

**1999 Commercial Buildings  
Energy Consumption Survey (CBECS)  
Public Use Files**

**Building Characteristics, Consumption,  
and Expenditures**

This document contains all the file layouts and format codes for the 1999 Commercial Buildings Energy Consumption Survey public use files. The files themselves can be downloaded in ASCII comma delimited files from:

**[http://www.eia.doe.gov/emeu/cbecs/public\\_use.html](http://www.eia.doe.gov/emeu/cbecs/public_use.html)**

The file layouts give, for each variable on a file: the variable name, a description, the position on the file and the corresponding format. To determine what each value of a variable means, find its corresponding format on the alphabetical list of the format codes found following the file layouts (ignoring the first words "VALUE" or "PICTURE" for each).

## Layout for File 1: General Building Information and Energy End Uses

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
CLIMATE7	Climate zone	43- 43	\$CLIMAT.
NFLOOR7	Number of floors	45- 47	NFLOOR.
YRCON7	Year construction was completed	49- 52	YRCON.
MONCON7	Month ready for occupancy in 1999	54- 55	\$MONCON.
GOVOWN7	Owned by government agency	57- 57	\$YESNO.
GOVTYP7	Type of government agency	59- 59	\$GOVTYP.
NOCC7	Number of establishments/organizations	61- 65	MISS5CH.
NOCCAT7	Number of estab./organizations category	67- 68	\$NOCCCAT.
OWNOCC7	Occupied by the owner	70- 70	\$YESNO.
OWNREP7	Owner employs someone in the building	72- 72	\$YESNO.
MONUSE7	Months in use during calendar year 1999	74- 75	MISS2CH.
PORVAC7	Any space vacant 3 months in a row	77- 77	\$YESNO.
OPEN247	Open 24 hours per day	79- 79	\$YESNO.
OPNMF7	Normally open Monday through Friday	81- 81	\$DAYSOPN.
OPNWE7	Normally open at all on the weekend	83- 83	\$YESNO.
WKHRS7	Total weekly operating hours	85- 87	MISS3CH.
WKHRSC7	Total weekly operating hours category	89- 89	\$HRSCAT.
NWKER7	Total employees during main shift	91- 96	MISS6CH.
NWKERC7	Number of employees main shift category	98- 99	\$WORKCAT.
HT17	Energy used for main heating	101- 101	\$YESNO.
HT27	Energy used for secondary heating	103- 103	\$YESNO.
COOL7	Energy used for cooling	105- 105	\$YESNO.
WATR7	Energy used for domestic hot water	107- 107	\$YESNO.
COOK7	Energy used for cooking	109- 109	\$YESNO.
MANU7	Energy used for manufacturing	111- 111	\$YESNO.
GENR7	Energy used to generate electricity	113- 113	\$YESNO.
HEATP7	Percent heated in 1999	115- 117	MISS3CH.
HTLS507	Building heated to less than 50 degrees	119- 119	\$YESNO.
COOLP7	Percent cooled in 1999	121- 123	MISS3CH.
LTOHRP7	Percent of building lit when open	125- 127	MISS3CH.
ADJWT7	Adjusted weight	129- 136	
PAIR7	Pair member	138- 138	
STRATUM7	Variance stratum	140- 141	

## Layout for File 2: Building Activities; Special Measures of Size; and Multibuilding Facilities

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ONEACT7	One activity accts for 75% of floorspace	43- 43	\$YESNO.
ACT17	First activity given (if >1)	45- 46	\$PBAX.
ACT27	Second activity given (if >1)	48- 49	\$PBAX.
ACT37	Third activity given (if >1)	51- 52	\$PBAX.
ACT1PCT7	Percent used for first activity	54- 56	MISS3CH.
ACT2PCT7	Percent used for second activity	58- 60	MISS3CH.
ACT3PCT7	Percent used for third activity	62- 64	MISS3CH.
VACUSE7	Vacant used/intended agr/ind/res/parking	66- 66	\$YESNO.
PBAPLUS7	More specific building activity	68- 69	\$PBAPLUS.
RWSEAT7	Religious worship seating capacity	71- 76	MISS6CH.
PBSEAT7	Public assembly seating capacity	78- 83	MISS6CH.
EDSEAT7	Total seats in classrooms	85- 90	MISS6CH.
FDSEAT7	Food service seating capacity	92- 97	MISS6CH.
HCBED7	Inpatient licensed bed capacity	99- 104	MISS6CH.
NRSBED7	Skilled care licensed bed capacity	106- 111	MISS6CH.
LODGRM7	Number of guest/occupant rooms	113- 118	MISS6CH.
FACIL7	Part of a campus or complex	120- 120	\$YESNO.
FEDFAC7	Campus/complex owned by federal govt.	122- 122	\$YESNO.
FACACT7	Facility activity	124- 125	\$FACACT.
MANIND7	Facility act. manufacturing industrial	127- 127	\$YESNO.
MANFAC7	Building same owner/operator as complex	129- 129	\$YESNO.
PLANT7	Campus/complex has a central plant	131- 131	\$YESNO.
FACDST7	Central plant produces district steam	133- 133	\$YESNO.
FACDHW7	Central plant produces dist. hot water	135- 135	\$YESNO.
FACDCW7	Cent. plant produces dist. chilled water	137- 137	\$YESNO.
FACELC7	Central plant produces electricity	139- 139	\$YESNO.
BLDPLT7	Central plant located in the building	141- 141	\$YESNO.
ADJW7	Adjusted weight	143- 150	
PAIR7	Pair member	152- 152	
STRATUM7	Variance stratum	154- 155	

