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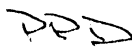
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DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25

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Subject: A.C.E. Revision II: Integration of Duplicate Links into the Full
Sample Estimation Files

The attached document contains the requirements for integrating the E and P sample duplicate links outside the search area into the full E and P sample files. These files are inputs to the Accuracy and Coverage Evaluation (A.C.E.) Revision II estimation process and include all variables for computing the estimation components relating to duplicate links.

The central focus of this process is the assignment of the probability that a sample case is a resident of the A.C.E. block cluster on Census Day given that it links to a census enumeration outside the search area. Thus, two conditional probabilities are computed:

- z_i - the probability that an E-sample case is a correct enumeration given that it is a duplicate to another census enumeration outside the search area, and
- h_i - the probability that a P-sample case is a resident on Census Day given that it links to a census enumeration outside the search area.

This process outlines the computation of two estimates of z_i and eight estimates of h_i . Estimates z_{i1} and h_{i1} are used in the A.C.E. Revision II estimates. The second estimate of z_i and the other seven estimates of h_i are for research purposes.

This document also gives the requirements for selecting one duplicate link when a sample case links to multiple census enumerations outside the A.C.E. search area and for appending the duplicate information to the full E- and P-sample files.

Integration of Duplicate Links into the Full Sample Estimation Files

Software Requirements Specifications

Participants:

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A. Selecting one link from triplicate or higher-ordered duplication

- 1) The software shall process all records on the E-sample Duplicate Link File.
See file requirements in DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-24.
- 2) The software shall process all records on the P-sample Duplicate Link File.
See file requirements in DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-24.
- 3) The software shall select the duplicate link with the largest duplicate probability (PT1) and retain that single link.
- 4) The software shall select the duplicate link from the set of duplicate links with equivalent, largest duplicate probabilities based on the following hierarchy:

Based on the Target person record of the link, use this hierarchy to keep the link that is...
 - ▶ E-sample eligible (ETARGET = '1')
 - ▶ a Group Quarter (ETARGET = '2')
 - ▶ a Reinstate housing unit (ETARGET = '3')
 - ▶ a Deleted housing unit (ETARGET = '4')
 - ▶ The first link in order based on Target ID (TID)
- 5) The software shall select from multiple duplicate links with the same hierarchy and equivalent, largest duplicate probabilities, the first duplicate link ordered by Target ID (TID).

B. Assign ZT1

- 1) The software shall process all records selected from the E-sample Duplicate Link File as specified in Section A, above.
- 2) The software shall add any newly created variable to the output file, E-sample Duplicate/Estimation Integration Output File. See Attachment A.
- 3) The software shall create a recode for the E-sample A.C.E. probability of correct enumeration, CEPROBF as follows:
 - 3.1) if CEPROBF = 0, then CEPROBIND = 0
 - 3.2) if CEPROBF > 0, then CEPROBIND = 1
- 4) The software shall define domain/tenure cells by recoding the Race/Hispanic Origin Domain and Tenure, variables DOMAIN and TENURE2, respectively.

- 4.1) if DOMAIN = 3 and TENURE2 = 1, then DTCELL = 1
 - 4.2) if DOMAIN = 3 and TENURE2 = 2, then DTCELL = 2
 - 4.3) if DOMAIN = 4 and TENURE2 = 1, then DTCELL = 3
 - 4.4) if DOMAIN = 4 and TENURE2 = 2, then DTCELL = 4
 - 4.5) if DOMAIN ≠ 3 or 4 and TENURE2 = 1, then DTCELL = 5
 - 4.6) if DOMAIN ≠ 3 or 4 and TENURE2 = 2, then DTCELL = 6
- 5) The software shall classify records into one of six situations as described in Chart 1.
 - ▶ There is hierarchy involved in classifying records; the first situation which applies should be used.
 - 6) The software shall assign ZT1 separately by domain/tenure cell, situation, and the A.C.E. correct enumeration probability as described in Chart 1.

Chart 1: Assignment of SITUATION and ZT1 for E-Sample

| SITUATION | Description of the Duplicate Links | Variable Description/Specifics | CEPROBF | ZT1 |
|-----------|---|---|----------------------------------|---------------|
| 0 | If the E-sample Record is a Non-Response Follow-Up training case. | If NRFUTREX = '1' | If CEPROBF ≥ 0 | 0.0 |
| 1 | If the E-sample Record is linked to a GQ census record | If TQQQTYP not '000' | If CEPROBF ≥ 0 | 0.0 |
| 2 | If both the E-sample record is 18+ and the census record is 18+ and either the E-sample record is a child of the reference person or the census record is a child of the reference person <u>but not both</u> . | If (AGE2 not = '1' and RELATE2 = '2') and (TQAGE > '017' and TQREL not = '03', '04', '05') or If (AGE2 not = '1' and RELATE2 not = '2') and (TQAGE > '017' and TQREL = '03', '04', '05') | If CEPROBF = 0 | 0.0 |
| | | If (AGE2 not = '1' and RELATE2 = '2') and (TQAGE > '017' and TQREL not = '03', '04', '05') is true | If CEPROBF > 0 | 0.0 |
| | | If (AGE2 not = '1' and RELATE2 not = '2') and (TQAGE > '017' and TQREL = '03', '04', '05') is true | If CEPROBF > 0 | 1.0 |
| 3 | If this is strictly a whole household of duplicate links, i.e. every census record in the E-sample housing unit has a duplicate link to a whole household of census person records. | INP = tally of E-sample links in E-sample households to same census household = TNP. This tally is the number of records within each E-sample HU/census HU combination. For an E-sample record, a unique HU ID is the first 12 characters from SID For a census record, a unique HU ID is the first 12 characters from TID | If CEPROBF = 0 If CEPROBF > 0 | 0.0 see 7) |
| 4 | If the E-sample record and the census record are children ages 0-17. | If AGE2 = '1' and RELATE2 = '2' and TQAGE ≤ '017' and TQREL = '03', '04', '05' | If CEPROBF = 0 If CEPROBF > 0 | 0.0 see 7) |
| 5 | All remaining links | | If CEPROBF = 0 If CEPROBF > 0 | 0.0 see 7) |

- 7) The software shall set ZT1 to the following for situations 3, 4, and 5.
- ▶ The summation is over all records within a domain/tenure cell pertaining to a given situation.

$$ZT1 = \frac{\sum_{HUtoHLinks} 0.5 \times ETESFINWT \times PT1}{\sum_{HUtoHLinks} ETESFINWT \times CEPROBF \times PT1}$$

- 8) The software shall provide additional statistical output for each domain/tenure cell, SITUATION, CEPROBIND, and ZT1 crosstab:
 - ▶ counts of E-sample duplicate link records ($\sum 1$)
 - ▶ weighted counts using ETESFINWT of E-sample duplicate link records ($\sum \text{ETESFINWT}$)
 - ▶ numerator of ZT1
 - ▶ denominator of ZT1

- 9) The software shall calculate ZT2 as ZT1 above without E-sample duplicate links to reinstated and deleted census records and by using PT2 in place of PT1.
 - 9.1) ETARGET = '3' identifies a link to a reinstated housing unit
 - 9.2) ETARGET = '4' identifies a link to a deleted housing unit
 - 9.3) Use the same situation (SITUATION) assignment for each record.

C. Assign 4 HTs: HT1, HT2, HT3, HT4

- 10) The software shall process all records selected from the P-sample Duplicate Link File as specified in Section A, above.

- 11) The software shall add any newly created variable to the output file, P-sample Duplicate/Estimation Integration Output File. See Attachment A.

- 12) The software shall create a recode for the P-sample A.C.E. probability of residence, RPROB as follows:
 - 12.1) if RPROB = 0, then RPROBIND = 0
 - 12.2) if RPROB > 0, then RPROBIND = 1

- 13) The software shall define domain/tenure cells by recoding the Race/Hispanic Origin Domain and Tenure, variables DOMAIN and TENURE2, respectively.
 - 13.1) if DOMAIN = 3 and TENURE2 = 1, then DTCELL = 1
 - 13.2) if DOMAIN = 3 and TENURE2 = 2, then DTCELL = 2
 - 13.3) if DOMAIN = 4 and TENURE2 = 1, then DTCELL = 3
 - 13.4) if DOMAIN = 4 and TENURE2 = 2, then DTCELL = 4
 - 13.5) if DOMAIN ≠ 3 or 4 and TENURE2 = 1, then DTCELL = 5
 - 13.6) if DOMAIN ≠ 3 or 4 and TENURE2 = 2, then DTCELL = 6

- 14) The software shall classify records into one of five situations as described in Chart 2.
 - ▶ There is hierarchy involved in classifying records; the first situation which applies should be used.

- 15) The software shall for inmovers, outmovers, and removed links assign SITUATION a blank value.
 - 15.1) if RSC = 'I', 'O', or 'R', then SITUATION = " ".
- 16) The software shall assign HT1 for inmover and outmover links an HT1 value equal to negative one.
 - 16.1) if RSC = 'I', or 'O', then HT1 = -1.0.
- 17) The software shall assign HT1 for removed links an HT1 value equal to zero.
 - 17.1) if RSC = 'R', then HT1 = 0.0.
- 18) The software shall assign HT1 to nonmover links separately by domain/tenure cell, situation, and the A.C.E. probability of being a resident as described in Chart 2.

