

November, 2008

## **2003 CBECS**

### **Building Characteristics and Consumption and Expenditures for All Buildings (Including Malls)**

#### **Public Use Files**

This document contains all the file layouts and format codes for the 2003 Commercial Buildings Energy Consumption Survey (CBECS) building characteristics and consumption and expenditures public use files.

The files themselves can be downloaded in CSV (comma separated values) files from the CBECS web site: <http://www.eia.doe.gov/emeu/cbecs>. The files contain building-level records for 5,215 cases. Mall buildings comprise 395 of these cases. For the mall buildings, a limited number of variables were collected, which is the reason behind the many blank fields in the files for the mall cases. The information for malls is limited to: Census region and division; square footage; year constructed; climate zone; number of establishments; the presence of heating, cooling, or water heating in the mall and which energy source (electricity, natural gas, fuel oil, or district steam) is used to perform the end use; and consumption for the four energy sources just mentioned.

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>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
CLIMATE8	Climate zone (30-year average)	43-	43	\$CLIMAT.
FREESTN8	Freestanding building	45-	45	\$YES.
WLCNS8	Wall construction material	47-	48	\$WLCNS.
RFCNS8	Roof construction material	50-	51	\$RFCNS.
GLSSPC8	Percent exterior glass	53-	53	\$GLSPCT.
EQGLSS8	Equal glass on all sides	55-	55	\$YESNO.
SUNGLS8	Glass sides receive most sunlight	57-	57	\$GLSAREA.
BLDSHP8	Building shape	59-	60	\$SHAPE.
NFLOOR8	Number of floors	62-	64	NFLOOR.
ELEVTR8	Elevators	66-	66	\$YESNO.
NELVTR8	Number of elevators	68-	70	MISS3CH.
ESCLTR8	Escalators	72-	72	\$YESNO.
NESLTR8	Number of escalators	74-	76	MISS3CH.
YRCON8	Year of construction	78-	81	YEAR4CH.
MONCON8	Month ready for occupancy in 2003	83-	84	\$MONTH.
RENOV8	Renovations since 1980	86-	86	\$YESNO.
RENADD8	Addition or annex	88-	88	\$YESNO.
RENRDC8	Reduction of floorspace	90-	90	\$YESNO.
RENCOS8	Cosmetic improvements	92-	92	\$YESNO.
RENEXT8	Exterior replacement	94-	94	\$YESNO.
RENINT8	Interior wall re-configuration	96-	96	\$YESNO.
RENHVC8	HVAC equipment upgrade	98-	98	\$YESNO.
RENLGT8	Lighting upgrade	100-	100	\$YESNO.
RENWIN8	Window replacement	102-	102	\$YESNO.
RENPLB8	Plumbing system upgrade	104-	104	\$YESNO.
RENINS8	Insulation upgrade	106-	106	\$YESNO.
RENOTH8	Other renovation	108-	108	\$YESNO.
GOVOWN8	Government owned	110-	110	\$YESNO.
GOVTYP8	Type of government	112-	112	\$GOVTYP.
OWNER8	Owner	114-	115	\$OWNER.
OWNOCC8	Owner occupies space	117-	117	\$YESNO.
NOCC8	Number of businesses	119-	123	MISS5CH.
NOCCAT8	Number of businesses category	125-	126	\$NOCCAT.
MONUSE8	Months in use past 12 months	128-	129	MISS2CH.
PORVAC8	Space vacant 3 months in row	131-	131	\$YESNO.
OPEN248	Open 24 hours a day	133-	133	\$YESNO.
OPNMF8	Open during week	135-	135	\$DAYSOPN.
OPNWE8	Open on weekend	137-	137	\$YESNO.
WKHRS8	Total weekly operating hours	139-	141	MISS3CH.

**(File 1 continued)**

WKHRSC8	Total weekly operating hours category	143- 143	\$HRSCAT.
NWKER8	Number of employees during main shift	145- 150	MISS6CH.
NWKERC8	Number of employees main shift category	152- 153	\$WORKCAT.
HT18	Energy used for main heating	155- 155	\$YESNO.
HT28	Energy used for secondary heating	157- 157	\$YESNO.
COOL8	Energy used for cooling	159- 159	\$YESNO.
WATR8	Energy used for water heating	161- 161	\$YESNO.
COOK8	Energy used for cooking	163- 163	\$YESNO.
MANU8	Energy used for manufacturing	165- 165	\$YESNO.
GENR8	Energy used for electricity generation	167- 167	\$YESNO.
ADJWT8	Final full sample building weight	169- 176	
STRATUM8	Variance stratum	178- 180	
PAIR8	Variance unit	182- 182	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ONEACT8	One activity in building	43-	43	\$YESNO.
ACT18	First activity in building	45-	46	\$PBAX.
ACT28	Second activity in building	48-	49	\$PBAX.
ACT38	Third activity in building	51-	52	\$PBAX.
ACT1PCT8	Percent used for first activity	54-	56	MISS3CH.
ACT2PCT8	Percent used for second activity	58-	60	MISS3CH.
ACT3PCT8	Percent used for third activity	62-	64	MISS3CH.
PBAPLUS8	More specific building activity	66-	67	\$PBAPLUS.
VACANT8	Completely vacant	69-	69	\$YESNO.
RWSEAT8	Religious worship seating capacity	71-	76	MISS6CH.
PBSEAT8	Assembly seating capacity	78-	83	MISS6CH.
EDSEAT8	Number of classroom seats	85-	90	MISS6CH.
FDSEAT8	Food service seating capacity	92-	97	MISS6CH.
HCBED8	Licensed bed capacity	99-	104	HCBED.
NRSBED8	Licensed bed capacity	106-	111	MISS6CH.
LODGRM8	Number of guest rooms	113-	118	MISS6CH.
FACIL8	On a multibuilding complex	120-	120	\$YESNO.
FEDFAC8	Federal complex	122-	122	\$YESNO.
FACACT8	Type of multibuilding complex	124-	125	\$FACACT.
MANIND8	Manufacturing industrial complex	127-	127	\$YESNO.
PLANT8	Central physical plant on complex	129-	129	\$YESNO.
FACDST8	Plant produces district steam	131-	131	\$YESNO.
FACDHW8	Plant produces district hot water	133-	133	\$YESNO.
FACDCW8	Plant produces district chilled water	135-	135	\$YESNO.
FACELC8	Plant produces electricity	137-	137	\$YESNO.
BLDPLT8	Central plant in building	139-	139	\$YESNO.
ADJWT8	Final full sample building weight	141-	148	
STRATUM8	Variance stratum	150-	152	
PAIR8	Variance unit	154-	154	

### 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>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
HEATP8	Percent heated	43-	45	MISS3CH.
HTLS508	Heated to less than 50 degrees	47-	47	\$YESNO.
FURNAC8	Furnaces that heat air directly	49-	49	\$YESNO.
BOILER8	Boilers inside the building	51-	51	\$YESNO.
PKGHT8	Packaged heating units	53-	53	\$YESNO.
SLFCON8	Individual space heaters	55-	55	\$YESNO.
HTPMPH8	Heat pumps for heating	57-	57	\$YESNO.
STHW8	District steam or hot water piped in	59-	59	\$YESNO.
OTHTEQ8	Other heating equipment	61-	61	\$YESNO.
FURNP8	Percent heated by furnace	63-	65	MISS3CH.
BOILP8	Percent heated by boilers	67-	69	MISS3CH.
PKGHP8	Percent heated by packaged heating	71-	73	MISS3CH.
SLFCNP8	Percent heated by indiv space heaters	75-	77	MISS3CH.
HTPHP8	Percent heated by heat pumps	79-	81	MISS3CH.
STHWP8	Percent heated by dist steam/hot water	83-	85	MISS3CH.
OTHTP8	Percent heated by other heating equip	87-	89	MISS3CH.
MAINHT8	Main heating equipment	91-	91	\$HTEQP.
PKGHP8	Packaged unit heat pump for heating	93-	93	\$YESNO.
SPLHPS8	Split system heat pump for heating	95-	95	\$YESNO.
RMHPS8	Individual room heat pump for heating	97-	97	\$YESNO.
AIRHPT8	Air source heat pump for heating	99-	99	\$YESNO.
GRDHPT8	Ground source heat pump for heating	101-	101	\$YESNO.
WTRHPT8	Water loop heat pump for heating	103-	103	\$YESNO.
NWMNHT8	Main heating replaced since 1990	105-	105	\$YESNO.
RDHTNF8	Heating reduced during 24 hour period	107-	107	\$YESNO.
HWRDHT8	How reduce heating	109-	109	\$HOWRDC.
COOLP8	Percent cooled	111-	113	MISS3CH.
PKGCL8	Packaged air conditioning units	115-	115	\$YESNO.
RCAC8	Residential-type central A/C	117-	117	\$YESNO.
ACWNWL8	Individual room air conditioners	119-	119	\$YESNO.
HTPMP8	Heat pumps for cooling	121-	121	\$YESNO.
CHWT8	District chilled water piped in	123-	123	\$YESNO.
CHILLR8	Central chillers inside the building	125-	125	\$YESNO.
EVAPCL8	Evaporative or swamp coolers	127-	127	\$YESNO.
OTCLEQ8	Other cooling equipment	129-	129	\$YESNO.
PKGCP8	Percent cooled by packaged A/C	131-	133	MISS3CH.
RCACP8	Percent cooled by central A/C	135-	137	MISS3CH.
ACWNWP8	Percent cooled by individual room A/C	139-	141	MISS3CH.
HTPCP8	Percent cooled by heat pumps	143-	145	MISS3CH.