### Layout for File 3: Heating and Cooling Equipment and Conservation Features

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
HEATP7	Percent heated in 1999	43- 45	MISS3CH.
HTLS507	Building heated to less than 50 degrees	47- 47	\$YESNO.
FURNAC7	Furnaces that heat air used	49- 49	\$YESNO.
HTPMPH7	Heat pumps used for heating	51- 51	\$YESNO.
SLFCON7	Individual space heaters used	53- 53	\$YESNO.
STHW7	District steam or hot water piped in	55- 55	\$YESNO.
BOILER7	Boilers used	57- 57	\$YESNO.
PKGHT7	Packaged heating units used	59- 59	\$YESNO.
OTHTEQ7	Some other heating equipment used	61- 61	\$YESNO.
FURNP7	Percent heated by furnace	63- 65	MISS3CH.
HTPHP7	Percent heated by heat pump	67- 69	MISS3CH.
SLFCNP7	Percent heated by indiv. space heaters	71- 73	MISS3CH.
STHWP7	Percent heated by dist. steam/hot water	75- 77	MISS3CH.
BOILP7	Percent heated by boiler	79- 81	MISS3CH.
PKGHP7	Percent heated by packaged heating	83- 85	MISS3CH.
OTHTP7	Percent heated by other heating equip.	87- 89	MISS3CH.
MAINHT7	Main heating equipment	91- 92	\$HTEQP.
NWHTEQ7	Main heating equip. replaced since 1995	94- 94	\$YESNO.
RDHTNF7	Reduce heating during off hours	96- 96	\$YESNO.
COOLP7	Percent cooled in 1999	98- 100	MISS3CH.
RCAC7	Central a/c used	102- 102	\$YESNO.
HTPMPC7	Heat pumps used for cooling	104- 104	\$YESNO.
ACWNWL7	Individual window or wall a/c used	106- 106	\$YESNO.
CHWT7	District chilled water piped in	108- 108	\$YESNO.
CHILLR7	Central chillers used	110- 110	\$YESNO.
PKGCL7	Packaged cooling units used	112- 112	\$YESNO.
EVAPCL7	Evaporative (or swamp) coolers used	114- 114	\$YESNO.
OTCLEQ7	Some other equipment used for cooling	116- 116	\$YESNO.
RCACP7	Percent cooled by central a/c	118- 120	MISS3CH.
HTPCP7	Percent cooled by heat pump	122- 124	MISS3CH.
ACWNWP7	Percent cooled by individual room a/c	126- 128	MISS3CH.
CHWTP7	Percent cooled by district hot water	130- 132	MISS3CH.
CHILP7	Percent cooled by central chillers	134- 136	MISS3CH.
PKGCP7	Percent cooled by packaged a/c	138- 140	MISS3CH.
EVAPP7	Percent cooled by swamp coolers	142- 144	MISS3CH.
OTCLP7	Percent cooled by other cooling equipmen	146- 148	MISS3CH.
MAINCL7	Main cooling equipment	150- 151	\$CLEQP.
NWCLEQ7	Main cooling equip. replaced since 1995	153- 153	\$YESNO.
RDCLNF7	Reduce cooling during off hours	155- 155	\$YESNO.
VAV7	Variable air volume (VAV) system	157- 157	\$YESNO.

**(File 3 continued)**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
ECN7	Economizer cycle	159- 159	\$YESNO.
MAINT7	Regular preventive maintenance program	161- 161	\$YESNO.
EMCS7	Energy management and control system	163- 163	\$YESNO.
ADJWT7	Adjusted weight	165- 172	
PAIR7	Pair member	174- 174	
STRATUM7	Variance stratum	176- 177	

**Layout for File 4: Water Heating, Refrigeration, and Office Equipment;  
and Special Space Uses**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
WHTHEQ7	Type of water heating equipment	43- 43	\$WATREQP.
FDRM7	Space for commercial food preparation	45- 45	\$YESNO.
HWTRM7	Space used requiring much hot water	47- 47	\$YESNO.
MEDEQP7	Equip. for medical diagnosis/treatment	49- 49	\$YESNO.
RFGEQP7	Commercial refrigeration/freezer equip.	51- 51	\$YESNO.
RFGWI7	Walk-in refrigeration units	53- 53	\$YESNO.
RFGWIN7	Number of walk-in refrigeration units	55- 58	MISS4CH.
RFGOP7	Open refrigerated cases or cabinets	60- 60	\$YESNO.
RFGOPN7	Number open refrigerated cases/cabinets	62- 65	MISS4CH.
RFGCL7	Closed refrigerated cases or cabinets	67- 67	\$YESNO.
RFGCLN7	Number closed refrig. cases/cabinets	69- 72	MISS4CH.
PCTERM7	Computers used	74- 74	\$YESNO.
PCNUM7	Number of computers used	76- 83	MISS8CH.
PCTRMC7	Number of computers category	85- 86	\$PCCAT.
FAX7	FAX machines used	88- 88	\$YESNO.
COPIER7	Photocopiers used	90- 90	\$YESNO.
PRINTR7	Laser printers used	92- 92	\$YESNO.
COPRN7	Number of photocopiers used	94- 98	MISS5CH.
RDOFEQ7	How often PCs/office equip. turned off	100- 100	\$EQPOFF.
ADJWT7	Adjusted weight	102- 109	
PAIR7	Pair member	111- 111	
STRATUM7	Variance stratum	113- 114	

## Layout for File 5: End Uses of Major Energy Sources; Electricity Generation; and Purchasing of Electricity and Natural Gas

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
FKTYPFO7	Fuel oil type specified as fuel oil	43- 43	\$YESNO.
FKTYPDS7	Fuel oil type specified as diesel	45- 45	\$YESNO.
FKTYPKR7	Fuel oil type specified as kerosene	47- 47	\$YESNO.
ABLEGEN7	Capability to generate electricity	49- 49	\$YESNO.
ELHT17	Electricity used for main heating	51- 51	\$YESNO.
NGHT17	Natural gas used for main heating	53- 53	\$YESNO.
FKHT17	Fuel oil used for main heating	55- 55	\$YESNO.
PRHT17	Propane used for main heating	57- 57	\$YESNO.
STHT17	District steam used for main heating	59- 59	\$YESNO.
HWHT17	Dist. hot water used for main heating	61- 61	\$YESNO.
ELHT27	Electricity used for secondary heating	63- 63	\$YESNO.
NGHT27	Natural gas used for secondary heating	65- 65	\$YESNO.
FKHT27	Fuel oil used for secondary heating	67- 67	\$YESNO.
PRHT27	Propane used for secondary heating	69- 69	\$YESNO.
STHT27	Dist. steam used for secondary heating	71- 71	\$YESNO.
HWHT27	Dist. hot water for secondary heating	73- 73	\$YESNO.
ELCOOL7	Electricity used for cooling	75- 75	\$YESNO.
NGCOOL7	Natural gas used for cooling	77- 77	\$YESNO.
FKCOOL7	Fuel oil used for cooling	79- 79	\$YESNO.
PRCOOL7	Propane used for cooling	81- 81	\$YESNO.
STCOOL7	District steam used for cooling	83- 83	\$YESNO.
HWCOOL7	District hot water used for cooling	85- 85	\$YESNO.
ELWATR7	Electricity used for water heating	87- 87	\$YESNO.
NGWATR7	Natural gas used for water heating	89- 89	\$YESNO.
FKWATR7	Fuel oil used for water heating	91- 91	\$YESNO.
PRWATR7	Propane used for water heating	93- 93	\$YESNO.
STWATR7	District steam used for water heating	95- 95	\$YESNO.
HWWATR7	Dist. hot water used for water heating	97- 97	\$YESNO.
ELCOOK7	Electricity used for cooking	99- 99	\$YESNO.
NGCOOK7	Natural gas used for cooking	101- 101	\$YESNO.
FKCOOK7	Fuel oil used for cooking	103- 103	\$YESNO.
PRCOOK7	Propane used for cooking	105- 105	\$YESNO.
STCOOK7	District steam used for cooking	107- 107	\$YESNO.
HWCOOK7	District hot water used for cooking	109- 109	\$YESNO.
ELMANU7	Electricity used for manufacturing	111- 111	\$YESNO.
NGMANU7	Natural gas used for manufacturing	113- 113	\$YESNO.
FKMANU7	Fuel oil used for manufacturing	115- 115	\$YESNO.
PRMANU7	Propane used for manufacturing	117- 117	\$YESNO.