Chart 2: Assignment of SITUATION and HT1 for P-Sample

| SITUATION | Description of the Duplicate Links | Variable Description/Specifics | RPROB | HT1 |
|-----------|---|--|--------------|---------|
| 1 | If the P-sample Record is linked to a GQ census record | If TQGGTYP not '000' | If RPROB ≥ 0 | 0.0 |
| 2 | If both the P-sample record is 18+ and the census record is 18+ and either the P-sample record is a child of the reference person or the census record is a child of the reference person but not both. | If (AGE2 not = '1' and RELAT2 = '2') and (TQAGE > '017' and TQREL not = '03', '04', '05') or If (AGE2 not = '1' and RELAT2 not = '2') and (TQAGE > '017' and TQREL = '03', '04', '05') If (AGE2 not = '1' and RELAT2 = '2') and (TQAGE > '017' and TQREL not = '03', '04', '05') is true If (AGE2 not = '1' and RELAT2 not = '2') and (TQAGE > '017' and TQREL = '03', '04', '05') is true | If RPROB = 0 | 0.0 |
| 3 | If this is strictly a whole household of duplicate links, i.e. every record in the P-sample housing unit has a duplicate link to a whole household of census person records. | NDATDFC = tally of P-sample links in P-sample households to same census household = TNP This tally is the number of records within each P-sample HU/census HU combination. For P-sample record, unique HU ID is the first 15 characters from SID For census record, unique HU ID is the first 12 characters from TID | If RPROB = 0 | 0.0 |
| 4 | If the P-sample record and the census record are children ages 0-17. | If AGE2 = '1' and RELAT2 = '2' and TQAGE ≤ '017' and TQREL = '03', '04', '05' | If RPROB = 0 | 0.0 |
| 5 | All remaining links | | If RPROB > 0 | see 19) |

19) The software shall assign the HT1 for situations 3, 4, and 5 for each domain/tenure cell to the ZT1 computed for the E-sample situations 3, 4, 5 and domain/tenure cells, respectively.

20) The software shall, for values of HT1 less than or equal to zero, let HT1, HT2, HT3, and HT4 be equal.

20.1) If HT1 = 0, then HT2 = HT3 = HT4 = 0.

20.2) If HT1 = -1.0, then HT2 = HT3 = HT4 = -1.0.

- 21) The software shall for HT1 greater than zero, assign the remaining HTs as follows:
 - 21.1) $HT2 = HT1 + 1/3 (1 - HT1)$
 - 21.2) $HT3 = HT1 + 2/3 (1 - HT1)$
 - 21.3) $HT4 = 1$

- 22) The software shall provide additional statistical output for each domain/tenure cell, SITUATION, RPROBIND, and HT (HT1 through HT4) crosstab:
 - ▶ counts of P-sample duplicate link records ($\sum 1$)
 - ▶ weighted counts using PTESFINWT of P-sample duplicate link records ($\sum PTESFINWT$)

- 23) The software shall calculate HT5, HT6, HT7, HT8 as HT1, HT2, HT3, HT4, respectively, above using ZT2 in place of ZT1 for the corresponding E-sample situations and domain/tenure cells.
 - 23.1) The new variable name HT5 is calculated as HT1 above.
 - 23.2) The new variable name HT6 is calculated as HT2 above.
 - 23.3) The new variable name HT7 is calculated as HT3 above.
 - 23.4) The new variable name HT8 is calculated as HT4 above.

D. E- and P-Sample Duplicate/Estimation Integration Output Files

- 1) The software shall round all ZTs and all HTs to 8 decimal places using standard rounding procedures.

- 2) The software shall append the following newly created variables from the above Integration Process to the E-sample input file, the E-sample Duplicate Link File.
 - 2.1) SITUATION
 - 2.2) DTCELL
 - 2.3) CEPROBIND
 - 2.4) ZT1
 - 2.5) ZT2

See Attachment A for a record layout of this output file, the E-Sample Duplicate/Estimation Integration Output File.

- 3) The software shall append the following newly created variables from the above Integration Process to the P-sample input file, the P-sample Duplicate Link File.
 - 3.1) SITUATION

- 3.2) DTCELL
- 3.3) RPROBIND
- 3.4) HT1
- 3.5) HT2
- 3.6) HT3
- 3.7) HT4
- 3.8) HT5
- 3.9) HT6
- 3.10) HT7
- 3.11) HT8

See Attachment A for a record layout of this output file, the P-Sample Duplicate/Estimation Integration Output File.

E. Full E-Sample File

See Attachment B for a record layout.

- 1) The software shall round all ZTs to 8 decimal places using standard rounding procedures.
- 2) The software shall use the following rule for appending variables located on the E-sample Duplicate Link File to the Full E-sample File that has been post-stratified. See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-26 for details of post-stratification.
 - 2.1) SID on the E-sample Duplicate Link File is a concatenation of PUID, PSEQ, and PNC from the Full E-sample File.
SID = PUID(12)/PSEQ(2)/PNC(5).
- 3) The software shall append the following Statistical Matching variables located on the E-sample Duplicate Link File to the Full E-sample File.
 - 3.1) SID
 - 3.2) TID
- 4) The software shall append the following newly created variables from the above Duplicate/Estimation Integration Process to the Full E-sample File.
 - 4.1) SITUATION
 - 4.2) DTCELL
 - 4.3) CEPROBIND
 - 4.4) ZT1
 - 4.5) ZT2

- 5) The software shall append the following Duplicate Link Analysis variables located on the E-sample Duplicate Link File to the Full E-sample File.
 - 5.1) ETARGET
 - 5.2) PT1
 - 5.3) PT2

- 6) The software shall append the following Statistical Modeling variables located on the E-sample Duplicate Link File to the Full E-sample File.
 - 6.1) GEOCAT
 - 6.2) GEOCAT2

- 7) The software shall, after appending the data in E.4 above, assign the probability of correct enumeration with reinstates/deletes given a duplicate link (ZT1) and the probability of correct enumeration without reinstates/deletes given a duplicate link (ZT2) a value of zero for E-sample records not on the E-sample Duplicate Link File.

- 8) The software shall, after appending the data in E.5 above, assign the probability of duplication, including reinstates and deletes (PT1) and the probability of duplication, not including reinstates and deletes (PT2) a value of zero for E-sample records not on the E-sample Duplicate Link File.

F. Full P-Sample File

See Attachment C for a record layout.

- 1) The software shall round all HTs to 8 decimal places using standard rounding procedures.

- 2) The software shall use the following rule for appending variables located on the P-sample Duplicate Link File to the Full P-sample File that has been post-stratified. See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-26 for details of post-stratification.
 - 2.1) SID on the P-sample Duplicate Link File is a concatenation of CLUSTER, IL_MAP_SPOT, UNIT_ID, MOVER, and PERID from the Full P-sample File. MOVER is a character variable set by Mule by recoding MOVERPER, RSC, and RPROB. The remaining variables are the unique identifier for a P-sample record.
 SID =
 CLUSTER(6)/IL_MAP_SPOT(5)/UNIT_ID(4)/MOVER(1)/PERID(2)

- 3) The software shall append the following Statistical Matching variables located on the P-sample Duplicate Link File to the Full P-sample File.
 - 3.1) SID
 - 3.2) TID

- 4) The software shall append the following newly created variables from the above Duplicate/Estimation Integration Process to the Full P-sample File.
 - 4.1) SITUATION
 - 4.2) DTCELL
 - 4.3) RPROBIND
 - 4.4) HT1
 - 4.5) HT2
 - 4.6) HT3
 - 4.7) HT4
 - 4.8) HT5
 - 4.9) HT6
 - 4.10) HT7
 - 4.11) HT8

- 5) The software shall append the following Duplicate Link Analysis variables located on the P-sample Duplicate Link File to the Full P-sample File.
 - 5.1) ETARGET
 - 5.2) PT1
 - 5.3) PT2

- 6) The software shall append the following Statistical Modeling variables located on the P-sample Duplicate Link File to the Full P-sample File.
 - 6.1) GEOCAT
 - 6.2) GEOCAT2

- 7) The software shall, after appending the data in F.4 above, assign the probability of residence with reinstates/deletes given a duplicate link (HT1, HT2, HT3, HT4) and the probability of residence without reinstates/deletes given a duplicate link (HT5, HT6, HT7, HT8) a value of zero for P-sample records not on the P-sample Duplicate Link File.

- 8) The software shall, after appending the data in F.5 above, assign the probability of duplication, including reinstates and deletes (PT1) and the probability of duplication, not including reinstates and deletes (PT2) a value of zero for P-sample records not on the P-sample Duplicate Link File.

E- and P-Sample Duplicate/Estimation Integration Output File Layout

Below is the layout for the E- and P-sample Duplicate/Estimation Integration Output Files. This production output file is the E- and P-sample Duplicate Link Files with variables from the Duplicate/Estimation Integration Process appended. The layout of this file is identical whether referring to the E or the P sample. For this reason, some P-sample variables may be blank when viewing characteristics that pertain to the E-sample and vice versa. This layout is separated by "Headers" which are in **bold**. These "Headers" represent the source of the variables contained within that section.

E- and P-Sample Duplicate/Estimation Integration Output Files

| Name | Variable Description | Position | Length |
|---------------------------------------|---|----------|--------|
| STATISTICAL MATCHING VARIABLES | | | |
| SID | Source (E- or P-sample) Person ID For E-sample records this is PUID(12)/PSEQ(2)/PNC(5) For P-sample records this is CLUST(6)/MSN(5)/WMSN(4)/MOVER(1)/PER(2) MOVER was a character variable set by Mule by recoding MOVERPER, RSC, and RPROB. The remaining variables are the unique identifier for a P-sample record. Unique HU ID for E-sample record: first 12 characters of the person ID (SID): PUID from HCUF Unique HU ID for P-sample record: first 15 characters of the person ID (SID): CLUST(6)/MSN(5)/WMSN(4) | 001-019 | 19 |
| SCPAGE | Source Computed Age | 020-022 | 3 |
| SRMOB | Source Month of Birth | 023-024 | 2 |
| SRDOB | Source Day of Birth | 025-026 | 2 |
| TID | Target (Census) Person ID For Census records this is PUID(12)/PSEQ(2)/PNC(5) Unique HU ID for Census records: first 12 characters of the person ID (SID): PUID from HCUF | 027-045 | 19 |
| TCPAGE | Target Computed Age | 046-048 | 3 |
| TRMOB | Target Month of Birth | 049-050 | 2 |
| TRDOB | Target Day of Birth | 051-052 | 2 |
| BLOCKID | Blocking ID for regular 2 nd -stage processing | 053-060 | 8 |
| IBLOCKID | Blocking ID for inverted 2 nd -stage processing | 061-068 | 8 |