(File 3 continued)

CHWTP8	Percent cooled by district chilled water	147- 149	MISS3CH.
CHILP8	Percent cooled by central chillers	151- 153	MISS3CH.
EVAPP8	Percent cooled by swamp coolers	155- 157	MISS3CH.
OTCLP8	Percent cooled by other cooling equip	159- 161	MISS3CH.
MAINCL8	Main cooling equipment	163- 164	\$CLEQP.
PKGCP8	Packaged unit heat pump for cooling	166- 166	\$YESNO.
SPLCP8	Split system heat pump for cooling	168- 168	\$YESNO.
RMCP8	Individual room heat pump for cooling	170- 170	\$YESNO.
AIRCPT8	Air source heat pump for cooling	172- 172	\$YESNO.
GRDCPT8	Ground source heat pump for cooling	174- 174	\$YESNO.
WTRCPT8	Water loop heat pump for cooling	176- 176	\$YESNO.
NWMNCL8	Main cooling replaced since 1990	178- 178	\$YESNO.
RDCLNF8	Cooling reduced during 24 hour period	180- 180	\$YESNO.
HWRDCL8	How reduce cooling	182- 182	\$HOWRDC.
VAV8	VAV system	184- 184	\$YESNO.
ECN8	Economizer cycle	186- 186	\$YESNO.
MAINT8	Regular HVAC maintenance	188- 188	\$YESNO.
EMCS8	Energy management and control system	190- 190	\$YESNO.
ADJWT8	Final full sample building weight	192- 199	
STRATUM8	Variance stratum	201- 203	
PAIR8	Variance unit	205- 205	

## 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>
PUBID8	Building identifier	1- 5	
REGION8	Census region	7- 7	\$REGION.
CENDIV8	Census division	9- 9	\$CENDIV.
SQFT8	Square footage	11- 20	MISS10CH.
SQFTC8	Square footage category	22- 23	\$SQFTCX.
YRCONC8	Year of construction category	25- 26	\$YEARCAT.
PBA8	Principal building activity	28- 29	\$PBA.
ELUSED8	Electricity used	31- 31	\$YESNO.
NGUSED8	Natural gas used	33- 33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35- 35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37- 37	\$YESNO.
STUSED8	District steam used	39- 39	\$YESNO.
HWUSED8	District hot water used	41- 41	\$YESNO.
WHTTEQ8	Water heating equipment	43- 43	\$WATREQP.
INSTWT8	Instant hot water	45- 45	\$YESNO.
FDRM8	Commercial food preparation area	47- 47	\$YESNO.
SNACK8	Snack bar	49- 49	\$YESNO.
FASTFD8	Fast food or small restaurant	51- 51	\$YESNO.
CAF8	Cafeteria or large restaurant	53- 53	\$YESNO.
FDPREP8	Food preparation area	55- 55	\$YESNO.
KITCHN8	Small kitchen area	57- 57	\$YESNO.
OTFDRM8	Other food prep area	59- 59	\$YESNO.
HWTRM8	Large amounts of hot water used	61- 61	\$YESNO.
LAUNDR8	Laundry onsite	63- 63	\$LAUND.
MEDEQP8	Medical diagnostic equipment used	65- 65	\$YESNO.
LABEQP8	Laboratory equipment used	67- 67	\$YESNO.
MCHEQP8	Machine equipment used	69- 69	\$YESNO.
POOL8	Indoor pool	71- 71	\$YESNO.
HTPOOL8	Heated indoor pool	73- 73	\$YESNO.
PLSRC8	Energy source used to heat pool	75- 75	\$POOLSRC.
RFGEQP8	Refrigeration equipment used	77- 77	\$YESNO.
RFGWI8	Walk-in refrigeration units	79- 79	\$YESNO.
RFGOP8	Open case refrigeration units	81- 81	\$YESNO.
RFGCL8	Closed case refrigeration units	83- 83	\$YESNO.
RFGRES8	Residential-type refrigerators	85- 85	\$YESNO.
RFGVEN8	Refrigerated vending machines	87- 87	\$YESNO.
RFGWIN8	Number of walk-in refrigeration units	89- 92	MISS4CH.
RFGOPN8	Number of open refrigerated cases	94- 97	MISS4CH.
RFGRSN8	Number of residential refrigerators	99- 102	MISS4CH.
RFGCLN8	Number of closed refrigerated cases	104- 107	MISS4CH.
RFGVNN8	Number of vending machines	109- 112	MISS4CH.
PCTERM8	Computers used	114- 114	\$YESNO.
SERVER8	Dedicated servers used	116- 116	\$YESNO.
MNFRM8	Mainframe computer room	118- 118	\$YESNO.
SRVFRM8	Server farm	120- 120	\$YESNO.
TRNGRM8	Computer-based training room	122- 122	\$YESNO.
STDNRM8	Student or public computer center	124- 124	\$YESNO.
OTPCRM8	Other computer area	126- 126	\$YESNO.
PCRMP8	Computer area percent	128- 130	MISS3CH.
SRVNUM8	Number of servers	132- 139	MISS8CH.
SRVRC8	Number of servers category	141- 142	\$PCCAT.

**(File 4 continued)**

PCNUM8	Number of computers	144- 151	MISS8CH.
PCTRMC8	Number of computers category	153- 154	\$PCCAT.
FLAT8	Flat screen monitors	156- 156	\$YESNO.
FLATC8	Flat screen monitors category	158- 158	\$FLAT.
PRNTRN8	Number of printers	160- 167	MISS8CH.
PRNTYP8	Type of printers	169- 169	\$PRNTR.
RGSTRN8	Number of cash registers	171- 175	MISS5CH.
COPIER8	Photocopiers	177- 177	\$YESNO.
COPRN8	Number of photocopiers	179- 183	MISS5CH.
FAX8	FAX machines	185- 185	\$YESNO.
RDOFEQ8	Equipment turned off during off hours	187- 187	\$EQPOFF.
ADJWT8	Final full sample building weight	189- 196	
STRATUM8	Variance stratum	198- 200	
PAIR8	Variance unit	202- 202	



## 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>
PUBID8	Building identifier	1- 5	
REGION8	Census region	7- 7	\$REGION.
CENDIV8	Census division	9- 9	\$CENDIV.
SQFT8	Square footage	11- 20	MISS10CH.
SQFTC8	Square footage category	22- 23	\$SQFTCX.
YRCONC8	Year of construction category	25- 26	\$YEARCAT.
PBA8	Principal building activity	28- 29	\$PBA.
ELUSED8	Electricity used	31- 31	\$YESNO.
NGUSED8	Natural gas used	33- 33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35- 35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37- 37	\$YESNO.
STUSED8	District steam used	39- 39	\$YESNO.
HWUSED8	District hot water used	41- 41	\$YESNO.
CAPGEN8	Electricity generation capability	43- 43	\$YESNO.
FKTYPE8	Specify fuel oil, diesel, or kerosene	45- 45	\$FKTYP.
ELHT18	Electricity used for main heating	47- 47	\$YESNO.
NGHT18	Natural gas used for main heating	49- 49	\$YESNO.
FKHT18	Fuel oil used for main heating	51- 51	\$YESNO.
PRHT18	Propane used for main heating	53- 53	\$YESNO.
STHT18	District steam used for main heating	55- 55	\$YESNO.
HWHT18	District hot water used for main heating	57- 57	\$YESNO.
ELHT28	Electricity used for secondary heating	59- 59	\$YESNO.
NGHT28	Natural gas used for secondary heating	61- 61	\$YESNO.
FKHT28	Fuel oil used for secondary heating	63- 63	\$YESNO.
PRHT28	Propane used for secondary heating	65- 65	\$YESNO.
STHT28	Dist steam used for secondary heating	67- 67	\$YESNO.
HWHT28	Dist hot water for secondary heating	69- 69	\$YESNO.
ELCOOL8	Electricity used for cooling	71- 71	\$YESNO.
NGCOOL8	Natural gas used for cooling	73- 73	\$YESNO.
FKCOOL8	Fuel oil used for cooling	75- 75	\$YESNO.
PRCOOL8	Propane used for cooling	77- 77	\$YESNO.
STCOOL8	District steam used for cooling	79- 79	\$YESNO.
HWCOOL8	District hot water used for cooling	81- 81	\$YESNO.
ELWATR8	Electricity used for water heating	83- 83	\$YESNO.
NGWATR8	Natural gas used for water heating	85- 85	\$YESNO.
FKWATR8	Fuel oil used for water heating	87- 87	\$YESNO.
PRWATR8	Propane used for water heating	89- 89	\$YESNO.
STWATR8	District steam used for water heating	91- 91	\$YESNO.
HWWATR8	Dist hot water used for water heating	93- 93	\$YESNO.
ELCOOK8	Electricity used for cooking	95- 95	\$YESNO.
NGCOOK8	Natural gas used for cooking	97- 97	\$YESNO.
FKCOOK8	Fuel oil used for cooking	99- 99	\$YESNO.
PRCOOK8	Propane used for cooking	101- 101	\$YESNO.
STCOOK8	District steam used for cooking	103- 103	\$YESNO.
HWCOOK8	District hot water used for cooking	105- 105	\$YESNO.
ELMANU8	Electricity used for manufacturing	107- 107	\$YESNO.
NGMANU8	Natural gas used for manufacturing	109- 109	\$YESNO.
FKMANU8	Fuel oil used for manufacturing	111- 111	\$YESNO.
PRMANU8	Propane used for manufacturing	113- 113	\$YESNO.
STMANU8	District steam used for manufacturing	115- 115	\$YESNO.
HWMANU8	Dist hot water used for manufacturing	117- 117	\$YESNO.