**(File 5 continued)**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
STMANU7	District steam used for manufacturing	119- 119	\$YESNO.
HWMANU7	Dist. hot water used for manufacturing	121- 121	\$YESNO.
NGGENR7	Natural gas used to generate elec.	123- 123	\$YESNO.
FKGENR7	Fuel oil used to generate electricity	125- 125	\$YESNO.
PRGENR7	Propane used to generate electricity	127- 127	\$YESNO.
GENUSE7	Use of generated electricity	129- 129	\$GENUSE.
NGOTH7	Natural gas used for some other use	131- 131	\$YESNO.
FKOTH7	Fuel oil used for some other use	133- 133	\$YESNO.
PROTH7	Propane used for some other use	135- 135	\$YESNO.
STOTH7	District steam used for some other use	137- 137	\$YESNO.
HWOTH7	Dist. hot water used for some other use	139- 139	\$YESNO.
ELLOCUT7	Electricity bought from local utility	141- 141	\$YESNO.
ELNONLU7	Elec. bought from IPP/nonlocal utility	143- 143	\$YESNO.
ELOTSRC7	Electricity bought from someone else	145- 145	\$YESNO.
ELLUPCT7	Percent of elec. from local utility	147- 149	MISS3CH.
NGLOCUT7	Natural gas bought from local utility	151- 151	\$YESNO.
NGOTSRC7	Natural gas bought from someone else	153- 153	\$YESNO.
ADJWT7	Adjusted weight	155- 162	
PAIR7	Pair member	164- 164	
STRATUM7	Variance stratum	166- 167	



## Layout for File 6: Minor Energy Sources and End Uses for Minor Energy Sources

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
CWUSED7	District chilled water used in 1999	43- 43	\$YESNO.
WOUSED7	Wood used in 1999	45- 45	\$YESNO.
COUSED7	Coal used in 1999	47- 47	\$YESNO.
SOUSED7	Solar used in 1999	49- 49	\$YESNO.
OTUSED7	Other energy source used in 1999	51- 51	\$YESNO.
WOHT17	Wood used for main heating	53- 53	\$YESNO.
COHT17	Coal used for main heating	55- 55	\$YESNO.
SOHT17	Solar used for main heating	57- 57	\$YESNO.
OTHT17	Other source used for main heating	59- 59	\$YESNO.
WOHT27	Wood used for secondary heating	61- 61	\$YESNO.
COHT27	Coal used for secondary heating	63- 63	\$YESNO.
SOHT27	Solar used for secondary heating	65- 65	\$YESNO.
OTHT27	Other source used for secondary heating	67- 67	\$YESNO.
CWCOOL7	District chilled water used for cooling	69- 69	\$YESNO.
OTCOOL7	Other energy source used for cooling	71- 71	\$YESNO.
WOWATR7	Wood used for water heating	73- 73	\$YESNO.
COWATR7	Coal used for water heating	75- 75	\$YESNO.
SOWATR7	Solar used for water heating	77- 77	\$YESNO.
OTWATR7	Other source used for water heating	79- 79	\$YESNO.
WOCOOK7	Wood used for cooking	81- 81	\$YESNO.
COCOOK7	Coal used for cooking	83- 83	\$YESNO.
SOCOOK7	Solar used for cooking	85- 85	\$YESNO.
OTCOOK7	Other source used for cooking	87- 87	\$YESNO.
WOMANU7	Wood used for manufacturing	89- 89	\$YESNO.
COMANU7	Coal used for manufacturing	91- 91	\$YESNO.
SOMANU7	Solar used for manufacturing	93- 93	\$YESNO.
OTMANU7	Other source used for manufacturing	95- 95	\$YESNO.
WOGENR7	Wood used to generate electricity	97- 97	\$YESNO.
COGENR7	Coal used to generate electricity	99- 99	\$YESNO.
SOGENR7	Solar used to generate electricity	101- 101	\$YESNO.
OTGENR7	Other source used to generate elec.	103- 103	\$YESNO.
WOOTH7	Wood used for some other use	105- 105	\$YESNO.
COOTH7	Coal used for some other use	107- 107	\$YESNO.
SOOTH7	Solar used for some other use	109- 109	\$YESNO.
OTOTH7	Other source used for some other use	111- 111	\$YESNO.
PRAMTC7	Amount of propane used in 1999	113- 113	\$PRAMT.
PRAUNT7	Units for propane amount	115- 115	\$PRUNIT.
WOAMT7	Amount of wood burned in 1999	117- 117	\$WOAMT.
WOSRC7	How wood was obtained	119- 119	\$WOSRC.

**(File 6 continued)**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
WOEXP7	Total dollars spent on wood in 1999	121- 126	MISS6CH.
WOEXPC7	Total \$\$\$ spent on wood in 1999 category	128- 128	\$WODOLS.
ADJWT7	Adjusted weight	130- 137	
PAIR7	Pair member	139- 139	
STRATUM7	Variance stratum	141- 142	

## Layout for File 7: Lighting Percents, Equipment, and Conservation Features

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
LTOHRP7	Percent of building lit when open	43- 45	MISS3CH.
LOHRPC7	Percent lit when open category	47- 47	\$LIT1CAT.
LTNHRP7	Percent of building lit during off hours	49- 51	MISS3CH.
LNHRPC7	Percent lit off hours category	53- 53	\$LIT2CAT.
RDLTNF7	Reduce lighting during off hours	55- 55	\$YESNO.
BULB7	Incandescent light bulbs used	57- 57	\$YESNO.
FLUOR7	Fluorescent lighting used	59- 59	\$YESNO.
CFLR7	Compact fluorescent bulbs used	61- 61	\$YESNO.
HID7	High intensity discharge lights used	63- 63	\$YESNO.
HALO7	Halogen bulbs used	65- 65	\$YESNO.
OTLT7	Other lighting used	67- 67	\$YESNO.
FLUORP7	Percent lit by fluorescent	69- 71	MISS3CH.
CFLRP7	Percent lit by compact fluorescent	73- 75	MISS3CH.
BULBP7	Percent lit by incandescent	77- 79	MISS3CH.
HALOP7	Percent lit by halogen	81- 83	MISS3CH.
HIDP7	Percent lit by high intensity discharge	85- 87	MISS3CH.
OTLTP7	Percent lit by other lighting	89- 91	MISS3CH.
SREF7	Specular reflectors used	93- 93	\$YESNO.
HEB7	Electronic ballasts used	95- 95	\$YESNO.
SKYLT7	Skylights/atriums designed for light	97- 97	\$YESNO.
WINTYP7	Type of windows in building	99- 99	\$WINDTYP.
TRG7	Tinted or reflective glass in windows	101- 101	\$YESNO.
ADJWT7	Adjusted weight	103- 110	
PAIR7	Pair member	112- 112	
STRATUM7	Variance stratum	114- 115	