| Name | Variable Description | Position | Length |
|---|--|----------|--------|
| MSCORE | Match score for modeling From 2 nd -stage if HU to HU link From 1 st -stage if HU to GQ link Blank if only from inverted processing | 069-078 | 10 |
| FMSCORE | Match score for regular 1 st stage processing | 079-088 | 10 |
| IFMSCORE | Match score for inverted 1 st stage processing | 089-098 | 10 |
| SMSCORE | Match score for regular 2 nd stage processing | 099-108 | 10 |
| ISMSCORE | Match score for inverted 2 nd stage processing | 109-118 | 10 |
| HCEF BLOCK RECORD CHARACTERISTICS FOR E SAMPLE (blank for P sample) Formed by "S" concatenated with the HCEF variable name. | | | |
| SBKN | Collection block number of the source record | 119-123 | 5 |
| SBKP | Collection block part of the source record | 124-124 | 1 |
| SAIR | American Indian reservation/ANVSA/TDSA/TJSA of the source record | 125-128 | 4 |
| SAA | Assignment Area of source record | 129-134 | 6 |
| SACER | A.C.E. ring indicator of source record | 135-135 | 1 |
| HCEF HOUSING UNIT RECORD CHARACTERISTICS FOR E SAMPLE (blank for P sample) Formed by "S" concatenated with the HCEF variable name. | | | |
| SMSOUR | MAF source flag of source record | 136-137 | 2 |
| SMAILD | Mail return check-in date MM/DD of source record | 138-141 | 4 |
| SUAA | Undeliverable as addressed (UAA) of the source record | 142-142 | 1 |
| SCEU | Coverage edit follow-up (CEFU) of the source record | 143-143 | 1 |
| SNRU | Non-response follow-up universe of the source record | 144-144 | 1 |
| SCIU | Coverage improvement follow-up (CIFU) of the source record | 145-145 | 1 |
| SUBSA | Units at basic street address of the source record | 146-149 | 4 |
| SSTENURE | "Is this house, apartment, or mobile home?" of the source record | 150-150 | 1 |
| SFTENURE | STENURE edit/allocation flag of the source record | 151-151 | 1 |
| SFINST | Final status of source record | 152-152 | 1 |
| SSFINST | Source of FINST and NP for source record | 153-153 | 1 |
| SRFT | Form type of source record HU | 154-155 | 2 |
| SRHHMEM | Household member (enumerator only) of source record | 156-156 | 1 |
| SNP | Estimated number of people of source record | 157-158 | 2 |
| HCEF PERSON RECORD CHARACTERISTICS FOR E SAMPLE (blank for P sample) Formed by "S" concatenated with the HCEF variable name. | | | |
| SPFT | Form type of source record PER | 159-160 | 2 |
| SPRT | PER form type of source record | 161-161 | 1 |
| SQREL | Relationship of source record | 162-163 | 2 |
| SFREL | QREL edit/allocation flag of source record | 164-164 | 1 |
| HCUF HOUSING UNIT RECORD CHARACTERISTICS FOR E SAMPLE (blank for P sample) Formed by "S" concatenated with the HCUF variable name with one exception, variable SHHMEM. | | | |

Attachment A

| Name | Variable Description | Position | Length |
|---|---|----------|--------|
| SMAILS | Mail check-in source of source record | 165-165 | 1 |
| SFVU | Field verification universe of source record | 166-166 | 1 |
| SRSOURCE | Source of return (recode)(from DRF2 processing) of source record | 167-168 | 2 |
| SUSTAT | Unit status of source record | 169-170 | 2 |
| SNRD | NRFU check-in month/day of source record | 171-174 | 4 |
| SNRS | NRFU status of source record | 175-175 | 1 |
| SNRC | NRFU vacancy status of source record | 176-176 | 1 |
| SFVS | Field verification status of source record | 177-177 | 1 |
| SCID | CIFU check-in month/day of source record | 178-181 | 4 |
| SCIS | CIFU status of the source record | 182-182 | 1 |
| SCIC | CIFU vacancy status of the source record | 183-183 | 1 |
| SREPDAT | Earliest form processing date of the source record | 184-187 | 4 |
| SRCMODE | Response collection mode of the source record | 188-188 | 1 |
| SHHMEM | Household member (enumerator only) of the source record | 189-189 | 1 |
| HCUF PERSON RECORD CHARACTERISTICS FOR E SAMPLE (blank for P sample) | | | |
| Formed by "S" concatenated with the HCUF variable name. | | | |
| SPCMODE | Response collection mode of the source record | 190-190 | 1 |
| SPCLANG | Language of captured form of the source record | 191-191 | 1 |
| E- AND P-SAMPLE PERSON DUAL SYSTEM ESTIMATION VARIABLES | | | |
| CST | Current FIPS State Code | 192-193 | 2 |
| REGION | Census Region 1=Northeast 2=Midwest 3=South 4=West 0=Puerto Rico | 194-194 | 1 |
| DIV | Census Division 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 0=Puerto Rico | 195-195 | 1 |
| AICIND | American Indian Country Indicators 0=Not American Indian Country 1=American Indian Reservation/Trust Land 2=Oklahoma Tribal Statistical Area (OTSA) 3=Alaska Native Village Statistical Area (ANVSA) 4=Tribal Designated Statistical Area (TDSA) | 196-196 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|---------|--|----------|--------|
| TEA | Type of Enumeration Area 1=Mailout/Mailback 2=Update/Leave 3=List/Enumerate 4=Remote Alaska (out of scope) 5=Rural Update/Enumerate 6=Military in Update/Leave 7=Urban Update/Leave 8=Urban Update/Enumerate 9=Mailout/Mailback to Update/Leave Conversion | 197-197 | 1 |
| CCOU | Current FIPS County Code | 198-200 | 3 |
| TRACT | Pseudo-tract Number | 201-206 | 6 |
| CLUSTER | Cluster Number and Check Digit | 207-212 | 6 |
| BLOCK | Block Number and Suffix | 213-218 | 6 |
| LCO | Local Census Office | 219-222 | 4 |
| RACE | Race Code 1=Other Race 2=Pacific Islander (PI)(includes Native Hawaiians) 3=PI and Other Race 4=Asian 5=Asian and Other Race 6=Asian and PI 7=Asian, PI and Other Race 8=American Indian or Alaska Native (AI) 9=AI and Other Race 10=AI and PI 11=AI, PI, and Other Race 12=AI and Asian 13=AI, Asian, and Other Race 14=AI, Asian, and PI 15=AI, Asian, PI, and Other Race 16=Black 17=Black and Other Race 18=Black and PI 19=Black, PI, and Other Race 20=Black and Asian 21=Black, Asian, and Other Race 22=Black, Asian, and PI 23=Black, Asian, PI, and Other Race 24=Black and AI 25=Black, AI, and Other Race 26=Black, AI, and PI 27=Black, AI, PI, and Other Race 28=Black, AI, and Asian 29=Black, AI, Asian, and Other Race 30=Black, AI, Asian, and PI 31=Black, AI, Asian, PI, and Other Race 32=White 33=White and Other Race | 223-224 | 2 |

Attachment A

| Name | Variable Description | Position | Length |
|----------|---|----------|--------|
| | 34=White and PI | | |
| | 35=White, PI, and Other Race | | |
| | 36=White and Asian | | |
| | 37=White, Asian, and Other Race | | |
| | 38=White, Asian, and PI | | |
| | 39=White, Asian, PI, and Other Race | | |
| | 40=White and AI | | |
| | 41=White, AI, and Other Race | | |
| | 42=White, AI, and PI | | |
| | 43=White, AI, PI, and Other Race | | |
| | 44=White, AI, and Asian | | |
| | 45=White, AI, Asian, and Other Race | | |
| | 46=White, AI, Asian, and PI | | |
| | 47=White, AI, Asian, PI, and Other Race | | |
| | 48=White and Black | | |
| | 49=White, Black, and Other Race | | |
| | 50=White, Black, and PI | | |
| | 51=White, Black, PI, and Other Race | | |
| | 52=White, Black and Asian | | |
| | 53=White, Black, Asian, and Other Race | | |
| | 54=White, Black, Asian, and PI | | |
| | 55=White, Black, Asian, PI, and Other Race | | |
| | 56=White, Black, and AI | | |
| | 57=White, Black, AI, and Other Race | | |
| | 58=White, Black, AI, and PI | | |
| | 59=White, Black, AI, PI, and Other Race | | |
| | 60=White, Black, AI, and Asian | | |
| | 61=White, Black, AI, Asian, and Other Race | | |
| | 62=White, Black, AI, Asian, and PI | | |
| | 63=White, Black, AI, Asian, PI, and Other Race | | |
| ST | Collection FIPS State Code | 225-226 | 2 |
| COU | Collection FIPS County Code | 227-229 | 3 |
| FINMAT | Final Match Code | 230-231 | 2 |
| FUFLAG | DSE Follow-up Flag | 232-232 | 1 |
| | Blank=No one in household needs follow-up | | |
| | 0=Someone in household needs follow-up but person doesn't | | |
| | 1=Person needs follow-up | | |
| | 2=Person needs follow-up (special question) | | |
| TESPER | TES Person Indicator | 233-233 | 1 |
| | 0=Not TES Person | | |
| | 1=TES Person | | |
| MATEIND | E-Sample Indicator of Primary Person | 234-234 | 1 |
| | 0=No Primary Person | | |
| | 1=Primary Person in E-Sample | | |
| | 3=Primary Person in Surrounding Block | | |
| FU_CODE1 | After Follow-up Code | 235-235 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|----------|---|----------|--------|
| FU_CODE2 | Recoded After Follow-Up Code 1=Potentially fictitious (FU_CODE1 = "b") 2=Potentially lived elsewhere on census day (FU_CODE1 = "e", "f", or "g") 3=Person went to follow-up (FU_CODE2 ≠ 1 or 2) 8=Person went to follow-up (no information used) (FU_CODE1 is blank and FUFLAG = 1 or 2) 9=Person did not go to follow-up (FU_CODE1 is blank and FUFLAG = 0, 3, or blank) | 236-236 | 1 |
| TENURE2 | Recoded Tenure 1=Owner 2=Renter | 237-237 | 1 |
| AGE2 | Age Category 1=0-17 2=18-29 3=30-49 4=50+ | 238-238 | 1 |
| RACE2 | Recoded Race for Hispanic Origin Imputation 0=Missing 1=White 2=Other race or white and other race 3=Remaining race categories | 239-239 | 1 |
| TENIFL | Imputation Flag for Recoded Tenure 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 240-240 | 1 |
| AGEIFL | Imputation Flag for Age Category 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 241-241 | 1 |
| SEXIFL | Imputation Flag for Sex 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 242-242 | 1 |
| HISPIF | Imputation Flag for Recoded Hispanic Origin 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 243-243 | 1 |
| RACEIF | Imputation Flag for Race 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 244-244 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|----------|--|----------|--------|
| BFUGP | E-Sample Before Follow-up Match Code Group 1=Matches needing follow-up 2=Possible matches 3=Nonmatches from partial household nonmatches 4=Nonmatches from whole-household nonmatches where HU matched in HU matching 5=Nonmatches from conflicting households where E-Sample HU was not in regular NRFU 6=Nonmatches from conflicting households where E-Sample HU was in regular NRFU (NRU=3) 7=Nonmatches from whole-household nonmatches where HU did not match during HU matching 8=Persons resolved before follow-up 9=Persons with insufficient information for matching 10=TES Persons | 245-246 | 2 |
| FIPS_MSA | MSA/CMSA FIPS Code 9999 = Non-MSA | 247-250 | 4 |
| MSAGROUP | MSA Group L=Large (U.S.) M=Medium (U.S.) S=Small (U.S.) X=Non-MSA (U.S.) 1=San Juan CMSA (PR) 2=Other MSA (PR) 3=Non-MSA (PR) | 251-251 | 1 |
| RETRATE | Tract-level Return Rate - See DSSD memos Q-38 and Q-48 for details | 252-256 | 5 |
| RRNUM | Numerator of Return Rate - See DSSD memos Q-38 and Q-48 for details | 257-266 | 10 |
| RRDEN | Denominator of Return Rate - See DSSD memos Q-38 and Q-48 for details | 267-276 | 10 |
| DOMAIN | A.C.E. Race/Hispanic Origin Domain 1=American Indian on Reservation 2=American Indian off Reservation 3=Hispanic 4=Non-Hispanic Black 5=Native Hawaiian or Pacific Islander 6=Non-Hispanic Asian 7=Non-Hispanic White or "Some other race" | 277-277 | 1 |
| AGESEX | Age/Sex Post-Stratification Variable 1=0-17 Male and Female 2=18-29 Male 3=18-29 Female 4=30-49 Male 5=30-49 Female 6=50+ Male 7=50+ Female | 278-278 | 1 |
| POSTSTR | A.C.E. Pre-Collapsed Post-Stratum Code - See DSSD memos Q-38 and Q-48 for details. | 279-281 | 3 |
| CPOSTSTR | A.C.E. Post-Collapsed Post-Stratum Code - See DSSD memos Q-38 and Q-48 for details. | 282-284 | 3 |