(File 5 continued)

NGGENR8	Natural gas used for elec generation	119- 119	\$YESNO.
FKGENR8	Fuel oil used for electricity generation	121- 121	\$YESNO.
PRGENR8	Propane used for electricity generation	123- 123	\$YESNO.
PHOTVL8	Photovoltaic cells used to generate elec	125- 125	\$YESNO.
FUELCL8	Fuel cells used to generate electricity	127- 127	\$YESNO.
MCROTB8	Microturbines used to generate elec	129- 129	\$YESNO.
GENUSE8	Use of generated electricity	131- 131	\$GENUSE.
COGEN8	Cogeneration system	133- 133	\$YESNO.
GRID8	Deliver electricity to grid	135- 135	\$YESNO.
NGOTH8	Natural gas used for some other use	137- 137	\$YESNO.
FKOTH8	Fuel oil used for some other use	139- 139	\$YESNO.
PROTH8	Propane used for some other use	141- 141	\$YESNO.
STOTH8	District steam used for some other use	143- 143	\$YESNO.
HWOTH8	Dist hot water used for some other use	145- 145	\$YESNO.
ELLOCUT8	Electricity from local utility	147- 147	\$YESNO.
ELNONLU8	Elec from IPP/non-local utility	149- 149	\$YESNO.
ELOTSRC8	Electricity from someone else	151- 151	\$YESNO.
ELLUPCT8	Percent of elec from local utility	153- 155	MISS3CH.
NGLOCUT8	Natural gas from local utility	157- 157	\$YESNO.
NGOTSRC8	Natural gas from non-utility or broker	159- 159	\$YESNO.
NGSRC8	How purchase natural gas	161- 161	\$NGSRC.
ADJWT8	Final full sample building weight	163- 170	
STRATUM8	Variance stratum	172- 174	
PAIR8	Variance unit	176- 176	

## 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>
PUBID8	Building identifier	1- 5	
REGION8	Census region	7- 7	\$REGION.
CENDIV8	Census division	9- 9	\$CENDIV.
SQFT8	Square footage	11- 20	MISS10CH.
SQFTC8	Square footage category	22- 23	\$SQFTCX.
YRCONC8	Year of construction category	25- 26	\$YEARCAT.
PBA8	Principal building activity	28- 29	\$PBA.
ELUSED8	Electricity used	31- 31	\$YESNO.
NGUSED8	Natural gas used	33- 33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35- 35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37- 37	\$YESNO.
STUSED8	District steam used	39- 39	\$YESNO.
HWUSED8	District hot water used	41- 41	\$YESNO.
CWUSED8	District chilled water used	43- 43	\$YESNO.
WOUSED8	Wood used	45- 45	\$YESNO.
COUSED8	Coal used	47- 47	\$YESNO.
SOUSED8	Solar used	49- 49	\$YESNO.
OTUSED8	Other energy source used	51- 51	\$YESNO.
WOHT18	Wood used for main heating	53- 53	\$YESNO.
COHT18	Coal used for main heating	55- 55	\$YESNO.
SOHT18	Solar used for main heating	57- 57	\$YESNO.
OTHT18	Other source used for main heating	59- 59	\$YESNO.
WOHT28	Wood used for secondary heating	61- 61	\$YESNO.
COHT28	Coal used for secondary heating	63- 63	\$YESNO.
SOHT28	Solar used for secondary heating	65- 65	\$YESNO.
OTHT28	Other source used for secondary heating	67- 67	\$YESNO.
CWCOOL8	District chilled water used for cooling	69- 69	\$YESNO.
OTCOOL8	Other source used for cooling	71- 71	\$YESNO.
WOWATR8	Wood used for water heating	73- 73	\$YESNO.
COWATR8	Coal used for water heating	75- 75	\$YESNO.
SOWATR8	Solar used for water heating	77- 77	\$YESNO.
OTWATR8	Other energy source for water heating	79- 79	\$YESNO.
WOCOOK8	Wood used for cooking	81- 81	\$YESNO.
COCOOK8	Coal used for cooking	83- 83	\$YESNO.
SOCOOK8	Solar used for cooking	85- 85	\$YESNO.
OTCOOK8	Other energy source used for cooking	87- 87	\$YESNO.
WOMANU8	Wood used for manufacturing	89- 89	\$YESNO.
COMANU8	Coal used for manufacturing	91- 91	\$YESNO.
SOMANU8	Solar used for manufacturing	93- 93	\$YESNO.
OTMANU8	Other energy source for manufacturing	95- 95	\$YESNO.
WOGENR8	Wood used for electricity generation	97- 97	\$YESNO.
COGENR8	Coal used for electricity generation	99- 99	\$YESNO.
SOGENR8	Solar used for electricity generation	101- 101	\$YESNO.
OTGENR8	Other energy source for elec generation	103- 103	\$YESNO.
WOOTH8	Wood used for some other use	105- 105	\$YESNO.
COOTH8	Coal used for some other use	107- 107	\$YESNO.
SOOTH8	Solar used for some other use	109- 109	\$YESNO.
OTOTH8	Other energy source for some other use	111- 111	\$YESNO.
PRAMTC8	Bottled gas amount	113- 113	\$PRAMT.
PRUNIT8	Bottled gas units	115- 115	\$PRUNIT.
WOAMT8	Amount wood burned	117- 117	\$WOAMT.
WOSRC8	How obtain wood	119- 119	\$WOSRC.