## Layout for File 8: Imputation Flags for File 1

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ZSQFT7	Imputed square footage	43- 43	\$ZVAR.
ZSQFTC7	Imputed square footage category	45- 45	\$ZVAR.
ZNFLOOR7	Imputed number of floors	47- 47	\$ZVAR.
ZYRCON7	Imputed year construction was completed	49- 49	\$ZVAR.
ZYRCONC7	Imputed year of construction category	51- 51	\$ZVAR.
ZGOVOWN7	Imputed owned by government agency	53- 53	\$ZVAR.
ZGOVTYP7	Imputed type of government agency	55- 55	\$ZVAR.
ZNOCC7	Imputed number of estabs/organizations	57- 57	\$ZVAR.
ZNOCCAT7	Imputed number of estabs/orgs category	59- 59	\$ZVAR.
ZOWNOCC7	Imputed occupied by the owner	61- 61	\$ZVAR.
ZOWNREP7	Imputed owner employs someone in bldg	63- 63	\$ZVAR.
ZMONUSE7	Imputed months in use calendar year 1999	65- 65	\$ZVAR.
ZPORVAC7	Imputed space vacant 3 months in a row	67- 67	\$ZVAR.
ZWKHRS7	Imputed total weekly operating hours	69- 69	\$ZVAR.
ZWKHRSC7	Imputed total weekly operating hrs cat.	71- 71	\$ZVAR.
ZNWKER7	Imputed total employees main shift	73- 73	\$ZVAR.
ZNWKERC7	Imputed total employees main shift cat.	75- 75	\$ZVAR.
ZELUSED7	Imputed electricity used in 1999	77- 77	\$ZVAR.
ZNGUSED7	Imputed natural gas used in 1999	79- 79	\$ZVAR.
ZFKUSED7	Imputed fuel oil used in 1999	81- 81	\$ZVAR.
ZPRUSED7	Imputed propane used in 1999	83- 83	\$ZVAR.
ZSTUSED7	Imputed district steam used in 1999	85- 85	\$ZVAR.
ZHWUSED7	Imputed district hot water used in 1999	87- 87	\$ZVAR.
ZHT17	Imputed energy used for main heating	89- 89	\$ZVAR.
ZHT27	Imputed energy for secondary heating	91- 91	\$ZVAR.
ZCOOL7	Imputed energy used for cooling	93- 93	\$ZVAR.
ZWATR7	Imputed energy used for hot water	95- 95	\$ZVAR.
ZCOOK7	Imputed energy used for cooking	97- 97	\$ZVAR.
ZMANU7	Imputed energy used for manufacturing	99- 99	\$ZVAR.
ZGENR7	Imputed energy used to generate elec	101- 101	\$ZVAR.
ZHEATP7	Imputed percent heated in 1999	103- 103	\$ZVAR.
ZHTLS507	Imputed building heated to < 50 degrees	105- 105	\$ZVAR.
ZCOOLP7	Imputed percent cooled in 1999	107- 107	\$ZVAR.
ADJWT7	Adjusted weight	109- 116	
PAIR7	Pair member	118- 118	
STRATUM7	Variance stratum	120- 121	

## Layout for File 9: Imputation Flags for File 2

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ZRWSEAT7	Imputed religious worship seat capacity	43- 43	\$ZVAR.
ZPBSEAT7	Imputed public assembly seating capacity	45- 45	\$ZVAR.
ZEDSEAT7	Imputed total seats in classrooms	47- 47	\$ZVAR.
ZFDSEAT7	Imputed food service seating capacity	49- 49	\$ZVAR.
ZHCBED7	Imputed inpatient licensed bed capacity	51- 51	\$ZVAR.
ZNRSBED7	Imputed skilled care bed capacity	53- 53	\$ZVAR.
ZLODGRM7	Imputed number of guest/occupant rooms	55- 55	\$ZVAR.
ZFACIL7	Imputed part of a campus or complex	57- 57	\$ZVAR.
ZFEDFAC7	Imputed campus/complex federal govt	59- 59	\$ZVAR.
ZFACACT7	Imputed facility activity	61- 61	\$ZVAR.
ZMANIND7	Imputed facility manufact. industrial	63- 63	\$ZVAR.
ZMANFAC7	Imputed bldg has same owner as complex	65- 65	\$ZVAR.
ZPLANT7	Imputed campus/complex has central plant	67- 67	\$ZVAR.
ZFACDST7	Imputed cntrl plant produces dist steam	69- 69	\$ZVAR.
ZFACDHW7	Imputed cntrl plnt produces dist hot wtr	71- 71	\$ZVAR.
ZFACDCW7	Imputed cntrl plnt produces chill wtr	73- 73	\$ZVAR.
ZFACELC7	Imputed central plant produces elec	75- 75	\$ZVAR.
ZBLDPLT7	Imputed central plant located in bldg	77- 77	\$ZVAR.
ADJWT7	Adjusted weight	79- 86	
PAIR7	Pair member	88- 88	
STRATUM7	Variance stratum	90- 91	

### Layout for File 10: Imputation Flags for File 3

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ZFURNAC7	Imputed furnaces that heat air used	43- 43	\$ZVAR.
ZHTPM7	Imputed heat pumps used for heating	45- 45	\$ZVAR.
ZSLFC7	Imputed individual space heaters used	47- 47	\$ZVAR.
ZSTHW7	Imputed dist steam/hot water piped in	49- 49	\$ZVAR.
ZBOILER7	Imputed boilers used	51- 51	\$ZVAR.
ZPKGHT7	Imputed packaged heating units used	53- 53	\$ZVAR.
ZOTHTEQ7	Imputed some other heating equip used	55- 55	\$ZVAR.
ZFURNP7	Imputed pct heated by furnace	57- 57	\$ZVAR.
ZHTPHP7	Imputed pct heated by heat pump	59- 59	\$ZVAR.
ZSLFCNP7	Imputed pct heated by indiv space heater	61- 61	\$ZVAR.
ZSTHWP7	Imputed pct heated by dist steam/hot wtr	63- 63	\$ZVAR.
ZBOILP7	Imputed pct heated by boiler	65- 65	\$ZVAR.
ZPKGHP7	Imputed pct heated by packaged heating	67- 67	\$ZVAR.
ZOTHTP7	Imputed pct heated by other heat equip	69- 69	\$ZVAR.
ZMAINHT7	Imputed main heating equipment	71- 71	\$ZVAR.
ZNWHTEQ7	Imputed mn ht equip replaced since 1995	73- 73	\$ZVAR.
ZRDHTNF7	Imputed reduce heating during off hours	75- 75	\$ZVAR.
ZRCAC7	Imputed central a/c used	77- 77	\$ZVAR.
ZHTPMPC7	Imputed heat pumps used for cooling	79- 79	\$ZVAR.
ZACWNWL7	Imputed individual window/wall a/c used	81- 81	\$ZVAR.
ZCHWT7	Imputed district chilled water piped in	83- 83	\$ZVAR.
ZCHILLR7	Imputed central chillers used	85- 85	\$ZVAR.
ZPKGCL7	Imputed packaged cooling units used	87- 87	\$ZVAR.
ZEVAPCL7	Imputed swamp coolers used	89- 89	\$ZVAR.
ZOTCLEQ7	Imputed some other equip for cooling	91- 91	\$ZVAR.
ZRCACP7	Imputed pct cooled by central a/c	93- 93	\$ZVAR.
ZHTPCP7	Imputed pct cooled by heat pump	95- 95	\$ZVAR.
ZACWNWP7	Imputed pct cooled by indiv room a/c	97- 97	\$ZVAR.
ZCHWTP7	Imputed pct cooled by district hot water	99- 99	\$ZVAR.
ZCHILP7	Imputed pct cooled by central chillers	101- 101	\$ZVAR.
ZPKGCP7	Imputed pct cooled by packaged a/c	103- 103	\$ZVAR.
ZEVAPP7	Imputed pct cooled by swamp coolers	105- 105	\$ZVAR.
ZOTCLP7	Imputed pct cooled by other cool equip	107- 107	\$ZVAR.
ZMAINCL7	Imputed main cooling equipment	109- 109	\$ZVAR.
ZNWCLEQ7	Imputed mn cl equip replaced since 1995	111- 111	\$ZVAR.
ZRDCLNF7	Imputed reduce cooling during off hours	113- 113	\$ZVAR.
ZVAV7	Imputed variable air volume (VAV) syst	115- 115	\$ZVAR.
ZECN7	Imputed economizer cycle	117- 117	\$ZVAR.
ZMAINT7	Imputed preventive maintenance program	119- 119	\$ZVAR.