| Name | Variable Description | Position | Length |
|--|---|----------|--------|
| E-SAMPLE PERSON DUAL SYSTEM ESTIMATION VARIABLES (blank for P sample) | | | |
| ECLUSURB | Estimated Cluster Urbanicity 1=Urban with Population \geq 250,000 2=Other Urban 3=Non-Urban | 285-285 | 1 |
| MPSIND | Indicator for Matching Person in P Sample Blank=Not matched N=Matched to non P Sample P=Matched to P Sample | 286-286 | 1 |
| MMSPOT | Matching Enhanced IL Map Spot Number | 287-291 | 5 |
| MUNIT_ID | Matching Within Map Spot Unit ID | 292-295 | 4 |
| MPERID | Matching A.C.E. Person ID | 296-299 | 4 |
| NESAMP | Total E-sample Persons in Household | 300-301 | 2 |
| INP | Number of Persons at this Housing Unit | 302-305 | 4 |
| RTENURE | Tenure 1=Owned with mortgage or loan 2=Owned free and clear, without mortgage 3=Rented for cash rent 4=Occupied without payment of cash rent 9=Missing | 306-306 | 1 |
| PAGE | Age 999=Missing | 307-309 | 3 |
| CPAGE | Computed Age 999=Missing | 310-312 | 3 |
| PSEX | Sex Code 1=Male 2=Female | 313-313 | 1 |
| PSPAN | Hispanic Code 1-Non Hispanic 2-Hispanic | 314-314 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|---------|--|----------|--------|
| PRELSUP | Relationship to Reference Person 1=Census Reference Person 2=Husband/wife 3=Natural born son/daughter 4=Adopted son/daughter 5=Stepson/stepdaughter 6=Brother/sister 7=Father/mother 8=Grandchild 9=Parent-in-law 10=Son-in-law/Daughter-in-law 11=Other relative 12=Roomer, boarder 13=Housemate/roommate 14=Unmarried partner 15=Foster child 16=Other nonrelative 17=Person from another form during linking 18=Person from another return during PSA 19=Missing | 315-316 | 2 |
| NUMEDUP | Number of Duplicates with E-Sample Persons (for which person is primary) | 317-317 | 1 |
| NUMDUP | Number of Duplicates with Persons Subsampled Out of the E-Sample. | 318-319 | 2 |
| NRU | Nonresponse Follow-up Universe 0=Universe not set 1=Not in NRFU, data received 2=Not in NRFU, but NRD, NRS, NRC, and NRPOP were set on DMAF by Update/Enumerate or List/Enumerate 3=in NRFU, Nonresponse 4=in NRFU, too late for mailout | 320-320 | 1 |
| STRCDE | Structure Code 1=Single Unit 2=Multi-unit | 321-321 | 1 |
| EWGHT | E-Sample Weight (Trimmed Weight) | 322-335 | 14.6 |
| FAGE | HCEF Age Edit/Allocation Flag 0=Consistent as reported 1=Age only 2=Date of birth only 3=Inconsistent age and date of birth 4=Allocated from hot deck 9=E-Sample person did not match to the HCEF | 336-336 | 1 |
| FRACE | HCEF Race Edit/Allocation Flag 0=As reported 1=Code changed through consistency edit 3=Classified from race response to Hispanic Origin question 4=Allocated from within household 5=Allocated from hot deck 9=E-Sample person did not match to the HCEF | 337-337 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|--|--|----------|--------|
| FTENURE | HCEF Tenure Edit/Allocation Flag 0=As reported 1=Assigned by consistency check 4=Allocated from hot deck 9=E-Sample person did not match to the HCEF | 338-338 | 1 |
| FSPAN | HCEF Hispanic Origin Edit/Allocation Flag 0=1 reported origin 2=Multiple response given a unique Hispanic or Non-Hispanic code 3=Assign Hispanic from race code 4=Allocated from within household 5=Allocated from hot deck (surname used) 6=Allocated from hot deck (surname not used) 9=E-Sample person did not match to the HCEF | 339-339 | 1 |
| FSEX | HCEF Sex Edit/Allocation Flag 0=As reported 1=From first name 2=Edited 4=Allocated from hot deck 5=Allocated from consistency check 9=E-Sample person did not match to the HCEF | 340-340 | 1 |
| FREL | HCEF Relationship to Reference Person Edit/Allocation Flag 0=As reported from code box 1=As reported from write-in 2=Value changed for household consistency 4=Allocated from hot deck 5=Allocated from consistency check 9=E-Sample person did not match to the HCEF | 341-341 | 1 |
| RELATE2 | Recoded Relationship to Reference Person 0=Missing or from another return 1=Spouse 2=Child 3=Sibling 4=Parent (includes parent-in-law) 5=Other relative (includes son/daughter-in-law) 6=Nonrelative 9=Census Reference Person | 342-342 | 1 |
| CEPROBI | Probability of Correct Enumeration-Initial | 343-352 | 10.8 |
| CEPROBF | Probability of Correct Enumeration-Final | 353-363 | 11.8 |
| ETESFINWT | E-sample Final TES-adjusted Weight | 364-377 | 14.6 |
| P-SAMPLE PERSON DUAL SYSTEM ESTIMATION VARIABLES (blank for E sample) | | | |
| FIPS_STA | FIPS State Code | 378-379 | 2 |
| FINOUTI | Final A.C.E. Outcome Code for Interview Day 1-3 are interviews 4-10 are noninterviews 11 is vacant 12 is delete | 380-381 | 2 |
| MID | Census Unit ID of Matching Census Person | 382-393 | 12 |