**(File 6 continued)**

WOEXP8	Expenditures for wood	121- 126	MISS6CH.
WOEXPC8	Wood expenditures category	128- 128	\$WODOLS.
ADJWT8	Final full sample building weight	130- 137	
STRATUM8	Variance stratum	139- 141	
PAIR8	Variance unit	143- 143	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID8	Building identifier	1- 5	
REGION8	Census region	7- 7	\$REGION.
CENDIV8	Census division	9- 9	\$CENDIV.
SQFT8	Square footage	11- 20	MISS10CH.
SQFTC8	Square footage category	22- 23	\$SQFTCX.
YRCONC8	Year of construction category	25- 26	\$YEARCAT.
PBA8	Principal building activity	28- 29	\$PBA.
ELUSED8	Electricity used	31- 31	\$YESNO.
NGUSED8	Natural gas used	33- 33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35- 35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37- 37	\$YESNO.
STUSED8	District steam used	39- 39	\$YESNO.
HWUSED8	District hot water used	41- 41	\$YESNO.
LTOHRP8	Percent lit when open	43- 45	MISS3CH.
LOHRPC8	Lit when open category	47- 47	\$LIT1CAT.
LTNHRP8	Percent lit when closed	49- 51	MISS3CH.
LNHRPC8	Lit when closed category	53- 53	\$LIT2CAT.
RDLTNF8	Lighting reduced during off hours	55- 55	\$YESNO.
BULB8	Incandescent bulbs	57- 57	\$YESNO.
FLUOR8	Fluorescent bulbs	59- 59	\$YESNO.
CFLR8	Compact fluorescent bulbs	61- 61	\$YESNO.
HID8	High intensity discharge (HID) bulbs	63- 63	\$YESNO.
HALO8	Halogen bulbs	65- 65	\$YESNO.
OTLT8	Other type of bulbs	67- 67	\$YESNO.
FLUORP8	Percent lit by fluorescent	69- 71	MISS3CH.
CFLRP8	Percent lit by compact fluorescent	73- 75	MISS3CH.
BULBP8	Percent lit by incandescent	77- 79	MISS3CH.
HALOP8	Percent lit by halogen	81- 83	MISS3CH.
HIDP8	Percent lit by HID	85- 87	MISS3CH.
OTLTP8	Percent lit by other lighting	89- 91	MISS3CH.
SREF8	Specular reflectors	93- 93	\$YESNO.
HEB8	Electronic ballasts	95- 95	\$YESNO.
EMCSLT8	EMCS controls lighting	97- 97	\$YESNO.
WINTYP8	Window glass type	99- 99	\$WINDTYP.
TINT8	Tinted window glass	101- 101	\$YESNO.
REFL8	Reflective window glass	103- 103	\$YESNO.
AWN8	External overhangs or awnings	105- 105	\$YESNO.
SKYLT8	Skylights/atriums designed for lighting	107- 107	\$YESNO.
AUTOLT8	Auto controls or sensors on lighting	109- 109	\$YESNO.
DAYLTP8	Percent daylight	111- 113	MISS3CH.
ADJWT8	Final full sample building weight	115- 122	
STRATUM8	Variance stratum	124- 126	
PAIR8	Variance unit	128- 128	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ZSQFT8	Imputed square footage	43-	43	\$ZVAR.
ZSQFTC8	Imputed square footage category	45-	45	\$ZVAR.
ZYRCONC8	Imputed year of construction category	47-	47	\$ZVAR.
ZWLCNS8	Imputed wall construction material	49-	49	\$ZVAR.
ZRFCNS8	Imputed roof construction material	51-	51	\$ZVAR.
ZGLSSPC8	Imputed percent exterior glass	53-	53	\$ZVAR.
ZEQGLSS8	Imputed equal glass on all sides	55-	55	\$ZVAR.
ZSUNGLS8	Imputed glass sides most sunlight	57-	57	\$ZVAR.
ZBLDSHP8	Imputed building shape	59-	59	\$ZVAR.
ZNFLOOR8	Imputed number of floors	61-	61	\$ZVAR.
ZELEVTR8	Imputed elevators	63-	63	\$ZVAR.
ZESCLTR8	Imputed escalators	65-	65	\$ZVAR.
ZNELVTR8	Imputed number of elevators	67-	67	\$ZVAR.
ZNESLTR8	Imputed number of escalators	69-	69	\$ZVAR.
ZYRCON8	Imputed year of construction	71-	71	\$ZVAR.
ZRENOV8	Imputed renovations since 1980	73-	73	\$ZVAR.
ZRENADD8	Imputed addition or annex	75-	75	\$ZVAR.
ZRENRDC8	Imputed reduction of floorspace	77-	77	\$ZVAR.
ZRENCOS8	Imputed cosmetic improvements	79-	79	\$ZVAR.
ZRENEXT8	Imputed exterior replacement	81-	81	\$ZVAR.
ZRENINT8	Imputed interior wall reconfiguration	83-	83	\$ZVAR.
ZRENHVC8	Imputed HVAC equipment upgrade	85-	85	\$ZVAR.
ZRENLGT8	Imputed lighting upgrade	87-	87	\$ZVAR.
ZRENWIN8	Imputed window replacement	89-	89	\$ZVAR.
ZRENPLB8	Imputed plumbing system upgrade	91-	91	\$ZVAR.
ZRENINS8	Imputed insulation upgrade	93-	93	\$ZVAR.
ZRENOth8	Imputed other renovation	95-	95	\$ZVAR.
ZGOVOWN8	Imputed government owned	97-	97	\$ZVAR.
ZGOVTYP8	Imputed type of government	99-	99	\$ZVAR.
ZOWNER8	Imputed type of owner	101-	101	\$ZVAR.
ZOWNOCC8	Imputed owner occupies space	103-	103	\$ZVAR.
ZNOCC8	Imputed number of businesses	105-	105	\$ZVAR.
ZNOCCAT8	Imputed number of businesses category	107-	107	\$ZVAR.
ZMONUSE8	Imputed months in use	109-	109	\$ZVAR.
ZPORVAC8	Imputed space vacant 3 months in row	111-	111	\$ZVAR.
ZOPEN248	Imputed open 24 hours a day	113-	113	\$ZVAR.
ZOPNMF8	Imputed open during week	115-	115	\$ZVAR.
ZOPNWE8	Imputed open on weekend	117-	117	\$ZVAR.
ZWKHRS8	Imputed total hours open per week	119-	119	\$ZVAR.

**(File 8 continued)**

ZWKHRSC8	Imputed weekly hours category	121- 121	\$ZVAR.
ZNWKER8	Imputed number of employees	123- 123	\$ZVAR.
ZNWKERC8	Imputed number of employees category	125- 125	\$ZVAR.
ZELUSED8	Imputed electricity used	127- 127	\$ZVAR.
ZNGUSED8	Imputed natural gas used	129- 129	\$ZVAR.
ZFKUSED8	Imputed fuel oil/diesel/kerosene used	131- 131	\$ZVAR.
ZPRUSED8	Imputed bottled gas/LPG/propane used	133- 133	\$ZVAR.
ZSTUSED8	Imputed district steam used	135- 135	\$ZVAR.
ZHWUSED8	Imputed district hot water used	137- 137	\$ZVAR.
ZHT18	Imputed energy used for main heating	139- 139	\$ZVAR.
ZHT28	Imputed energy used for 2nd heating	141- 141	\$ZVAR.
ZCOOL8	Imputed energy used for cooling	143- 143	\$ZVAR.
ZWATR8	Imputed energy used for water heating	145- 145	\$ZVAR.
ZCOOK8	Imputed energy used for cooking	147- 147	\$ZVAR.
ZMANU8	Imputed energy used for manufacturing	149- 149	\$ZVAR.
ZGENR8	Imputed energy used for elec generation	151- 151	\$ZVAR.
ADJWT8	Final full sample building weight	153- 160	
STRATUM8	Variance stratum	162- 164	
PAIR8	Variance unit	166- 166	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ZVACANT8	Imputed completely vacant	43-	43	\$ZVAR.
ZFACIL8	Imputed on a multibuilding complex	45-	45	\$ZVAR.
ZFEDFAC8	Imputed Federal complex	47-	47	\$ZVAR.
ZFACACT8	Imputed type of multibuilding complex	49-	49	\$ZVAR.
ZMANIND8	Imputed manufacturing industrial complex	51-	51	\$ZVAR.
ZPLANT8	Imputed central plant on complex	53-	53	\$ZVAR.
ZFACDST8	Imputed plant produces district steam	55-	55	\$ZVAR.
ZFACDHW8	Imputed plant produces dist hot water	57-	57	\$ZVAR.
ZFACDCW8	Imputed plant produces dist chill water	59-	59	\$ZVAR.
ZFACELC8	Imputed plant produces electricity	61-	61	\$ZVAR.
ZBLDPLT8	Imputed central plant in building	63-	63	\$ZVAR.
ZRWSEAT8	Imputed relig worship seating capacity	65-	65	\$ZVAR.
ZPBSEAT8	Imputed assembly seating capacity	67-	67	\$ZVAR.
ZEDSEAT8	Imputed number of classroom seats	69-	69	\$ZVAR.
ZFDSEAT8	Imputed food service seating capacity	71-	71	\$ZVAR.
ZHCBED8	Imputed licensed bed capacity	73-	73	\$ZVAR.
ZNRSBED8	Imputed licensed bed capacity	75-	75	\$ZVAR.
ZLODGRM8	Imputed number of guest rooms	77-	77	\$ZVAR.
ADJWT8	Final full sample building weight	79-	86	
STRATUM8	Variance stratum	88-	90	
PAIR8	Variance unit	92-	92	



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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ZHEATP8	Imputed percent heated	43-	43	\$ZVAR.
ZHTLS508	Imputed heated to less than 50 degrees	45-	45	\$ZVAR.
ZFURNAC8	Imputed furnaces that heat air directly	47-	47	\$ZVAR.
ZBOILER8	Imputed boilers inside building	49-	49	\$ZVAR.
ZPKGHT8	Imputed packaged heating units	51-	51	\$ZVAR.
ZSLFCON8	Imputed individual space heaters	53-	53	\$ZVAR.
ZHTPMPH8	Imputed heat pumps for heating	55-	55	\$ZVAR.
ZSTHW8	Imputed district steam or hot water	57-	57	\$ZVAR.
ZOTHTEQ8	Imputed other heating equipment	59-	59	\$ZVAR.
ZFURNP8	Imputed pct heated by furnace	61-	61	\$ZVAR.
ZBOILP8	Imputed pct heated by boilers	63-	63	\$ZVAR.
ZPKGHP8	Imputed pct heated by packaged heating	65-	65	\$ZVAR.
ZSLFCNP8	Imputed pct heated by indiv space htrs	67-	67	\$ZVAR.
ZHTPHP8	Imputed pct heated by heat pumps	69-	69	\$ZVAR.
ZSTHWP8	Imputed pct heated by dist steam/HW	71-	71	\$ZVAR.
ZOTHTP8	Imputed pct heated by other ht equip	73-	73	\$ZVAR.
ZMAINHT8	Imputed main heating equipment	75-	75	\$ZVAR.
ZPKGHP8	Imputed pkgd unit heat pump for heating	77-	77	\$ZVAR.
ZSPLHPS8	Imputed split system ht pump for heating	79-	79	\$ZVAR.
ZRMHPS8	Imputed indiv room heat pump for heating	81-	81	\$ZVAR.
ZAIRHPT8	Imputed air source heat pump for heating	83-	83	\$ZVAR.
ZGRDHPT8	Imputed ground source ht pmp for heating	85-	85	\$ZVAR.
ZWTRHPT8	Imputed water loop heat pump for heating	87-	87	\$ZVAR.
ZNWMNHT8	Imputed main heating replaced	89-	89	\$ZVAR.
ZRDHTNF8	Imputed heat reduced over 24 hr period	91-	91	\$ZVAR.
ZHWRDHT8	Imputed how reduce heating	93-	93	\$ZVAR.
ZCOOLP8	Imputed percent cooled	95-	95	\$ZVAR.
ZPKGCL8	Imputed packaged air conditioning units	97-	97	\$ZVAR.
ZRCAC8	Imputed residential-type air conditioner	99-	99	\$ZVAR.
ZACWNWL8	Imputed individual room air conditioners	101-	101	\$ZVAR.
ZHTPMPC8	Imputed heat pumps for cooling	103-	103	\$ZVAR.
ZCHWT8	Imputed district chilled water piped in	105-	105	\$ZVAR.
ZCHILLR8	Imputed central chillers inside building	107-	107	\$ZVAR.
ZEVAPCL8	Imputed evaporative or swamp coolers	109-	109	\$ZVAR.
ZOTCLEQ8	Imputed other cooling equipment	111-	111	\$ZVAR.
ZPKGCP8	Imputed pct cooled by packaged A/C	113-	113	\$ZVAR.
ZRCACP8	Imputed pct cooled by central A/C	115-	115	\$ZVAR.
ZACWNWP8	Imputed pct cooled by indiv room A/C	117-	117	\$ZVAR.
ZHTPCP8	Imputed pct cooled by heat pumps	119-	119	\$ZVAR.

