	
Upt01	Distance up to which to apply conversion factor 1 (Fctupt01)	Num(7,3)	
Upt02	Distance up to which to apply conversion factor 2 (Fctupt02)	Num(7,3)	
Upt03	Distance up to which to apply conversion factor 3 (Fctupt03)	Num(7,3)	
Upt04	Distance up to which to apply conversion factor 4 (Fctupt04)	Num(7,3)	
Value	Mean value	Num	
Vol_sens	Indicates whether element is driven by volume	Char(8)	
Wat_dep	Water Table Depth	Num(4)	40
White	White	Num	
Worth	Mean net worth	Num	

Appendix C

SAS® PROCEDURES

Procedure Name	*Procedure Description*
lab_cst	Load A + B costs
lacf	Load annual charge factors for capital
lblowup	Load table used to populate costs
lcbl_siz	Load OSP cable size
lcensus	Load houshold and census tables
lclli	Load Clli/Central Office and Usage tables
lcustm	Load summarized raw customer data
lday_pop	Load daytime population table
ldens_ty	Load density type
ldensity	Load density
ldis_typ	Load distance conversion factors
leng_rul	Load engineering rules
lfactors	Load conversion factors
lfdr_rto	Load FDR distance conversion factors
lfills	Load fills
lmis_sai	Load missing SAI FDR/DIST
lmisdist	Load missing distance
lopx_rto	Load operating expense ratios
losp_fct	Load OSP factor adjustments
losp_spc	Load OSP specifications
loth_exp	Load other expense unit costs
loth_inv	Load other loop unit investments
lrawcust	Load raw customer data
lsai	Load SAI
lsai_den	Load SAI density
lsio_inv	Load switch and interoffice investment
lsio_spc	Load switch and interoffice specifications
lst_cbg	Load state cbg grid table
lst_grid	Load state grid table
lstd_spc	Load standard service specifications
lsum_cos	Load summary of cost proxy data by class of service
lsurf	Load surface texture
lterrain	Load terrain
luni_inv	Load unit investment
mdet_rpt	Macro that produces a detail report based on the column_name specified (executes MSUM_DET and MP_DET)