**(File 10 continued)**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
ZEMCS7	Imputed energy mgmt and control system	121- 121	\$ZVAR.
ADJWT7	Adjusted weight	123- 130	
PAIR7	Pair member	132- 132	
STRATUM7	Variance stratum	134- 135	

## Layout for File 11: Imputation Flags for File 4

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ZWTHTEQ7	Imputed type of water heating equipment	43- 43	\$ZVAR.
ZFDRM7	Imputed space for commercial food prep	45- 45	\$ZVAR.
ZHWTRM7	Imputed space requiring much hot water	47- 47	\$ZVAR.
ZMEDEQP7	Imputed medical diagnosis/treatment eqp	49- 49	\$ZVAR.
ZRFGEQP7	Imputed commercial refrig/freezer eqp	51- 51	\$ZVAR.
ZRFGWI7	Imputed walk-in refrigeration units	53- 53	\$ZVAR.
ZRFGWIN7	Imputed num walk-in refrigeration units	55- 55	\$ZVAR.
ZRFGOP7	Imputed open refrigerated cases/cabinets	57- 57	\$ZVAR.
ZRFGOPN7	Imputed num open refrig cases/cabinets	59- 59	\$ZVAR.
ZRFGCL7	Imputed closed refrig cases/cabinets	61- 61	\$ZVAR.
ZRFGCLN7	Imputed num closed refrig cases/cabinets	63- 63	\$ZVAR.
ZPCTERM7	Imputed computers used	65- 65	\$ZVAR.
ZPCNUM7	Imputed number of computers used	67- 67	\$ZVAR.
ZPCTRMC7	Imputed number of computers category	69- 69	\$ZVAR.
ZFAX7	Imputed FAX machines used	71- 71	\$ZVAR.
ZCOPIER7	Imputed photocopiers used	73- 73	\$ZVAR.
ZPRINTR7	Imputed laser printers used	75- 75	\$ZVAR.
ZCOPRN7	Imputed number of photocopiers used	77- 77	\$ZVAR.
ZRDOFEQ7	Imputed how often PCs/office equip off	79- 79	\$ZVAR.
ADJWT7	Adjusted weight	81- 88	
PAIR7	Pair member	90- 90	
STRATUM7	Variance stratum	92- 93	



## Layout for File 12: Imputation Flags for File 5

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ZELHT17	Imputed electricity used for main heat	43- 43	\$ZVAR.
ZNGHT17	Imputed natural gas used for main heat	45- 45	\$ZVAR.
ZFKHT17	Imputed fuel oil used for main heat	47- 47	\$ZVAR.
ZPRHT17	Imputed propane used for main heat	49- 49	\$ZVAR.
ZSTHT17	Imputed dist steam used for main heat	51- 51	\$ZVAR.
ZHWHT17	Imputed dist hot water for main heat	53- 53	\$ZVAR.
ZELHT27	Imputed elec used for secondary heat	55- 55	\$ZVAR.
ZNGHT27	Imputed nat gas used for secondary heat	57- 57	\$ZVAR.
ZFKHT27	Imputed fuel oil used for secondary heat	59- 59	\$ZVAR.
ZPRHT27	Imputed propane used for secondary heat	61- 61	\$ZVAR.
ZSTHT27	Imputed dist steam for secondary heat	63- 63	\$ZVAR.
ZHWHT27	Imputed dist hot wtr for secondary heat	65- 65	\$ZVAR.
ZELCOOL7	Imputed electricity used for cooling	67- 67	\$ZVAR.
ZNGCOOL7	Imputed natural gas used for cooling	69- 69	\$ZVAR.
ZFKCOOL7	Imputed fuel oil used for cooling	71- 71	\$ZVAR.
ZPRCOOL7	Imputed propane used for cooling	73- 73	\$ZVAR.
ZSTCOOL7	Imputed district steam used for cooling	75- 75	\$ZVAR.
ZHWCOOL7	Imputed dist hot water used for cooling	77- 77	\$ZVAR.
ZELWATR7	Imputed electricity for water heating	79- 79	\$ZVAR.
ZNGWATR7	Imputed natural gas for water heating	81- 81	\$ZVAR.
ZFKWATR7	Imputed fuel oil for water heating	83- 83	\$ZVAR.
ZPRWATR7	Imputed propane used for water heating	85- 85	\$ZVAR.
ZSTWATR7	Imputed dist steam for water heating	87- 87	\$ZVAR.
ZHWWATR7	Imputed dist hot water for water heating	89- 89	\$ZVAR.
ZELCOOK7	Imputed electricity used for cooking	91- 91	\$ZVAR.
ZNGCOOK7	Imputed natural gas used for cooking	93- 93	\$ZVAR.
ZFKCOOK7	Imputed fuel oil used for cooking	95- 95	\$ZVAR.
ZPRCOOK7	Imputed propane used for cooking	97- 97	\$ZVAR.
ZSTCOOK7	Imputed district steam used for cooking	99- 99	\$ZVAR.
ZHWCOOK7	Imputed dist hot water used for cooking	101- 101	\$ZVAR.
ZELMANU7	Imputed elec used for manufacturing	103- 103	\$ZVAR.
ZNGMANU7	Imputed nat gas used for manufacturing	105- 105	\$ZVAR.
ZFKMANU7	Imputed fuel oil for manufacturing	107- 107	\$ZVAR.
ZPRMANU7	Imputed propane used for manufacturing	109- 109	\$ZVAR.
ZSTMANU7	Imputed dist steam for manufacturing	111- 111	\$ZVAR.
ZHWMANU7	Imputed dist hot water for manufacturing	113- 113	\$ZVAR.
ZNGGENR7	Imputed nat gas to generate electricity	115- 115	\$ZVAR.
ZFKGENR7	Imputed fuel oil to generate electricity	117- 117	\$ZVAR.
ZPRGENR7	Imputed propane to generate electricity	119- 119	\$ZVAR.