(File 10 continued)

ZCHWTP8	Imputed pct cooled by dist chilled water	121- 121	\$ZVAR.
ZCHILP8	Imputed pct cooled by central chillers	123- 123	\$ZVAR.
ZEVAPP8	Imputed pct cooled by swamp coolers	125- 125	\$ZVAR.
ZOTCLP8	Imputed pct cooled by other A/C equip	127- 127	\$ZVAR.
ZMAINCL8	Imputed main cooling equipment	129- 129	\$ZVAR.
ZPKGCP8	Imputed pkgd unit heat pump for cooling	131- 131	\$ZVAR.
ZSPLCP8	Imputed split system ht pump for cooling	133- 133	\$ZVAR.
ZRMCPS8	Imputed indiv room heat pump for cooling	135- 135	\$ZVAR.
ZAIRCPT8	Imputed air source heat pump for cooling	137- 137	\$ZVAR.
ZGRDCPT8	Imputed ground source ht pmp for cooling	139- 139	\$ZVAR.
ZWTRCPT8	Imputed water loop heat pump for cooling	141- 141	\$ZVAR.
ZNWMNCL8	Imputed main cooling replaced	143- 143	\$ZVAR.
ZRDCLNF8	Imputed A/C reduced during 24 hr period	145- 145	\$ZVAR.
ZHWRDCL8	Imputed how reduce cooling	147- 147	\$ZVAR.
ZVAV8	Imputed VAV system	149- 149	\$ZVAR.
ZECN8	Imputed economizer cycle	151- 151	\$ZVAR.
ZMAINT8	Imputed regular HVAC maintenance	153- 153	\$ZVAR.
ZEMCS8	Imputed EMCS	155- 155	\$ZVAR.
ADJWT8	Final full sample building weight	157- 164	
STRATUM8	Variance stratum	166- 168	
PAIR8	Variance unit	170- 170	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ZWTHTEQ8	Imputed water heating equipment	43-	43	\$ZVAR.
ZINSTWT8	Imputed instant hot water	45-	45	\$ZVAR.
ZFDRM8	Imputed commercial food preparation	47-	47	\$ZVAR.
ZSNACK8	Imputed snack bar	49-	49	\$ZVAR.
ZFASTFD8	Imputed fast food or small restaurant	51-	51	\$ZVAR.
ZCAF8	Imputed cafeteria or large restaurant	53-	53	\$ZVAR.
ZFDPREP8	Imputed food preparation area	55-	55	\$ZVAR.
ZKITCHN8	Imputed small kitchen area	57-	57	\$ZVAR.
ZOTFDRM8	Imputed other food prep area	59-	59	\$ZVAR.
ZHWTRM8	Imputed large amounts of hot water	61-	61	\$ZVAR.
ZLAUNDR8	Imputed laundry onsite	63-	63	\$ZVAR.
ZMEDEQP8	Imputed medical equipment	65-	65	\$ZVAR.
ZLABEQP8	Imputed laboratory equipment	67-	67	\$ZVAR.
ZMCHEQP8	Imputed machine equipment	69-	69	\$ZVAR.
ZPOOL8	Imputed indoor pool	71-	71	\$ZVAR.
ZHTPOOL8	Imputed heated pool	73-	73	\$ZVAR.
ZPLSRC8	Imputed pool energy source	75-	75	\$ZVAR.
ZRFGEQP8	Imputed refrigeration equipment used	77-	77	\$ZVAR.
ZRFGWI8	Imputed walk-in refrigeration units	79-	79	\$ZVAR.
ZRFGOP8	Imputed open case refrigeration units	81-	81	\$ZVAR.
ZRFGCL8	Imputed closed case refrigeration units	83-	83	\$ZVAR.
ZRFGRES8	Imputed residential type refrigerators	85-	85	\$ZVAR.
ZRFGVEN8	Imputed refrigerated vending machines	87-	87	\$ZVAR.
ZRFGWIN8	Imputed number of walk-in units	89-	89	\$ZVAR.
ZRFGOPN8	Imputed number of open cases	91-	91	\$ZVAR.
ZRFGCLN8	Imputed number of closed cases	93-	93	\$ZVAR.
ZRFGRSN8	Imputed number of resid-type refrig	95-	95	\$ZVAR.
ZRFGVNN8	Imputed number of refr vending machines	97-	97	\$ZVAR.
ZPCTERM8	Imputed computers used	99-	99	\$ZVAR.
ZSERVER8	Imputed dedicated servers	101-	101	\$ZVAR.
ZMNFRM8	Imputed mainframe computer room	103-	103	\$ZVAR.
ZSRVFRM8	Imputed server farm	105-	105	\$ZVAR.
ZTRNGRM8	Imputed computer-based training room	107-	107	\$ZVAR.
ZSTDNRM8	Imputed student/public computer center	109-	109	\$ZVAR.
ZOTPCRM8	Imputed other computer area	111-	111	\$ZVAR.
ZSRVNUM8	Imputed number of servers	113-	113	\$ZVAR.
ZSRVRC8	Imputed number of servers category	115-	115	\$ZVAR.
ZPCNUM8	Imputed number of computers	117-	117	\$ZVAR.
ZPCTRM8	Imputed number of computers category	119-	119	\$ZVAR.

**(File 11 continued)**

ZFLAT8	Imputed flat screen monitors	121- 121	\$ZVAR.
ZFLATC8	Imputed flat screen monitors category	123- 123	\$ZVAR.
ZPRNTRN8	Imputed number of printers	125- 125	\$ZVAR.
ZPRNTYP8	Imputed type of printers	127- 127	\$ZVAR.
ZRGSTRN8	Imputed number of cash registers	129- 129	\$ZVAR.
ZCOPIER8	Imputed photocopiers	131- 131	\$ZVAR.
ZCOPRN8	Imputed number of photocopiers	133- 133	\$ZVAR.
ZFAX8	Imputed FAX machines	135- 135	\$ZVAR.
ZRDOFEQ8	Imputed equip turned off during off hrs	137- 137	\$ZVAR.
ADJWT8	Final full sample building weight	139- 146	
STRATUM8	Variance stratum	148- 150	
PAIR8	Variance unit	152- 152	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ZCAPGEN8	Imputed elec generation capability	43-	43	\$ZVAR.
ZELHT18	Imputed elec for main space heating	45-	45	\$ZVAR.
ZNGHT18	Imputed nat gas for main space heating	47-	47	\$ZVAR.
ZFKHT18	Imputed fuel oil for main space heating	49-	49	\$ZVAR.
ZPRHT18	Imputed propane for main space heating	51-	51	\$ZVAR.
ZSTHT18	Imputed dist steam for main space ht	53-	53	\$ZVAR.
ZHWHT18	Imputed dist HW for main space heating	55-	55	\$ZVAR.
ZELHT28	Imputed elec for 2nd space heating	57-	57	\$ZVAR.
ZNGHT28	Imputed nat gas for 2nd space heating	59-	59	\$ZVAR.
ZFKHT28	Imputed fuel oil for 2nd space heating	61-	61	\$ZVAR.
ZPRHT28	Imputed propane for 2nd space heating	63-	63	\$ZVAR.
ZSTHT28	Imputed dist steam for 2nd space heating	65-	65	\$ZVAR.
ZHWHT28	Imputed dist HW for 2nd space heating	67-	67	\$ZVAR.
ZELCOOL8	Imputed electricity used for cooling	69-	69	\$ZVAR.
ZNGCOOL8	Imputed natural gas used for cooling	71-	71	\$ZVAR.
ZFKCOOL8	Imputed fuel oil used for cooling	73-	73	\$ZVAR.
ZSTCOOL8	Imputed district steam used for cooling	75-	75	\$ZVAR.
ZPRCOOL8	Imputed propane used for cooling	77-	77	\$ZVAR.
ZHWCOOL8	Imputed district HW used for cooling	79-	79	\$ZVAR.
ZELWATR8	Imputed elect used for water heating	81-	81	\$ZVAR.
ZNGWATR8	Imputed nat gas used for water heating	83-	83	\$ZVAR.
ZFKWATR8	Imputed fuel oil used for water heating	85-	85	\$ZVAR.
ZPRWATR8	Imputed propane used for water heating	87-	87	\$ZVAR.
ZSTWATR8	Imputed dist steam for water heating	89-	89	\$ZVAR.
ZHWWATR8	Imputed dist HW used for water heating	91-	91	\$ZVAR.
ZELCOOK8	Imputed electricity used for cooking	93-	93	\$ZVAR.
ZNGCOOK8	Imputed natural gas used for cooking	95-	95	\$ZVAR.
ZFKCOOK8	Imputed fuel oil used for cooking	97-	97	\$ZVAR.
ZPRCOOK8	Imputed propane used for cooking	99-	99	\$ZVAR.
ZSTCOOK8	Imputed district steam used for cooking	101-	101	\$ZVAR.
ZHWCOOK8	Imputed district HW used for cooking	103-	103	\$ZVAR.
ZELMANU8	Imputed elec used for manufacturing	105-	105	\$ZVAR.
ZNGMANU8	Imputed nat gas used for manufacturing	107-	107	\$ZVAR.
ZFKMANU8	Imputed fuel oil used for manufacturing	109-	109	\$ZVAR.
ZPRMANU8	Imputed propane used for manufacturing	111-	111	\$ZVAR.
ZSTMANU8	Imputed dist steam for manufacturing	113-	113	\$ZVAR.
ZHWMANU8	Imputed dist HW used for manufacturing	115-	115	\$ZVAR.
ZNGGENR8	Imputed nat gas used for elec gener	117-	117	\$ZVAR.
ZFKGENR8	Imputed fuel oil used for elec gener	119-	119	\$ZVAR.