Attachment A

| Name | Variable Description | Position | Length |
|---------|---|----------|--------|
| MSEQ | Census Return Sequence Number of Matching Census Person | 394-395 | 2 |
| MPNC | Computed Census Person Number of Matching Census Person | 396-400 | 5 |
| POSSPSC | Total Possible P-sample Persons in Household for Census Day (Final, after follow-up) | 401-402 | 2 |
| NDATDFC | Number of Data-Defined Possible P-sample Persons in Household for Census Day (Final, after follow-up) | 403-404 | 2 |
| POSSPSI | Total P-Sample Persons in Household for Interview Day | 405-406 | 2 |
| NDATDFI | Number of Data-Defined P-Sample Persons in Household for Interview Day | 407-408 | 2 |
| TENURE | Tenure (from the CAPI path in which the person was collected) 1=Own (with mortgage or own free and clear) 2=Rent 3=Occupy without payment 9=Missing | 409-409 | 1 |
| TOBA | Type of Basic Address 1=One-family house-detached or attached 2=Basic address with 2 or more housing units 3=Mobile home/trailer not in a park 4=Mobile home/trailer park 5=One-family unit in special place 6=Multi-unit in special place 7=Other | 410-410 | 1 |
| AGE | Age 999=Missing | 411-413 | 3 |
| SEX | Sex Code 1=Male 2=Female | 414-414 | 1 |
| HISP | Hispanic Code 1=Not Spanish/Hispanic/Latino 2=Mexican, Mexican-American, Chicano 3=Puerto Rican 4=Cuban 5=Other Spanish/Hispanic/Latino 9=Missing | 415-415 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|----------|---|----------|--------|
| RELATE | Relationship to Reference Person 1=A.C.E. Reference Person 2=Husband/wife 3=Natural born or adopted son/daughter 4=Stepson/stepdaughter 5=Brother/sister 6=Father/mother 7=Grandchild 8=Other relative 9=Roomer, boarder, or foster child 10=Housemate/roommate 11=Unmarried partner 12=Other nonrelative 13 (Not Used in P-Sample file) 14=Missing | 416-417 | 2 |
| PRXYIN | Proxy/Nonproxy Respondent 1=Proxy 2=Nonproxy | 418-418 | 1 |
| MOVERPER | Person Mover Flag 1=Nonmover 2=Inmover 3=Outmover | 419-419 | 1 |
| MOVERHH | Household Mover Flag 1=Person from outmover household 2=Other | 420-420 | 1 |
| RSC | Computer Residence Status Code (A.C.E. Status Code) N=Nonmover I=Inmover O=Outmover U=Unresolved R=Remove | 421-421 | 1 |
| HISP2 | Recoded Hispanic Origin 1=Non-Hispanic 2=Hispanic | 422-422 | 1 |
| RTYPE | Recoded Type of Basic Address 1=One-family 2=Apartments (2 or more) 3=Other (TOBA=3-7) | 423-423 | 1 |
| RELAT2 | Recoded Relationship to Reference Person 0=Missing 1=Spouse 2=Child 3=Sibling 4=Parent 5=Other relative 6=Nonrelative 9=A.C.E. Reference Person | 424-424 | 1 |
| RPROB | Probability of Residence (Set to 0 for inmovers) | 425-434 | 10.8 |

Attachment A

| Name | Variable Description | Position | Length |
|---|--|----------|--------|
| MPROB | Match Probability (Set to 0 for in-movers and nonresidents) | 435-445 | 11.8 |
| PWGHT | Initial P-sample Weight (Trimmed Weight) | 446-459 | 14.6 |
| NIWGTO | P-sample Noninterview Adjusted Weight based on Census Day Interview Status | 460-474 | 15.6 |
| NIWGTI | P-sample Noninterview Adjusted Weight based on A.C.E. Interview Day Interview Status | 475-489 | 15.6 |
| PTESFINWT | P-sample Final TES-adjusted Weight for Census Day | 490-504 | 15.6 |
| RRATEIND | Return Rate Indicator - See DSSD memos Q-38 and Q-48 for details. 1=High 0=Low 9=Not Applicable | 505-505 | 1 |
| A.C.E. INTERVIEWING CHARACTERISTICS (blank for E sample) | | | |
| PRXFLG | Proxy Interview Blank is valid | 506-506 | 1 |
| INTFLG | Telephone Interview Blank is valid | 507-507 | 1 |
| INTDATE | Date of Interview | 508-515 | 8 |
| PRTYPE | Proxy Respondent Type | 516-516 | 1 |
| HCEF BLOCK RECORD CHARACTERISTICS FOR LINKED CENSUS RECORD Formed by "T" concatenated with the HCEF variable name. | | | |
| TST | Collection FIPS State Code | 517-518 | 2 |
| TCOU | Collection FIPS County Code | 519-521 | 3 |
| TBKN | Collection Block Number of the Target Record | 522-526 | 5 |
| TBKP | Collection Block Part of the Target Record | 527-527 | 1 |
| TTEA | Type of Enumeration Area for the Target Record | 528-528 | 1 |
| TTRACT | Nonresponse Follow-up Tract of the Target Record | 529-534 | 6 |
| TAIR | American Indian Reservation/ANVSA/TDSA/TJSA of the Target Record | 535-538 | 4 |
| TAA | Assignment Area of the Target Record | 539-544 | 6 |
| TACER | A.C.E. Ring of the Target Record | 545-545 | 1 |
| HCEF HOUSING UNIT RECORD CHARACTERISTICS FOR LINKED CENSUS RECORD Formed by "T" concatenated with the HCEF variable name. | | | |
| TMSOUR | MAF Source Flag of Target Record | 546-547 | 2 |
| TMAILD | Mail Return Check-in MM/DD of Target Record | 548-551 | 4 |
| TUAA | Undeliverable as Addressed (UAA) of Target Record | 552-552 | 1 |
| TCEU | Coverage Edit Follow-up (CEFU) of Target Record | 553-553 | 1 |
| TNRU | Nonresponse Follow-up Universe of Target Record | 554-554 | 1 |
| TCIU | Coverage Improvement Follow-up | 555-555 | 1 |
| TUBSA | Units at the Basic Street Address of Target Record | 556-559 | 4 |
| TSTENURE | "Is this House, Apartment, or Mobile Home" of Target Record | 560-560 | 1 |
| TFTENURE | STENURE Edit/Allocation of Target Record | 561-561 | 1 |

| Name | Variable Description | Position | Length |
|---|---|----------|--------|
| TRFT | Form Type of Target Record | 562-563 | 2 |
| TNP | Estimated Number of People of Target Record | 564-568 | 5 |
| TRHHMEM | Household Member (Enumerator Only) of Target Record | 569-569 | 1 |
| HCEF PERSON RECORD CHARACTERISTICS FOR LINKED CENSUS RECORD | | | |
| Formed by "T" concatenated with the HCEF variable name. | | | |
| TPFT | Form Type of Target Record | 570-571 | 2 |
| TQSEX | Sex of Target Record | 572-572 | 1 |
| TQAGE | Age of Target Record | 573-575 | 3 |
| TQSPAN | Hispanic/Origin of Target Record | 576-578 | 3 |
| TQGQTYP | Person Group Quarter Type Code of Target Record | 579-581 | 3 |
| TFSEX | QSEX Edit/Allocation Flag of Target Record | 582-582 | 1 |
| TFAGE | QAGE Edit/Allocation Flag | 583-583 | 1 |
| TFSPAN | Hispanic Origin (QSPAN) Edit/Allocation Flag of Target Record | 584-584 | 1 |
| TFRACE | RACE (QRACE1 - QRACE8) Edit /Allocation Flag of Target Record | 585-585 | 1 |
| TFGQTYP | QGQTYPE Edit/Allocation Flag of Target Record | 586-586 | 1 |
| TPOSTSTR | A.C.E. Pre-collapsed Post-stratum Code | 587-589 | 3 |
| TRACERC | Race Recode of Target Record | 590-591 | 2 |
| TPRT | Person Form Type of Target Record | 592-592 | 1 |
| TQREL | Relationship of Target Record | 593-594 | 2 |
| TFREL | QREL Edit/Allocation Flag of Target Record | 595-595 | 1 |
| HCUF HOUSING UNIT RECORD CHARACTERISTICS FOR LINKED CENSUS RECORD | | | |
| Formed by "T" concatenated with the HCUF variable name with one exception, THHMEM. | | | |
| TMAILS | Mail Check-in Source of Target Record | 596-596 | 1 |
| TFVU | Field Verification Universe of Target Record | 597-597 | 1 |
| TRSOURCE | Source of Return(recode)(from DRF2 processing) of Target Record | 598-599 | 2 |
| TUSTAT | Unit Status of Target Record | 600-601 | 2 |
| TNRD | NRFU Check-in MM/DD of Target Record | 602-605 | 4 |
| TNRS | NRFU Status of Target Record | 606-606 | 1 |
| TNRC | NRFU Vacancy Status of Target Record | 607-607 | 1 |
| TFVS | Field Verification Status of Target Record | 608-608 | 1 |
| TCID | CIFU Check-in MM/DD of Target Record | 609-612 | 4 |
| TCIS | CIFU Status of Target Record | 613-613 | 1 |
| TCIC | CIFU Vacancy Status of Target Record | 614-614 | 1 |
| TREPDAT | Earliest form processing date of Target Record | 615-618 | 4 |
| TRCMODE | Response Collection Mode of Target Record | 619-619 | 1 |
| THHMEM | Household Member (enumerator only) of Target Record | 620-620 | 1 |
| TFINST | Final Status of Target Record | 621-621 | 1 |

| Name | Variable Description | Position | Length |
|--|--|----------|--------|
| TSEINST | Source of FINST and NP for Target Record | 622-622 | 1 |
| HCUF PERSON RECORD CHARACTERISTICS FOR LINKED CENSUS RECORD | | | |
| Formed by "T" concatenated with the HCUF variable name. | | | |
| TPCMODE | Response Collection Mode of Target Record | 623-623 | 1 |
| TPCLANG | Language of Captured Form of Target Record | 624-624 | 1 |
| STATISTICAL MODELING VARIABLES | | | |
| BPEOPLEM | Number of People in Source Modeling Unit E-sample-Modeling Unit is 1 st 12 digits of Source ID P-sample-Modeling Unit is 1 st 16 digits of Source ID (Includes Mover Status) | 625-632 | 8 |
| CLUSTGEO | Geographic Distance 1=Within Cluster 2=Surrounding Block 3=Outside Surrounding Block | 633-640 | 8 |
| COUNT | Number of 2 nd Stage Matching Attempts of Source Model Unit Within Geographic Area (GEOCAT2) | 641-648 | 8 |
| ESAMPLE | E-sample Indicator | 649-649 | 1 |
| FS | First-Stage Indicator | 650-650 | 1 |
| GEOCAT | Geographic Category 1=Within Cluster 2=Surrounding Block 3=Outside Surrounding Block, Within Cluster 4=Different County, same State 5=Different State | 651-658 | 8 |
| GEOCAT2 | Geographic Category 2 1=Block 2=Outside Block, Within Tract 3=Outside Tract, Within County 4=Different County, same State 5=Different State | 659-666 | 8 |
| LINK_TO_ESAMPLE | Is Target ID in the E-sample? | 667-667 | 1 |
| MPROBDUP | Probability of Not Observing a Set of Match Score or Better | 668-675 | 8.6 |
| NLINKS | Number of Links Between Source and Target Modeling Units | 676-683 | 8 |
| NLINKSCAT | Category of NLINKS 1=Only 1 2=2 or more | 684-684 | 1 |
| ONE_M_C | Probability of Occurrence between (doesn't account for count) | 685-692 | 8.6 |
| PROBGE | Probability of Match Score of Link is Greater than or Equal to Observed Score | 693-700 | 8.6 |
| PSAMPLE | P-sample Indicator | 701-701 | 1 |
| SPROBDUP | Statistical Probability of Duplication | 703-710 | 8.6 |