**(File 12 continued)**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
ZGENUSE7	Imputed use of generated electricity	121- 121	\$ZVAR.
ADJWT7	Adjusted weight	123- 130	
PAIR7	Pair member	132- 132	
STRATUM7	Variance stratum	134- 135	

### Layout for File 13: Imputation Flags for File 6

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ZCWUSED7	Imputed dist chilled water used in 1999	43- 43	\$ZVAR.
ZWOUSED7	Imputed wood used in 1999	45- 45	\$ZVAR.
ZCOUSED7	Imputed coal used in 1999	47- 47	\$ZVAR.
ZSOUSED7	Imputed solar used in 1999	49- 49	\$ZVAR.
ZOTUSED7	Imputed other energy source used in 1999	51- 51	\$ZVAR.
ZWOHT17	Imputed wood used for main heat	53- 53	\$ZVAR.
ZCOHT17	Imputed coal used for main heat	55- 55	\$ZVAR.
ZSOHT17	Imputed solar used for main heat	57- 57	\$ZVAR.
ZOTHT17	Imputed other source for main heat	59- 59	\$ZVAR.
ZWOHT27	Imputed wood used for secondary heat	61- 61	\$ZVAR.
ZCOHT27	Imputed coal used for secondary heat	63- 63	\$ZVAR.
ZSOHT27	Imputed solar used for secondary heat	65- 65	\$ZVAR.
ZOTHT27	Imputed other source for secondary heat	67- 67	\$ZVAR.
ZCWCOOL7	Imputed dist chilled water for cooling	69- 69	\$ZVAR.
ZOTCOOL7	Imputed other source used for cooling	71- 71	\$ZVAR.
ZWOWATR7	Imputed wood used for water heating	73- 73	\$ZVAR.
ZCOWATR7	Imputed coal used for water heating	75- 75	\$ZVAR.
ZSOWATR7	Imputed solar used for water heating	77- 77	\$ZVAR.
ZOTWATR7	Imputed other source for water heating	79- 79	\$ZVAR.
ZWOCOOK7	Imputed wood used for cooking	81- 81	\$ZVAR.
ZCOCOOK7	Imputed coal used for cooking	83- 83	\$ZVAR.
ZSOCOOK7	Imputed solar used for cooking	85- 85	\$ZVAR.
ZOTCOOK7	Imputed other source used for cooking	87- 87	\$ZVAR.
ZWOMANU7	Imputed wood used for manufacturing	89- 89	\$ZVAR.
ZCOMANU7	Imputed coal used for manufacturing	91- 91	\$ZVAR.
ZSOMANU7	Imputed solar used for manufacturing	93- 93	\$ZVAR.
ZOTMANU7	Imputed other source for manufacturing	95- 95	\$ZVAR.
ZWOGENR7	Imputed wood to generate electricity	97- 97	\$ZVAR.
ZCOGENR7	Imputed coal to generate electricity	99- 99	\$ZVAR.
ZSOGENR7	Imputed solar to generate electricity	101- 101	\$ZVAR.
ZOTGENR7	Imputed other source to generate elec	103- 103	\$ZVAR.
ADJWT7	Adjusted weight	105- 112	
PAIR7	Pair member	114- 114	
STRATUM7	Variance stratum	116- 117	

## Layout for File 14: Imputation Flags for File 7

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ZLTOHRP7	Imputed percent of bldg lit when open	43- 43	\$ZVAR.
ZLOHRPC7	Imputed percent lit when open category	45- 45	\$ZVAR.
ZLTNHRP7	Imputed percent lit during off hours	47- 47	\$ZVAR.
ZLNHRPC7	Imputed percent lit off hours category	49- 49	\$ZVAR.
ZBULB7	Imputed incandescent light bulbs used	51- 51	\$ZVAR.
ZFLUOR7	Imputed fluorescent lighting used	53- 53	\$ZVAR.
ZCFCLR7	Imputed compact fluorescent bulbs used	55- 55	\$ZVAR.
ZHID7	Imputed high intensity discharge lights	57- 57	\$ZVAR.
ZHALO7	Imputed halogen bulbs used	59- 59	\$ZVAR.
ZOTLT7	Imputed other lighting used	61- 61	\$ZVAR.
ZFLUORP7	Imputed pct lit by fluorescent	63- 63	\$ZVAR.
ZCFLRP7	Imputed pct lit by compact fluorescent	65- 65	\$ZVAR.
ZBULBP7	Imputed pct lit by incandescent	67- 67	\$ZVAR.
ZHALOP7	Imputed pct lit by halogen	69- 69	\$ZVAR.
ZHIDP7	Imputed pct lit by HID	71- 71	\$ZVAR.
ZOTLTP7	Imputed percent lit by other lighting	73- 73	\$ZVAR.
ZSREF7	Imputed specular reflectors used	75- 75	\$ZVAR.
ZHEB7	Imputed electronic ballasts used	77- 77	\$ZVAR.
ZSKYLT7	Imputed skylights/atriums for light	79- 79	\$ZVAR.
ZWINTYP7	Imputed type of windows in building	81- 81	\$ZVAR.
ZTRG7	Imputed tinted/reflective glass windows	83- 83	\$ZVAR.
ADJWT7	Adjusted weight	85- 92	
PAIR7	Pair member	94- 94	
STRATUM7	Variance stratum	96- 97	

## Layout for File 15: Consumption and Expenditures for Sum of Major Fuels and Electricity

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID7	Building identifier	1- 5	
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ADJWT7	Adjusted weight	43- 50	
PAIR7	Pair member	52- 52	
STRATUM7	Variance stratum	54- 55	
HDD657	Heating Degree Day for 65 degrees	57- 62	COMMA6.
CDD657	Cooling Degree Day for 65 degrees	64- 69	COMMA6.
MFUSED7	Any major fuel used	71- 71	\$YESNO.
MFBTU7	Annual major fuel consumption (mBtu)	73- 90	COMMA18.
MFEXP7	Annual major fuel expenditures	92- 101	MISS10CH.
ELCNS7	Total kwh of electricity used in 1999	103- 117	MISS15CH.
ELBTU7	Annual electricity consumption (mBtu)	119- 136	COMMA18.
ELEXP7	Total dollars spent on elec. in 1999	138- 147	MISS10CH.
ZELCNS7	Electricity consumption imputation	149- 149	\$ZCNSEXP.
ZELEXP7	Electricity expenditures imputation	151- 151	\$ZCNSEXP.