**(File 12 continued)**

ZPRGENR8	Imputed propane used for elec gener	121- 121	\$ZVAR.
ZGENUSE8	Imputed use of generated electricity	123- 123	\$ZVAR.
ZCOGEN8	Imputed cogeneration system	125- 125	\$ZVAR.
ZGRID8	Imputed deliver electricity to grid	127- 127	\$ZVAR.
ADJWT8	Final full sample building weight	129- 136	
STRATUM8	Variance stratum	138- 140	
PAIR8	Variance unit	142- 142	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ZCWUSED8	Imputed district chilled water used	43-	43	\$ZVAR.
ZWOUSED8	Imputed wood used	45-	45	\$ZVAR.
ZCOUSED8	Imputed coal used	47-	47	\$ZVAR.
ZSOUSED8	Imputed solar used	49-	49	\$ZVAR.
ZOTUSED8	Imputed other energy source used	51-	51	\$ZVAR.
ZWOHT18	Imputed wood for main space heating	53-	53	\$ZVAR.
ZCOHT18	Imputed coal for main space heating	55-	55	\$ZVAR.
ZSOHT18	Imputed solar for main space heating	57-	57	\$ZVAR.
ZOTHT18	Imputed other source for main space ht	59-	59	\$ZVAR.
ZWOHT28	Imputed wood for 2nd space heating	61-	61	\$ZVAR.
ZCOHT28	Imputed coal for 2nd space heating	63-	63	\$ZVAR.
ZSOHT28	Imputed solar for 2nd space heating	65-	65	\$ZVAR.
ZOTHT28	Imputed other source for 2nd space ht	67-	67	\$ZVAR.
ZCWCOOL8	Imputed district CW used for cooling	69-	69	\$ZVAR.
ZOTCOOL8	Imputed other source used for cooling	71-	71	\$ZVAR.
ZWOWATR8	Imputed wood used for water heating	73-	73	\$ZVAR.
ZCOWATR8	Imputed coal used for water heating	75-	75	\$ZVAR.
ZSOWATR8	Imputed solar used for water heating	77-	77	\$ZVAR.
ZOTWATR8	Imputed other source for water heating	79-	79	\$ZVAR.
ZWOCOOK8	Imputed wood used for cooking	81-	81	\$ZVAR.
ZCOCOOK8	Imputed coal used for cooking	83-	83	\$ZVAR.
ZSOCOOK8	Imputed solar used for cooking	85-	85	\$ZVAR.
ZOTCOOK8	Imputed other source used for cooking	87-	87	\$ZVAR.
ZWOMANU8	Imputed wood used for manufacturing	89-	89	\$ZVAR.
ZCOMANU8	Imputed coal used for manufacturing	91-	91	\$ZVAR.
ZSOMANU8	Imputed solar used for manufacturing	93-	93	\$ZVAR.
ZOTMANU8	Imputed other source for manufacturing	95-	95	\$ZVAR.
ZWOGENR8	Imputed wood used for elec generation	97-	97	\$ZVAR.
ZCOGENR8	Imputed coal used for elec generation	99-	99	\$ZVAR.
ZSOGENR8	Imputed solar used for elec generation	101-	101	\$ZVAR.
ZOTGENR8	Imputed other source used for elec gener	103-	103	\$ZVAR.
ADJWT8	Final full sample building weight	105-	112	
STRATUM8	Variance stratum	114-	116	
PAIR8	Variance unit	118-	118	

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

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ZLTOHRP8	Imputed percent lit when open	43-	43	\$ZVAR.
ZLOHRPC8	Imputed percent lit when open category	45-	45	\$ZVAR.
ZLTNHRP8	Imputed percent lit when closed	47-	47	\$ZVAR.
ZLNHRPC8	Imputed percent lit when closed category	49-	49	\$ZVAR.
ZRDLTNF8	Imputed reduce lighting during off hours	51-	51	\$ZVAR.
ZBULB8	Imputed incandescent bulbs	53-	53	\$ZVAR.
ZFLUOR8	Imputed fluorescent bulbs	55-	55	\$ZVAR.
ZCFLR8	Imputed compact fluorescent bulbs	57-	57	\$ZVAR.
ZHID8	Imputed HID bulbs	59-	59	\$ZVAR.
ZHALO8	Imputed halogen bulbs	61-	61	\$ZVAR.
ZOTLT8	Imputed other type of bulbs	63-	63	\$ZVAR.
ZFLUORP8	Imputed pct lit by fluorescent	65-	65	\$ZVAR.
ZCFLRP8	Imputed pct lit by compact fluorescent	67-	67	\$ZVAR.
ZBULBP8	Imputed pct lit by incandescent	69-	69	\$ZVAR.
ZHALOP8	Imputed pct lit by halogen	71-	71	\$ZVAR.
ZHIDP8	Imputed pct lit by HID	73-	73	\$ZVAR.
ZOTLTP8	Imputed pct lit by other lighting	75-	75	\$ZVAR.
ZSREF8	Imputed specular reflectors	77-	77	\$ZVAR.
ZHEB8	Imputed electronic ballasts	79-	79	\$ZVAR.
ZEMCSLT8	Imputed EMCS controls lighting	81-	81	\$ZVAR.
ZWINTYP8	Imputed window glass type	83-	83	\$ZVAR.
ZTINT8	Imputed tinted window glass	85-	85	\$ZVAR.
ZREFL8	Imputed reflective window glass	87-	87	\$ZVAR.
ZAWN8	Imputed external overhangs or awnings	89-	89	\$ZVAR.
ZSKYLT8	Imputed skylights or atriums	91-	91	\$ZVAR.
ZAUTOLT8	Imputed auto controls/sensors on lights	93-	93	\$ZVAR.
ZDAYLTP8	Imputed percent daylight	95-	95	\$ZVAR.
ADJWT8	Final full sample building weight	97-	104	
STRATUM8	Variance stratum	106-	108	
PAIR8	Variance unit	110-	110	



**Layout for File 15: Consumption and Expenditures for  
Sum of Major Fuels and Electricity (Includes Imputation Flags)**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ADJWT8	Final full sample building weight	43-	50	
STRATUM8	Variance stratum	52-	54	
PAIR8	Variance unit	56-	56	
HDD658	Heating degree days (base 65)	58-	63	COMMA6.
CDD658	Cooling degree days (base 65)	65-	70	COMMA6.
MFUSED8	Any major fuel used	72-	72	\$YESNO.
MFBTU8	Annual maj fuel consumption (thous Btu)	74-	91	COMMA18.
MFEXP8	Annual major fuel expenditures (\$)	93-	102	MISS10CH.
ELCNS8	Annual electricity consumption (kWh)	104-	118	MISS15CH.
ELBTU8	Annual elec consumption (thous Btu)	120-	137	COMMA18.
ELEXP8	Annual electricity expenditures (\$)	139-	148	MISS10CH.
ZELCNS8	Imputed electricity consumption	150-	150	\$ZVAR.
ZELEXP8	Imputed electricity expenditures	152-	152	\$ZVAR.