Attachment A

| Name | Variable Description | Position | Length |
|--|---|----------|--------|
| AME | Merge Indicator First Character=Analysis File 1=Yes 0=No Second Character=Model File 1=Yes 0=No Third Character=Exact Match File 1=Yes 0=No | 712-714 | 3 |
| EXACT MATCHING VARIABLES (Both P- and E-sample variables) | | | |
| EYAGEG | Age Group, 2-year Intervals from Exact Matching | 715-717 | 3 |
| EYAGE | Age as of Census Day from Exact Matching | 718-720 | 3 |
| ERPMOB | Month of Birth from Exact Matching | 721-722 | 2 |
| ERPDOB | Day of Birth from Exact Matching | 723-724 | 2 |
| EGQFLAG1 | GQ Flag from Exact Matching of First Record 0=HU 1=GQ | 725-725 | 1 |
| EPSEX1 | Sex of First Record | 727-727 | 1 |
| EFINST1 | Final Status of First Record | 728-728 | 1 |
| EGQFLAG2 | GQ Flag from Exact Matching of Second Record 0=HU 1=GQ | 729-729 | 1 |
| EPSEX2 | Sex of Second Record | 731-731 | 1 |
| EFINST2 | Final Status of Second Record | 732-732 | 1 |
| EDCOUNT | Count of Duplicate for Core Model from Exact Matching | 733-737 | 5 |
| ENCOUNTY | Number of Occurrences from Exact Matching | 738-742 | 5 |
| EMODEL | Model from Exact Matching 1=Core Model 2 - 4 as in Fay, R., "Probabilistic Models for Detecting Census Person Duplication," Proceedings of the Survey Research Methods Section, American Statistical Association, 2002. | 743-744 | 2 |
| EGROUP | Group from Exact Matching If Model=1 then group is COU fro HU pop If Model=2, 3, 4 then age category (out of 11) | 745-748 | 4 |
| EGQF1 | Same as EGQFLAG1 | 749-749 | 1 |
| EGQF2 | Same as EGQFLAG2 | 750-750 | 1 |
| EPROBDUP | Estimated Probability Not Including Reinstates and Deletes | 752-759 | 8.6 |
| EPASSIGN | Probability Assign from Exact Matching 1=Probability Assigned 0=Not Assigned | 761-761 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|---|--|----------|--------|
| ENAMEGRP | Name Group from Exact Matching C=Common Non-Hispanic D=Less Common Non-Hispanic N=Unlisted S=Common Hispanic | 762-762 | 1 |
| EGEO | Geographic Distance from Exact Matching 1=County 2=Within State 3=Different State | 763-763 | 1 |
| EDCOUNTF | Count of Duplicates for Core Model from Exact Matching Including Reinstates and Deletes | 764-768 | 5 |
| ENCOUNTYF | Number of Occurrences from Exact Matching Including Reinstates and Deletes | 769-773 | 5 |
| EMODELF | Number of Occurrences Including Reinstates and Deletes 1=Core Model 2 - 4 as in Fay, R., "Probabilistic Models for Detecting Census Person Duplication," Proceedings of the Survey Research Methods Section, American Statistical Association, 2002. | 774-775 | 2 |
| EGROUPF | Group from Exact Matching Including Reinstates and Deletes If Model=1 then group is COU fro HU pop If Model=2, 3, 4 then age category (out of 11) | 776-779 | 4 |
| EPROBDUPF | Estimated Probability Including Reinstates and Deletes | 781-788 | 8.6 |
| EPASSIGNF | Probability Assign from Exact Matching Including Reinstates and Deletes 1=Probability Assigned 0=Not Assigned | 790-790 | 1 |
| EXACT MATCHING VARIABLES (P-sample variables only) | | | |
| EYAGEP | Reported P-sample Age | 791-793 | 3 |
| EPFIPS | State Code for P-sample Record | 794-795 | 2 |
| EPCOU | County Code for P-sample Record | 796-798 | 3 |
| ECPAGEADJ | Adjustment to P-sample Age to Match Census | 799-800 | 2 |
| EXACT MATCHING VARIABLES (E-sample variables only) | | | |
| ORDER12 | Record Indicator for Exact Matching st=Source is Record 1 Target is Record 2 ts=Source is Record 2 Target is Record 1 | 801-802 | 2 |
| DUPLICATE LINK ANALYSIS VARIABLES | | | |
| NRFUTREX | Non-response Follow-up Training Example Case 1=Yes 0=No | 803-803 | 1 |
| ETARGET | Target Record Indicator 1=E-sample Eligible 2=Group Quarters 3=Reinstated 4=Deleted | 804-804 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|---|---|----------|--------|
| OUTSIDE | Outside A.C.E. Search Area 1=Yes 0=No | 805-805 | 1 |
| PROBDUPF | Initial Probability of Duplication with Links to Reinstates and Deletes | 807-814 | 8.6 |
| ADJCELL1 | Adjustment Cell for Probability of Duplication with Links to Reinstates and Deletes | 816-820 | 5 |
| SEST11 | Weighted Estimate of (1 - Exact probability) for exact links where statistical probability equal to 1. For probability with links to reinstates and deletes. | 822-838 | 17.6 |
| SEST12 | Weighted Estimate of Exact probability for exact links where statistical probability equal to 0. For probability with links to reinstates and deletes. | 840-856 | 17.6 |
| TPROBFACTOR1 | Untruncated probability factor for probability with links to reinstates and deletes. | 858-869 | 12.8 |
| PROBFACTOR1 | Probability factor (after truncation) for probability with links to reinstates and deletes. | 871-882 | 12.8 |
| PROBDUP | Initial Probability of Duplication without Links to Reinstates and Deletes | 884-891 | 8.6 |
| ADJCELL2 | Adjustment Cell for Probability of Duplication without Links to Reinstates and Deletes | 893-897 | 5 |
| SEST21 | Weighted Estimate of (1 - Exact probability) for exact links where statistical probability equal to 1. For probability without links to reinstates and deletes. | 899-915 | 17.8 |
| SEST22 | Weighted Estimate of Exact probability for exact links where statistical probability equal to 0. For probability without links to reinstates and deletes. | 917-933 | 17.8 |
| TPROBFACTOR2 | Untruncated probability factor for probability without links to reinstates and deletes. | 935-946 | 12.8 |
| PROBFACTOR2 | Probability factor (after truncation) for probability without links to reinstates and deletes. | 948-959 | 12.8 |
| PT1 | Duplication Probability of E-sample/P-Sample Link Outside A.C.E. Search Area, Includes Links to Reinstated and Deleted Census Records | 961-970 | 10.8 |
| PT2 | Duplication Probability of E-sample/P-Sample Link Outside A.C.E. Search Area, Does Not Include Links to Reinstated and Deleted Census Records | 972-981 | 10.8 |
| INTEGRATION OF DUPLICATE LINKS AND A.C.E. Revision II ESTIMATION | | | |
| SITUATION | Situation Describing the Type of Duplicate Link for A.C.E. E or P Sample | 982-982 | 1 |
| DTCELL | Recoded A.C.E. Race/Hispanic Origin Domain crossed with Tenure 1=Hispanic Owner 2=Hispanic Renter 3=Non-Hispanic Black Owner 4=Non-Hispanic Black Renter 5=Everyone else Owner 6=Everyone else Renter | 983-983 | 1 |
| CEPROBIND | Recoded E-sample A.C.E. Probability of Correct Enumeration (blank for P-sample) 1=Probability of Correction Enumeration greater than zero 0=Probability of Correction Enumeration equal to zero | 984-984 | 1 |
| RPROBIND | Recoded P-sample A.C.E. Probability of Residence (blank for E-sample) 1=Probability of Residence greater than zero 0=Probability of Residence equal to zero | 985-985 | 1 |

Attachment A

| Name | Variable Description | Position | Length |
|------|---|-----------|--------|
| ZT1 | Probability of Correct Enumeration Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records, Used in A.C.E. Revision II estimates (blank for P-sample) – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. | 986-995 | 10.8 |
| ZT2 | Probability of Correct Enumeration Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (blank for P-sample) – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. | 996-1005 | 10.8 |
| HT1 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records, Used in A.C.E. Revision II estimates (blank for E-sample) = $0 \leq HT1 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 1006-1016 | 11.8 |
| HT2 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records (blank for E-sample) = $0 \leq HT2 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 1017-1027 | 11.8 |
| HT3 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records (blank for E-sample) = $0 \leq HT3 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 1028-1038 | 11.8 |
| HT4 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records (blank for E-sample) = $0 \leq HT4 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 1039-1049 | 11.8 |
| HT5 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (blank for E-sample) = $0 \leq HT5 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 1050-1060 | 11.8 |
| HT6 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (blank for E-sample) = $0 \leq HT6 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 1061-1071 | 11.8 |

Attachment A

| Name | Variable Description | Position | Length |
|------|---|-----------|--------|
| HT7 | <p>Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (blank for E-sample)</p> <p>= $0 \leq HT7 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R)</p> | 1072-1082 | 11.8 |
| HT8 | <p>Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (blank for E-sample)</p> <p>= $0 \leq HT8 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R)</p> | 1083-1093 | 11.8 |

A.C.E. Revision II Full E-Sample File Layout

Below is the layout for the A.C.E. Revision II Full E-Sample File. This layout is separated by “Headers” which are in **bold**. These “Headers” represent the source of the variables contained within that section.