## Layout for File 16: Consumption and Expenditures for Natural Gas, Fuel Oil, and District Heat

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
REGION7	Census region	7- 7	\$REGION.
CENDIV7	Census division	9- 9	\$CENDIV.
SQFT7	Square footage	11- 20	MISS10CH.
SQFTC7	Square footage category	22- 23	\$\$SQFTCAT.
YRCONC7	Year of construction category	25- 26	\$YEARCAT.
PBA7	Principal building activity	28- 29	\$PBA.
ELUSED7	Electricity used in 1999	31- 31	\$YESNO.
NGUSED7	Natural gas used in 1999	33- 33	\$YESNO.
FKUSED7	Fuel oil used in 1999	35- 35	\$YESNO.
PRUSED7	Propane used in 1999	37- 37	\$YESNO.
STUSED7	District steam used in 1999	39- 39	\$YESNO.
HWUSED7	District hot water used in 1999	41- 41	\$YESNO.
ADJWT7	Adjusted weight	43- 50	
PAIR7	Pair member	52- 52	
STRATUM7	Variance stratum	54- 55	
NGCNS7	Total amount of natural gas used in 1999	57- 71	MISS15CH.
NGBTU7	Annual natural gas consumption (mBtu)	73- 90	COMMA18.
NGEXP7	Total dollars spent on nat. gas in 1999	92- 101	MISS10CH.
TRNGAS7	Building uses transportation gas	103- 103	\$YESNO.
ZNGCNS7	Natural gas consumption imputation	105- 105	\$ZCNSEXP.
ZNGEXP7	Natural gas expenditures imputation	107- 107	\$ZCNSEXP.
FKCNS7	Total gallons of fuel oil used in 1999	109- 123	MISS15CH.
FKBTU7	Annual fuel oil consumption (mBtu)	125- 142	COMMA18.
FKEXP7	Total dollars spent on fuel oil in 1999	144- 153	MISS10CH.
ZFKCNS7	Fuel oil consumption imputation	155- 155	\$ZCNSEXP.
ZFKEXP7	Fuel oil expenditures imputation	157- 157	\$ZCNSEXP.
DHUSED7	District heat (steam/hot water) used	159- 159	\$YESNO.
DHHT17	District heat used for main heating	161- 161	\$YESNO.
DHHT27	District heat used for secondary heating	163- 163	\$YESNO.
DHCOOL7	District heat used for cooling	165- 165	\$YESNO.
DHWATR7	District heat used for water heating	167- 167	\$YESNO.
DHCOOK7	District heat used for main heating	169- 169	\$YESNO.
DHMANU7	District heat used for manufacturing	171- 171	\$YESNO.
DHOTH7	District heat used for some other use	173- 173	\$YESNO.
DHCNS7	Annual district heat consumption (mlbs.)	175- 189	MISS15CH.
DHBTU7	Annual district heat consumption (mBtu)	191- 208	COMMA18.
DHEXP7	Annual district heat expenditures	210- 219	MISS10CH.
ZDHCNS7	District heat consumption imputation	221- 221	\$ZCNSEXP.
ZDHEXP7	District heat expenditures imputation	223- 223	\$ZCNSEXP.

## Format Codes for All Variables

```
VALUE $CENDIV
  '1'='New England'
  '2'='Middle Atlantic'
  '3'='East North Central'
  '4'='West North Central'
  '5'='South Atlantic'
  '6'='East South Central'
  '7'='West South Central'
  '8'='Mountain'
  '9'='Pacific'
;
VALUE $CLEQP
  '01'='Packaged air conditioning units'
  '02'='Heat pumps for cooling'
  '03'='Residential type central air conditioners'
  '04'='Individual room air conditioners'
  '05'='District chilled water'
  '06'='Central chillers inside the building'
  '07'=' "Swamp" coolers or evaporative coolers'
  '08'='Some other cooling equipment'
;
VALUE $CLIMAT
  '1'='<2000 CDD,>7000 HDD'
  '2'='<2000 CDD,5500-7000 HDD'
  '3'='<2000 CDD,4000-5499 HDD'
  '4'='<2000 CDD,<4000 HDD'
  '5'='>=2000 CDD,<4000 HDD'
;
VALUE $DAYSOPN
  '1'='Open all five days (Mon-Fri)'
  '2'='Open some of these days (Mon-Fri)'
  '3'='Not open at all (Mon-Fri)'
;
VALUE $EQPOFF
  '1'='Always turned off'
  '2'='Sometimes turned off'
  '3'='Never turned off'
  '4'='COMPUTERS ARE "POWERED DOWN"'
  '7'='Not Ascertained'
  '9'='Don't Know'
;
```

```

VALUE $FACACT
  '01'='College, university, or junior college'
  '02'='Primary or secondary school (grades K-12)'
  '03'='Other type of school'
  '04'='Office complex'
  '05'='Retail complex'
  '06'='Religious campus or complex'
  '07'='Hospital or other health care complex'
  '08'='Post office'
  '09'='Other type of government complex'
  '10'='Industrial complex'
  '11'='Transportation complex (e.g. terminal, depot, airport)'
  '12'='Some other type of campus or complex'
;
VALUE $GENUSE
  '1'='Primarily for emergency back-up'
  '2'='Only during periods of high electricity demand'
  '3'='Whenever electricity was used'
;
VALUE $GOVTYP
  '1'='Federal government'
  '2'='State government'
  '3'='Local government'
;
VALUE $HTEQP
  '01'='Packaged heating units'
  '02'='Heat pumps, other than packaged units'
  '03'='Furnaces that heat air directly'
  '04'='Individual space heaters'
  '05'='District steam or hot water'
  '06'='Boilers inside the building'
  '07'='Some other heating equipment'
;
VALUE $HRSCAT
  '1'='Zero'
  '2'='1 to 39'
  '3'='40 to 48'
  '4'='49 to 60'
  '5'='61 to 84'
  '6'='85 to 167'
  '7'='Always open'
;
VALUE $LIT1CAT
  '1'='1 to 25 percent'
  '2'='26 to 50 percent'
  '3'='51 to 75 percent'
  '4'='76 to 100 percent'
  '5'='Not lit at all when open'
;
VALUE $LIT2CAT
  '1'='1 to 25 percent'
  '2'='26 to 50 percent'
  '3'='51 to 75 percent'
  '4'='76 to 100 percent'
  '5'='Not lit at all during off hours'
;

```



```

PICTURE MISS2CH
  0-96 = '09'
    97 = 'Not ascertained'
    98 = 'Refused'
    99 = 'Don''t know'
;
PICTURE MISS3CH
  0-996 = '009'
    997 = 'Not ascertained'
    998 = 'Refused'
    999 = 'Don''t know'
;
PICTURE MISS4CH
  0-9996 = '0,009'
    9997 = 'Not ascertained'
    9998 = 'Refused'
    9999 = 'Don''t know'
;
PICTURE MISS5CH
  0-99996 = '00,009'
    99997 = 'Not ascertained'
    99998 = 'Refused'
    99999 = 'Don''t know'
;
PICTURE MISS6CH
  0-999996 = '000,009'
    999997 = 'Not ascertained'
    999998 = 'Refused'
    999999 = 'Don''t know'
;
PICTURE MISS8CH
  0-99999996 = '00,000,009'
    99999997 = 'Not ascertained'
    99999998 = 'Refused'
    99999999 = 'Don''t know'
;
PICTURE MISS10CH
  0-9999999996 = '0,000,000,009'
    9999999997 = 'Not ascertained'
    9999999998 = 'Refused'
    9999999999 = 'Don''t know'
;
PICTURE MISS15CH
  0-99999999999995 = '000,000,000,000,009'
    99999999999997 = 'Not Ascertained'
    99999999999998 = 'Refused'
    99999999999999 = 'Don''t Know'
;
VALUE $MONCON
  '01'='Jan-Mar'
  '02'='Apr-June'
  '03'='July-Sept'
  '04'='Oct-Dec'
  '99'='Don''t Know'
;