**Layout for File 16: Consumption and Expenditures for  
Natural Gas, Fuel Oil, and District Heat (Includes Imputation Flags)**

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ADJWT8	Final full sample building weight	43-	50	
STRATUM8	Variance stratum	52-	54	
PAIR8	Variance unit	56-	56	
NGCNS8	Annual natural gas consumption (ccf)	58-	72	MISS15CH.
NGBTU8	Annual nat gas consumption (thous Btu)	74-	91	COMMA18.
NGEXP8	Annual natural gas expenditures (\$)	93-	102	MISS10CH.
ZNGCNS8	Imputed natural gas consumption	104-	104	\$ZVAR.
ZNGEXP8	Imputed natural gas expenditures	106-	106	\$ZVAR.
FKCNS8	Annual fuel oil consumption (gallons)	108-	122	MISS15CH.
FKBTU8	Annual fuel oil consumption (thous Btu)	124-	141	COMMA18.
FKEXP8	Annual fuel oil expenditures	143-	152	MISS10CH.
ZFKCNS8	Imputed fuel oil consumption	154-	154	\$ZVAR.
ZFKEXP8	Imputed fuel oil expenditures	156-	156	\$ZVAR.
DHUSED8	District heat (steam or hot water) used	158-	158	\$YESNO.
DHHT18	District heat used for main heating	160-	160	\$YESNO.
DHHT28	District heat used for secondary heating	162-	162	\$YESNO.
DHCOOL8	District heat used for cooling	164-	164	\$YESNO.
DHWATR8	District heat used for water heating	166-	166	\$YESNO.
DHCOOK8	District heat used for cooking	168-	168	\$YESNO.
DHMANU8	District heat used for manufacturing	170-	170	\$YESNO.
DHOTH8	District heat used for some other use	172-	172	\$YESNO.
DHCNS8	Annual dist heat consumption (thous lbs)	174-	188	MISS15CH.
DHBTU8	Annual dist heat consumption (thous Btu)	190-	207	COMMA18.
DHEXP8	Annual district heat expenditures (\$)	209-	218	MISS10CH.
ZDHCNS8	Imputed district heat consumption	220-	220	\$ZVAR.
ZDHEXP8	Imputed district heat expenditures	222-	222	\$ZVAR.

## Layout for File 17: Consumption of Major Fuels by End Use

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID8	Building identifier	1- 5	
REGION8	Census region	7- 7	\$REGION.
CENDIV8	Census division	9- 9	\$CENDIV.
SQFT8	Square footage	11- 20	MISS10CH.
SQFTC8	Square footage category	22- 23	\$SQFTCX.
YRCONC8	Year of construction category	25- 26	\$YEARCAT.
PBA8	Principal building activity	28- 29	\$PBA.
ELUSED8	Electricity used	31- 31	\$YESNO.
NGUSED8	Natural gas used	33- 33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35- 35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37- 37	\$YESNO.
STUSED8	District steam used	39- 39	\$YESNO.
HWUSED8	District hot water used	41- 41	\$YESNO.
ADJWT8	Final full sample building weight	43- 50	
STRATUM8	Variance stratum	52- 54	
PAIR8	Variance unit	56- 56	
MFHTBTU8	Major Fuel heating use (mBtu)	58- 75	COMMA18.
MFCLBTU8	Major Fuel cooling use (mBtu)	77- 94	COMMA18.
MFVNBUTU8	Major Fuel ventilation use (mBtu)	96- 113	COMMA18.
MFWTBTU8	Major Fuel water heating use (mBtu)	115- 132	COMMA18.
MFLTBTU8	Major Fuel lighting use (mBtu)	134- 151	COMMA18.
MFCKBTU8	Major Fuel cooking use (mBtu)	153- 170	COMMA18.
MFRFBTU8	Major Fuel refrigeration use (mBtu)	172- 189	COMMA18.
MFOFBTU8	Major Fuel office equipment use (mBtu)	191- 208	COMMA18.
MFPCBTU8	Major Fuel computer use (mBtu)	210- 227	COMMA18.
MFMSBTU8	Major Fuel miscellaneous use (mBtu)	229- 246	COMMA18.

## Layout for File 18: Consumption of Electricity by End Use

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ADJWT8	Final full sample building weight	43-	50	
STRATUM8	Variance stratum	52-	54	
PAIR8	Variance unit	56-	56	
ELHTBTU8	Electric heating use (mBtu)	58-	75	COMMA18.
ELCLBTU8	Electric cooling use (mBtu)	77-	94	COMMA18.
ELVNBTU8	Electric ventilation use (mBtu)	96-	113	COMMA18.
ELWTBTU8	Electric water heating use (mBtu)	115-	132	COMMA18.
ELLTBTU8	Electricity lighting use (mBtu)	134-	151	COMMA18.
ELCKBTU8	Electric cooking use (mBtu)	153-	170	COMMA18.
ELRFBTU8	Electric refrigeration use (mBtu)	172-	189	COMMA18.
ELOFBTU8	Electric office equipment use (mBtu)	191-	208	COMMA18.
ELPCBTU8	Electric computer use (mBtu)	210-	227	COMMA18.
ELMSBTU8	Electric miscellaneous use (mBtu)	229-	246	COMMA18.

## Layout for File 19: Consumption of Natural Gas by End Use

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>	<u>Format</u>
PUBID8	Building identifier	1- 5	
REGION8	Census region	7- 7	\$REGION.
CENDIV8	Census division	9- 9	\$CENDIV.
SQFT8	Square footage	11- 20	MISS10CH.
SQFTC8	Square footage category	22- 23	\$SQFTCX.
YRCONC8	Year of construction category	25- 26	\$YEARCAT.
PBA8	Principal building activity	28- 29	\$PBA.
ELUSED8	Electricity used	31- 31	\$YESNO.
NGUSED8	Natural gas used	33- 33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35- 35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37- 37	\$YESNO.
STUSED8	District steam used	39- 39	\$YESNO.
HWUSED8	District hot water used	41- 41	\$YESNO.
ADJWT8	Final full sample building weight	43- 50	
STRATUM8	Variance stratum	52- 54	
PAIR8	Variance unit	56- 56	
NGHTBTU8	Natural Gas heating use (mBtu)	58- 75	COMMA18.
NGCLBTU8	Natural Gas cooling use (mBtu)	77- 94	COMMA18.
NGWTBTU8	Natural Gas water heating use (mBtu)	96- 113	COMMA18.
NGCKBTU8	Natural Gas cooking use (mBtu)	115- 132	COMMA18.
NGMSBTU8	Natural Gas miscellaneous use (mBtu)	134- 151	COMMA18.

## Layout for File 20: Consumption of Fuel Oil and District Heat by End Use

<u>Variable Name</u>	<u>Variable Description</u>	<u>Position</u>		<u>Format</u>
PUBID8	Building identifier	1-	5	
REGION8	Census region	7-	7	\$REGION.
CENDIV8	Census division	9-	9	\$CENDIV.
SQFT8	Square footage	11-	20	MISS10CH.
SQFTC8	Square footage category	22-	23	\$SQFTCX.
YRCONC8	Year of construction category	25-	26	\$YEARCAT.
PBA8	Principal building activity	28-	29	\$PBA.
ELUSED8	Electricity used	31-	31	\$YESNO.
NGUSED8	Natural gas used	33-	33	\$YESNO.
FKUSED8	Fuel oil/diesel/kerosene used	35-	35	\$YESNO.
PRUSED8	Bottled gas/LPG/propane used	37-	37	\$YESNO.
STUSED8	District steam used	39-	39	\$YESNO.
HWUSED8	District hot water used	41-	41	\$YESNO.
ADJWT8	Final full sample building weight	43-	50	
STRATUM8	Variance stratum	52-	54	
PAIR8	Variance unit	56-	56	
FKHTBTU8	Fuel Oil heating use (mBtu)	58-	75	COMMA18.
FKCLBTU8	Fuel Oil cooling use (mBtu)	77-	94	COMMA18.
FKWTBTU8	Fuel Oil water heating use (mBtu)	96-	113	COMMA18.
FKCKBTU8	Fuel Oil cooking use (mBtu)	115-	132	COMMA18.
FKMSBTU8	Fuel Oil miscellaneous use (mBtu)	134-	151	COMMA18.
DHHTBTU8	District Heat heating use (mBtu)	153-	170	COMMA18.
DHCLBTU8	District Heat cooling use (mBtu)	172-	189	COMMA18.
DHWTBTU8	District Heat water heating use (mBtu)	191-	208	COMMA18.
DHCKBTU8	District Heat cooking use (mBtu)	210-	227	COMMA18.
DHMSBTU8	District Heat miscellaneous use (mBtu)	229-	246	COMMA18.