A.C.E. Revision II Full E-Sample File

| Name | Variable Description | Position | Length |
|---|--|----------|--------|
| E-SAMPLE PERSON DUAL SYSTEM ESTIMATION | | | |
| CST | Current FIPS State Code | 001-002 | 2\$ |
| REGION | Census Region 1=Northeast 2=Midwest 3=South 4=West 0=Puerto Rico | 003 | 1\$ |
| DIV | Census Division 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 0=Puerto Rico | 004 | 1\$ |
| AICIND | American Indian Country Indicator 0=Not American Indian Country 1=American Indian Reservation/Trust Land 2=Oklahoma Tribal Statistical Area (OTSA) 3=Alaska Native Village Statistical Area (ANVSA) 4=Tribal Designated Statistical Area (TDSA) | 005 | 1 |
| SAMPSTR | Sampling Stratum 1=Small (0-2 housing units) 2=Medium (3-79 housing units) 3=Large (80+ housing units) 4=Medium/Large on American Indian Reservation | 006 | 1 |

Attachment B

| Name | Variable Description | Position | Length |
|----------|---|----------|--------|
| TEA | Type of Enumeration Area 1=Mailout/Mailback 2=Update/Leave 3=List/Enumerate 4=Remote Alaska (out of scope) 5=Rural Update/Enumerate 6=Military in Update/Leave 7=Urban Update/Leave 8=Urban Update/Enumerate 9=Mailout/Mailback to Update/Leave Conversion | 007 | 1 |
| CCOU | Current FIPS County Code | 008-010 | 3\$ |
| TRACT | Pseudo-Tract Number | 011-016 | 6\$ |
| CLUSTER | Cluster Number and Check Digit | 017-022 | 6\$ |
| BLOCK | Block Number and Suffix | 023-028 | 6\$ |
| LCO | Local Census Office | 029-032 | 4\$ |
| ECLUSURB | Estimated Cluster Urbanicity 1=Urban with Population \geq 250,000 2=Other Urban 3=Non-Urban | 033 | 1 |
| TESIND | Targeted Extended Search Indicator 0=TES not conducted for Cluster 1=TES conducted for Cluster | 034 | 1 |
| PUID | Census Unit ID | 035-046 | 12\$ |
| PSEQ | Census Return Sequence Number | 047-048 | 2\$ |
| PNC | Computed Census Person Number | 049-053 | 5\$ |
| MPSIND | Indicator for Matching Person in P Sample Blank=Not matched N=Matched to non P Sample P=Matched to P Sample | 054 | 1\$ |
| MMSPOT | Matching Enhanced IL Map Spot Number | 055-059 | 5\$ |
| MUNIT_ID | Matching Within Map Spot Unit ID | 060-063 | 4\$ |
| MPERID | Matching A.C.E. Person ID | 064-067 | 4\$ |
| DTCODE | Demographic/Tenure Group Code for Cluster | 068-069 | 2 |
| NESAMP | Total E-Sample Persons in Household | 070-071 | 2 |
| INP | Number of Persons at this Housing Unit | 072-075 | 4 |
| RTENURE | Tenure 1=Owned with mortgage or loan 2=Owned free and clear, without mortgage 3=Rented for cash rent 4=Occupied without payment of cash rent 9=Missing | 076 | 1 |
| PAGE | Age 999=Missing | 077-079 | 3 |

Attachment B

| Name | Variable Description | Position | Length |
|-------|---|----------|--------|
| CPAGE | Computed Age 999=Missing | 080-082 | 3 |
| RACE | Race Code 1=Other Race 2=Pacific Islander (PI)(includes Native Hawaiians) 3=PI and Other Race 4=Asian 5=Asian and Other Race 6=Asian and PI 7=Asian, PI and Other Race 8=American Indian or Alaska Native (AI) 9=AI and Other Race 10=AI and PI 11=AI, PI, and Other Race 12=AI and Asian 13=AI, Asian, and Other Race 14=AI, Asian, and PI 15=AI, Asian, PI, and Other Race 16=Black 17=Black and Other Race 18=Black and PI 19=Black, PI, and Other Race 20=Black and Asian 21=Black, Asian, and Other Race 22=Black, Asian, and PI 23=Black, Asian, PI, and Other Race 24=Black and AI 25=Black, AI, and Other Race 26=Black, AI, and PI 27=Black, AI, PI, and Other Race 28=Black, AI, and Asian 29=Black, AI, Asian, and Other Race 30=Black, AI, Asian, and PI 31=Black, AI, Asian, PI, and Other Race 32=White 33=White and Other Race 34=White and PI 35=White, PI, and Other Race 36=White and Asian 37=White, Asian, and Other Race 38=White, Asian, and PI 39=White, Asian, PI, and Other Race 40=White and AI 41=White, AI, and Other Race 42=White, AI, and PI 43=White, AI, PI, and Other Race 44=White, AI, and Asian 45=White, AI, Asian, and Other Race 46=White, AI, Asian, and PI 47=White, AI, Asian, PI, and Other Race 48=White and Black | 083-084 | 2 |

Attachment B

| Name | Variable Description | Position | Length |
|---------|--|----------|--------|
| | 49=White, Black, and Other Race | | |
| | 50=White, Black, and PI | | |
| | 51=White, Black, PI, and Other Race | | |
| | 52=White, Black and Asian | | |
| | 53=White, Black, Asian, and Other Race | | |
| | 54=White, Black, Asian, and PI | | |
| | 55=White, Black, Asian, PI, and Other Race | | |
| | 56=White, Black, and AI | | |
| | 57=White, Black, AI, and Other Race | | |
| | 58=White, Black, AI, and PI | | |
| | 59=White, Black, AI, PI, and Other Race | | |
| | 60=White, Black, AI, and Asian | | |
| | 61=White, Black, AI, Asian, and Other Race | | |
| | 62=White, Black, AI, Asian, and PI | | |
| | 63=White, Black, AI, Asian, PI, and Other Race | | |
| PSEX | Sex Code | 085 | 1 |
| | 1=Male | | |
| | 2=Female | | |
| PSPAN | Hispanic Code | 086 | 1 |
| | 1-Non Hispanic | | |
| | 2-Hispanic | | |
| PRELSUP | Relationship to Reference Person | 087-088 | 2 |
| | 1=Census Reference Person | | |
| | 2=Husband/wife | | |
| | 3=Natural born son/daughter | | |
| | 4=Adopted son/daughter | | |
| | 5=Stepson/stepdaughter | | |
| | 6=Brother/sister | | |
| | 7=Father/mother | | |
| | 8=Grandchild | | |
| | 9=Parent-in-law | | |
| | 10=Son-in-law/Daughter-in-law | | |
| | 11=Other relative | | |
| | 12=Roomer, boarder | | |
| | 13=Housemate/roommate | | |
| | 14=Unmarried partner | | |
| | 15=Foster child | | |
| | 16=Other nonrelative | | |
| | 17=Person from another form during linking | | |
| | 18=Person from another return during PSA | | |
| | 19=Missing | | |
| NUMEDUP | Number of Duplicates with E-Sample Persons (for which person is primary) | 089 | 1 |
| NUMDUP | Number of Duplicates with Persons Subsampled Out of the E-Sample. | 090-091 | 2 |

Attachment B

| Name | Variable Description | Position | Length |
|---------|---|----------|--------|
| NRU | Nonresponse Follow-up Universe 0=Universe not set 1=Not in NRFU, data received 2=Not in NRFU, but NRD, NRS, NRC, and NRPOP were set on DMAF by Update/Enumerate or List/Enumerate 3=in NRFU, Nonresponse 4=in NRFU, too late for mailout | 092 | 1 |
| CMPMAT | Computer Match Code | 093-094 | 2\$ |
| CLEMAT | Before Follow-up Clerical Match Code | 095-096 | 2\$ |
| BFUMAT | Before Follow-up Match Code | 097-098 | 2\$ |
| AFUMAT | After Follow-up Match Code | 099-100 | 2\$ |
| FINMAT | Final Match Code | 101-102 | 2\$ |
| FUFLAG | DSE Follow-up Flag Blank=No one in household needs follow-up 0=Someone in household needs follow-up but person doesn't 1=Person needs follow-up 2=Person needs follow-up (special question) | 103 | 1\$ |
| TESPER | TES Person Indicator 0=Not TES Person 1=TES Person | 104 | 1 |
| MATEIND | E-Sample Indicator of Primary Person 0=No Primary Person 1=Primary Person in E-Sample 3=Primary Person in Surrounding Block | 105 | 1 |
| WPINIT | Initial Whole/Partial Match Code 1=Partial household match 2=Whole household nonmatch 3=Whole household match 4=All Other1 | 106 | 1 |
| WPFIN | Final Whole/Partial Match Code 1=Partial household match 2=Whole household nonmatch 3=Whole household match 4=All Other | 107 | 1 |
| ADDCDE | Address Code 1=HU matched during HU Phase 2=HU not matched during HU Phase 3=HU added to DMAF after HU Phase of A.C.E. 4=Conflicting households (Based on before-follow-up person match codes) | 108 | 1 |
| STRCDE | Structure Code 1=Single Unit 2=Multi-unit | 109 | 1 |
| EWGHT | E-Sample Weight (Trimmed Weight) | 110-123 | 14.6 |