```

```
PICTURE NFLOOR
  0-14 = '009'
  991 = '15 to 25' (NOEDIT)
  992 = 'Over 25' (NOEDIT)
  9997 = 'Not ascertained'
  9998 = 'Refused'
  9999 = 'Don''t know'
;
VALUE $NOCCCAT
  '01'='Zero'
  '02'='One'
  '03'='2 to 5'
  '04'='6 to 10'
  '05'='11 to 20'
  '06'='21 to 50'
  '07'='51 to 100'
  '08'='More than 100'
;
VALUE $PBA
  '01'='Vacant'
  '14'='Education'
  '24'='Enclosed mall'
  '06'='Food sales'
  '15'='Food service'
  '16'='Health care (inpatient)'
  '18'='Lodging'
  '04'='Laboratory'
  '05'='Warehouse (nonrefrig.)'
  '02'='Office/Professional'
  '08'='Health care (outpatient)'
  '13'='Public assembly'
  '07'='Public order and safety'
  '11'='Warehouse (refrig.)'
  '12'='Religious worship'
  '25'='Retail (excl. mall)'
  '26'='Service'
  '17'='Skilled nursing'
  '23'='Strip shopping mall'
  '91'='Other'
;
```

VALUE \$PBAPLUS

'01'='Administrative/Professional office'  
'02'='Auto dealership/Showroom'  
'03'='Auto service/Auto repair'  
'04'='Bank/Financial'  
'05'='Clinic/Outpatient health'  
'06'='College/University'  
'07'='Courthouse/Probation office'  
'08'='Doctor/Dentist office'  
'09'='Dormitory/Fraternity/Sorority'  
'10'='Dry cleaner/Laundromat'  
'11'='Elementary/Middle/High school'  
'12'='Enclosed mall'  
'13'='Entertainment (Theater/Sports arena/Nightclub)'  
'14'='Fire station/Police station'  
'15'='Government office'  
'16'='Grocery store/Food market'  
'17'='Hospital/Inpatient health'  
'18'='Hotel'  
'19'='Jail/Reformatory/Penitentiary'  
'20'='Laboratory'  
'21'='Library/Museum'  
'22'='Motel/Inn/Resort'  
'23'='Non-refrigerated warehouse'  
'24'='Nursing home/Assisted living'  
'25'='Other education'  
'26'='Other food sales or service'  
'27'='Other health care'  
'28'='Other lodging'  
'29'='Other office'  
'30'='Other public assembly'  
'31'='Other public order and safety'  
'32'='Other retail'  
'33'='Other service'  
'34'='Post office/Postal center'  
'35'='Preschool/Daycare'  
'36'='Recreation (Gymnasium/Bowling alley/Health club)'  
'37'='Refrigerated warehouse'  
'38'='Religious worship'  
'39'='Repair shop'  
'40'='Restaurant/Bar/Fast food/Cafeteria'  
'41'='Social meeting center/Convention center'  
'42'='Store'  
'43'='Strip shopping center'  
'44'='Vacant'  
'45'='Other'

;

```
VALUE $PBAX
'11'='Office'
'12'='Warehouse'
'13'='Food sales or service'
'14'='Retail'
'15'='Education'
'16'='Worship'
'17'='Public assembly'
'18'='Health care'
'19'='Service'
'20'='Lodging'
'21'='Public order'
'22'='Residential'
'23'='Industrial'
'24'='Agricultural'
'25'='Vacant'
'26'='Other'
```

```
;
```

```
VALUE $PCCAT
'01'='1 to 4'
'02'='5 to 9'
'03'='10 to 19'
'04'='20 to 49'
'05'='50 to 99'
'06'='100 to 249'
'07'='250 to 499'
'08'='500 to 999'
'09'='1,000 to 2,499'
'10'='2,500 to 4,999'
'11'='5,000 or more'
```

```
;
```

```
VALUE $PRAMT
'1'='Less than 100'
'2'='100 to 499'
'3'='500 to 999'
'4'='1,000 or more'
'7'='Not Ascertained'
'8'='Refused'
'9'='Don't Know'
```

```
;
```

```
VALUE $PRUNIT
'1'='Gallons'
'2'='Pounds'
'7'='Not Ascertained'
'8'='Refused'
'9'='Don't Know'
```

```
;
```

```
VALUE $REGION
'1'='Northeast'
'2'='Midwest'
'3'='South'
'4'='West'
```

```
;
```

```

VALUE $SQFTCAT
'01'='1,000 sq ft or less'
'02'='1,001 to 5,000 sq ft'
'03'='5,001 to 10,000 sq ft'
'04'='10,001 to 25,000 sq ft'
'05'='25,001 to 50,000 sq ft'
'06'='50,001 to 100,000 sq ft'
'07'='100,001 to 200,000 sq ft'
'08'='200,001 to 500,000 sq ft'
'09'='500,001 to 1 million sq ft'
'10'='Over 1 million sq ft'
;
VALUE $WATREQP
'1'='One or more centralized water heaters'
'2'='One or more "point-of-use" water heaters'
'3'='Both centralized and point-of-use water heaters'
;
VALUE $WINDTYP
'1'='Single paned windows,'
'2'='Multi-paned windows'
'3'='Both single and multi-paned windows'
'4'='No windows in building'
;
VALUE $WOAMT
'1'='Less than 1 cord'
'2'='1 to 9 cords'
'3'='10 to 20 cords'
'4'='More than 20 cords'
'7'='Not Ascertained'
'9'='Don''t Know'
;
VALUE $WODOLS
'1'='$1 to $100'
'2'='$101 to $500'
'3'='$501 to $1,000'
'4'='$1,001 to $2,000'
'5'='Over $2,000'
'7'='Not Ascertained'
'9'='Don''t Know'
;
VALUE $WORKCAT
'01'='None'
'02'='1 to 4'
'03'='5 to 9'
'04'='10 to 19'
'05'='20 to 49'
'06'='50 to 99'
'07'='100 to 249'
'08'='250 to 499'
'09'='500 to 999'
'10'='1000 to 2499'
'11'='2500 to 4999'
'12'='5000 or More'
;

```

```
VALUE $WOSRC
  '1'='Purchase all the wood'
  '2'='Obtain all wood free of charge'
  '3'='Some wood purchased and some free'
```

```
;
```

```
VALUE $YEARCAT
  '01'='Before 1920'
  '02'='1920 to 1945'
  '03'='1946 to 1959'
  '04'='1960 to 1969'
  '05'='1970 to 1979'
  '06'='1980 to 1989'
  '07'='1990 to 1995'
  '08'='1996 to 1999'
  '09'='2000'
```

```
;
```

```
VALUE $YESNO
  '1'='Yes'
  '2'='No'
  '7'='Not Ascertained'
  '8'='Refused'
  '9'='Don''t Know'
```

```
;
```

```
VALUE $YES
  '1'='Yes'
  '9'='Don''t Know'
```

```
;
```

```
PICTURE YRCON
  0-1491 = '*9999*'
  1492-1999 = '9999'
  2000-9996 = '*9999*'
  9999 = 'Don''t know'
```

```
;
```

```
VALUE $ZCNSEXP
  '0' = 'Reported'
  '3' = 'Regression estimate'
  '9' = 'Not supplied'
```

```
;
```

```
VALUE $ZVAR
  '0'='Reported'
  '1'='Imputed'
  '9'='Inapplicable'
```

```
;
```