## 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
  '1'='Packaged A/C units'
  '2'='Residential-type central A/C'
  '3'='Individual room A/C'
  '4'='Heat pumps for cooling'
  '5'='District chilled water piped in'
  '6'='Central chillers inside the building'
  '7'='"Swamp" coolers or evaporative coolers'
  '8'='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'
  '7'='Withheld to protect confidentiality'
;
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"'
;
```

```

VALUE $FACACT
  '01'='College/university/junior college'
  '02'='Primary or secondary school (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'='Lodging or resort complex'
  '09'='Post office complex'
  '10'='Other type of government complex'
  '11'='Industrial complex'
  '12'='Transportation complex'
  '13'='Other type of campus or complex'
;
VALUE $FKTYP
  '1'='Fuel oil'
  '2'='Diesel'
  '3'='Kerosene'
  '4'='Fuel oil and diesel'
  '5'='Fuel oil and kerosene'
  '6'='Diesel and kerosene'
  '7'='Fuel oil, diesel, and kerosene'
;
VALUE $FLAT
  '1'='All flat screen'
  '2'='Most flat screen'
  '3'='Some flat screen'
  '4'='A few flat screen'
;
VALUE $GENUSE
  '1'='Primarily for emergency back-up'
  '2'='During periods of high demand'
  '3'='Whenever electricity was used'
;
VALUE $GLSAREA
  '1'='More glass area'
  '2'='Less glass area'
  '3'='About the same amount'
;
VALUE $GLSPCT
  '1'='10 percent or less'
  '2'='11 to 25 percent'
  '3'='26 to 50 percent'
  '4'='51 to 75 percent'
  '5'='76 to 100 percent'
;
VALUE $GOVTYP
  '1'='Federal'
  '2'='State'
  '3'='Local'
  '7'='Withheld to protect confidentiality'
;
PICTURE HCBED
  0-150 = '009'
  9991 = 'Over 150' (noedit)
;

```



```

VALUE $HOWRDC
  '1'='Time-clock thermostat'
  '2'='Thermostat is manually reset'
  '3'='Part of EMCS'
;
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 $HTEQP
  '1'='Furnaces that heat air directly'
  '2'='Boilers inside the building'
  '3'='Packaged heating units'
  '4'='Individual space heaters'
  '5'='Heat pumps for heating'
  '6'='District steam or hot water'
  '7'='Other heating equipment'
;
VALUE $LAUND
  '1'='In this building'
  '2'='In another building on-site'
  '3'='By an offsite laundry service'
;
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 YEAR4CH
    0-9996 = '0009'
    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 $MONTH
    '1'='January'
    '2'='February'
    '3'='March'
    '4'='April'
    '5'='May'
    '6'='June'
    '7'='July'
    '8'='August'
    '9'='September'
    '10'='October'
    '11'='November'
    '12'='December'
;

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PICTURE NFLOOR
  0-14 = '009'
  991 = '15 to 25' (noedit)
  992 = 'Over 25' (noedit)
;
VALUE $NGSRC
  '1'='Local utility'
  '2'='Someone else (eg non-utility, broker)'
  '3'='Bought both ways'
  '9'='Don't Know'
;
VALUE $NOCCAT
  '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 $OWNER
  '01'='Property management company'
  '02'='Other corporation/partnership/LLC'
  '03'='Religious organization'
  '04'='Other non-profit organization'
  '05'='Privately-owned school'
  '06'='Individual owner'
  '07'='Other nongovernment owner'
  '08'='Federal government'
  '09'='State government'
  '10'='Local government'
;
VALUE $PBA
  '01'='Vacant'
  '02'='Office'
  '04'='Laboratory'
  '05'='Nonrefrigerated warehouse'
  '06'='Food sales'
  '07'='Public order and safety'
  '08'='Outpatient health care'
  '11'='Refrigerated warehouse'
  '12'='Religious worship'
  '13'='Public assembly'
  '14'='Education'
  '15'='Food service'
  '16'='Inpatient health care'
  '17'='Nursing'
  '18'='Lodging'
  '23'='Strip shopping mall'
  '24'='Enclosed mall'
  '25'='Retail other than mall'
  '26'='Service'
  '91'='Other'
;

```

```
VALUE $PBAPLUS
'01'='Vacant'
'02'='Administrative/professional office'
'03'='Bank/other financial'
'04'='Government office'
'05'='Medical office (non-diagnostic)'
'06'='Mixed-use office'
'07'='Other office'
'08'='Laboratory'
'09'='Distribution/shipping center'
'10'='Non-refrigerated warehouse'
'11'='Self-storage'
'12'='Convenience store'
'13'='Convenience store with gas station'
'14'='Grocery store/food market'
'15'='Other food sales'
'16'='Fire station/police station'
'17'='Other public order and safety'
'18'='Medical office (diagnostic)'
'19'='Clinic/other outpatient health'
'20'='Refrigerated warehouse'
'21'='Religious worship'
'22'='Entertainment/culture'
'23'='Library'
'24'='Recreation'
'25'='Social/meeting'
'26'='Other public assembly'
'27'='College/university'
'28'='Elementary/middle school'
'29'='High school'
'30'='Preschool/daycare'
'31'='Other classroom education'
'32'='Fast food'
'33'='Restaurant/cafeteria'
'34'='Other food service'
'35'='Hospital/inpatient health'
'36'='Nursing home/assisted living'
'37'='Dormitory/fraternity/sorority'
'38'='Hotel'
'39'='Motel or inn'
'40'='Other lodging'
'41'='Vehicle dealership/showroom'
'42'='Retail store'
'43'='Other retail'
'44'='Post office/postal center'
'45'='Repair shop'
'46'='Vehicle service/repair shop'
'47'='Vehicle storage/maintenance'
'48'='Other service'
'49'='Other'
'50'='Strip shopping mall'
'51'='Enclosed mall'
;
```

```

VALUE $PBAX
'11'='Office/Professional'
'12'='Data center/Computer "server farm"'
'13'='Warehouse/Storage'
'14'='Food sales or service'
'15'='Retail'
'16'='Education'
'17'='Religious worship'
'18'='Public assembly'
'19'='Health care'
'20'='Service'
'21'='Lodging'
'22'='Public order and safety'
'23'='Residential'
'24'='Industrial'
'25'='Agricultural'
'26'='Vacant'
'27'='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 $POOLSRC
'1'='Electricity'
'2'='Natural gas'
'3'='Fuel oil/diesel/kerosene'
'4'='Bottled gas/LPG/Propane'
'5'='Solar'
'6'='Some other energy source'
;
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 $PRNTR
'1'='Inkjet'
'2'='Laser'
'3'='Some other type'
'4'='Half inkjet, half laser'
;

```

```

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 $RFCNS
  '1'='Built-up'
  '2'='Slate or tile shingles'
  '3'='Wood shingles/shakes/other wood'
  '4'='Asphalt/fiberglass/other shingles'
  '5'='Metal surfacing'
  '6'='Plastic/rubber/synthetic sheeting'
  '7'='Concrete'
  '8'='No one major type'
  '9'='Other'
;
VALUE $SHAPE
  '1'='Square'
  '2'='Wide rectangle'
  '3'='Narrow rectangle'
  '4'='Rectangle/square with courtyard'
  '5'=' "H" shaped'
  '6'=' "U" shaped'
  '7'=' "E" shaped'
  '8'=' "T" shaped'
  '9'=' "L" shaped'
  '10'=' "+" or cross shaped'
  '11'='Other shape'
;
VALUE $SQFTCX
  '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'
  '2'='One or more "point-of-use"'
  '3'='Both types of water heaters'
;

```

```

VALUE $WINDTYP
  '1'='Single layer glass'
  '2'='Multi-layer glass'
  '3'='Combination of both'
  '4'='No windows'
;
VALUE $WLCNS
  '1'='Brick, stone, or stucco'
  '2'='Pre-cast concrete panels'
  '3'='Concrete block or poured concrete '
  '4'='Siding, shingles, tiles, or shakes'
  '5'='Sheet metal panels'
  '6'='Window or vision glass'
  '7'='Decorative or construction glass'
  '8'='No one major type'
  '9'='Other'
;
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'='1,000 to 2,499'
  '11'='2,500 to 4,999'
  '12'='5,000 or More'
;
VALUE $WOSRC
  '1'='Purchased all the wood'
  '2'='Obtained all wood free of charge'
  '3'='Some wood purchased and some free'
  '7'='Not Ascertained'
  '9'='Don't Know'
;

```

```

PICTURE YEAR4CH
    0-9996 = '0009'
    9997 = 'Not ascertained'
    9998 = 'Refused'
    9999 = 'Don't know'
;
VALUE $YEARCAT
    '1'='Before 1920'
    '2'='1920 to 1945'
    '3'='1946 to 1959'
    '4'='1960 to 1969'
    '5'='1970 to 1979'
    '6'='1980 to 1989'
    '7'='1990 to 1999'
    '8'='2000 to 2003'
    '9'='2004'
;
VALUE $YES
    '1'='Yes'
    '9'='Don't Know'
;
VALUE $YESNO
    '1'='Yes'
    '2'='No'
    '7'='Not Ascertained'
    '8'='Refused'
    '9'='Don't Know'
;
VALUE $ZVAR
    '0' = 'Reported'
    '1' = 'Imputed'
    '8' = 'Missing'
    '9' = 'Inapplicable'
;

```