Attachment B

| Name | Variable Description | Position | Length |
|-----------|--|----------|--------|
| FAGE | HCEF Age Edit/Allocation Flag 0=Consistent as reported 1=Age only 2=Date of birth only 3=Inconsistent age and date of birth 4=Allocated from hot deck 9=E-Sample person did not match to the HCEF | 124 | 1 |
| FRACE | HCEF Race Edit/Allocation Flag 0=As reported 1=Code changed through consistency edit 3=Classified from race response to Hispanic Origin question 4=Allocated from within household 5=Allocated from hot deck 9=E-Sample person did not match to the HCEF | 125 | 1 |
| FTENURE | HCEF Tenure Edit/Allocation Flag 0=As reported 1=Assigned by consistency check 4=Allocated from hot deck 9=E-Sample person did not match to the HCEF | 126 | 1 |
| FSPAN | HCEF Hispanic Origin Edit/Allocation Flag 0=1 reported origin 2=Multiple response given a unique Hispanic or Non-Hispanic code 3=Assign Hispanic from race code 4=Allocated from within household 5=Allocated from hot deck (surname used) 6=Allocated from hot deck (surname not used) 9=E-Sample person did not match to the HCEF | 127 | 1 |
| FSEX | HCEF Sex Edit/Allocation Flag 0=As reported 1=From first name 2=Edited 4=Allocated from hot deck 5=Allocated from consistency check 9=E-Sample person did not match to the HCEF | 128 | 1 |
| FREL | HCEF Relationship to Reference Person Edit/Allocation Flag 0=As reported from code box 1=As reported from write-in 2=Value changed for household consistency 4=Allocated from hot deck 5=Allocated from consistency check 9=E-Sample person did not match to the HCEF | 129 | 1 |
| TESWGT | Target Extended Search Sampling Weight (TES Take-Every) | 130-136 | 7.4 |
| AFNMAT_HU | Final Match Code from Housing Unit Phase | 137-138 | 2\$ |
| PRCODE | E-Sample Probability Code | 139 | 1 |
| MHUMSPOT | Map Spot Number of Matching A.C.E. HU | 140-144 | 5\$ |
| MHUWMSID | Within Map Spot Unit ID of Matching A.C.E. HU (from Housing Unit Phase) | 145-148 | 4\$ |
| ST | Collection FIPS State Code | 149-150 | 2\$ |

Attachment B

| Name | Variable Description | Position | Length |
|----------|---|----------|--------|
| COU | Collection FIPS County Code | 151-153 | 3\$ |
| FU_CODE1 | After Follow-up Code | 154 | 1\$ |
| FU_CODE2 | Recoded After Follow-Up Code 1=Potentially fictitious (FU_CODE1 = "b") 2=Potentially lived elsewhere on census day (FU_CODE1 = "e", "f", or "g") 3=Person went to follow-up (FU_CODE2 ≠ 1 or 2) 8=Person went to follow-up (no information used) (FU_CODE1 is blank and FUFLAG = 1 or 2) 9=Person did not go to follow-up (FU_CODE1 is blank and FUFLAG = 0, 3, or blank) | 155 | 1 |
| | Blank | 156-158 | 3 |
| TENURE2 | Recoded Tenure 1=Owner 2=Renter | 159 | 1 |
| AGE2 | Age Category 1=0-17 2=18-29 3=30-49 4=50+ | 160 | 1 |
| RACE2 | Recoded race for Hispanic origin imputation 0=Missing 1=White 2=Other race or white and other race 3=Remaining race categories | 161 | 1 |
| | Blank | 162 | 1 |
| RELATE2 | Recoded Relationship to Reference Person 0=Missing or from another return 1=Spouse 2=Child 3=Sibling 4=Parent (includes parent-in-law) 5=Other relative (includes son/daughter-in-law) 6=Nonrelative 9=Census Reference Person | 163 | 1 |
| TENIFL | Imputation Flag for Recoded Tenure 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 164 | 1 |
| AGEIFL | Imputation Flag for Age Category 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 165 | 1 |
| SEXIFL | Imputation Flag for Sex 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 166 | 1 |

Attachment B

| Name | Variable Description | Position | Length |
|----------|--|----------|--------|
| HISPIF | Imputation Flag for Recoded Hispanic Origin 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 167 | 1 |
| RACEIF | Imputation Flag for Race 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 168 | 1 |
| AMTIMP | Flag for any variables imputed 0=No Imputation 1=At least one variable imputed in E-sample 2=At least one variable imputed on HCEF | 169 | 1 |
| BFUGP | E-Sample Before Follow-up Match Code Group 1=Matches needing follow-up 2=Possible matches 3=Nonmatches from partial household nonmatches 4=Nonmatches from whole-household nonmatches where HU matched in HU matching 5=Nonmatches from conflicting households where E-Sample HU was not in regular NRFU 6=Nonmatches from conflicting households where E-Sample HU was in regular NRFU (NRU=3) 7=Nonmatches from whole-household nonmatches where HU did not match during HU matching 8=Persons resolved before follow-up 9=Persons with insufficient information for matching 10=TES Persons | 170-171 | 2 |
| FES | Numeric Initial Enumeration Status 0=Erroneous Enumeration 1=Correct Enumeration 2=Unresolved | 172-176 | 5.3 |
| CEPROBI | Probability of Correct Enumeration-Initial | 177-186 | 10.8 |
| CEPROBF | Probability of Correct Enumeration-Final | 187-197 | 11.8 |
| TESFINWT | E-Sample Final TES-Adjusted Weight | 198-211 | 14.6 |
| FIPS_MSA | MSA/CMSA FIPS Code 9999 = Non-MSA | 212-215 | 4\$ |
| MSAGROUP | MSA Group L=Large (U.S.) M=Medium (U.S.) S=Small (U.S.) X=Non-MSA (U.S.) 1=San Juan CMSA (PR) 2=Other MSA (PR) 3=Non-MSA (PR) | 216 | 1\$ |
| MSANAME | MSA Name | 217-276 | 60\$ |
| RETRATE | Tract-level Return Rate - See DSSD memos Q-38 and Q-48 for details. | 277-281 | 5.1 |

Attachment B

| Name | Variable Description | Position | Length |
|---|---|----------|--------|
| RRNUM | Numerator of Return Rate - See DSSD memos Q-38 and Q-48 for details. | 282-291 | 10 |
| RRDEN | Denominator of Return Rate - See DSSD memos Q-38 and Q-48 for details. | 292-301 | 10 |
| DOMAIN | A.C.E. Race/Hispanic Origin Domain 1=American Indian on Reservation 2=American Indian off Reservation 3=Hispanic 4=Non-Hispanic Black 5=Native Hawaiian or Pacific Islander 6=Non-Hispanic Asian 7=Non-Hispanic White or "Some other race" | 302 | 1 |
| CUTOFF | Cut-Off Return Rate - See DSSD memos Q-38 and Q-48 for details. | 303-307 | 5.1 |
| RRATEIND | Return Rate Indicator - See DSSD memos Q-38 and Q-48 for details. 1=High 0=Low 9=Not Applicable | 308 | 1 |
| MSATEA | MSA/TEA Post-Stratification Variable 0=Puerto Rico 1=Large MSA MO/MB (U.S.) 2=Medium MSA MO/MB (U.S.) 3=Small MSA and Non-MSA MO/MB (U.S.) 4=All Other TEAs (U.S.) | 309 | 1 |
| AGESEX | Age/Sex Post-Stratification Variable 1=0-17 Male and Female 2=18-29 Male 3=18-29 Female 4=30-49 Male 5=30-49 Female 6=50+ Male 7=50+ Female | 310 | 1 |
| POSTSTR | A.C.E. Pre-Collapsed Post-Stratum Code - See DSSD memos Q-38 and Q-48 for details. | 311-313 | 3\$ |
| CPOSTSTR | A.C.E. Post-Collapsed Post-Stratum Code - See DSSD memos Q-38 and Q-48 for details. | 314-316 | 3\$ |
| HCEF BLOCK RECORD CHARACTERISTICS | | | |
| Formed by "S" concatenated with the HCEF variable name | | | |
| SBKN | Collection Block Number - (HCEF Block Record) | 317-321 | 5\$ |
| SBKP | Block Part - (HCEF Block Record) | 322-322 | 1\$ |
| SAIR | AIR/ANVSA/TDSA/TJSA - (HCEF Block Record) | 323-326 | 4\$ |
| SAA | Assignment Area - (HCEF Block Record) | 327-332 | 6\$ |
| SACER | A.C.E. Ring Indicator - (HCEF Block Record) | 333-333 | 1\$ |
| HCEF HOUSING UNIT RECORD CHARACTERISTICS | | | |
| Formed by "S" concatenated with the HCEF variable name | | | |
| SMSOUR | MAF Source Flag - (HCEF Housing Unit Record) | 334- 335 | \$2 |
| SMAILD | Mail Return Check-in Month and Day - (HCEF Housing Unit Record) | 336-339 | \$4 |

| Name | Variable Description | Position | Length |
|---|---|----------|--------|
| SUAA | Undeliverable as Addressed (UAA) - (HCEF Housing Unit Record) | 340-340 | \$1 |
| SCEU | Coverage Edit Follow-up (CEFU) Universe - (HCEF Housing Unit Record) | 341-341 | \$1 |
| SNRU | Nonresponse Follow-up Universe - (HCEF Housing Unit Record) | 342-342 | \$1 |
| SCIU | Coverage Improvement Follow-up Universe - (HCEF Housing Unit Record) | 343-343 | \$1 |
| SUBSA | Units at Basic Street Address (BSA) - (HCEF Housing Unit Record) | 344-347 | \$4 |
| SSTENURE | "Is this house, apartment or mobile home - ?" - (HCEF Housing Unit Record) | 348-348 | \$1 |
| SFTENURE | STENURE edit/allocation Flag - (HCEF Housing Unit Record) | 349-349 | \$1 |
| SFINST | Final Status of Unit - (HCEF Housing Unit Record) | 350-350 | \$1 |
| SSFINST | Source of FINST and NP - (HCEF Housing Unit Record) | 351-351 | \$1 |
| SRFT | Form Type - (HCEF Housing Unit Record) | 352-353 | \$2 |
| SRHHMEM | Respondent Household Member? [EQ only] - (HCEF Housing Unit Record) | 354-354 | \$1 |
| SNP | Number of Persons at this Housing Unit - (HCEF Housing Unit Record) | 355-356 | \$2 |
| HCEF PERSON RECORD CHARACTERISTICS | | | |
| Formed by "S" concatenated with the HCEF variable name | | | |
| SPFT | Form Type - (HCEF Person Record) | 357-358 | \$2 |
| SPRT | Person Record (form) Type - (HCEF Person Record) | 359-359 | \$1 |
| SQREL | Relationship - (HCEF Person Record) | 360-361 | \$2 |
| SFREL | QREL edit/allocation Flag - (HCEF Person Record) | 362-362 | \$1 |
| HCUF HOUSING UNIT RECORD CHARACTERISTICS | | | |
| Formed by "S" concatenated with the HCUF variable name with one exception, variable SHHMEM | | | |
| SMAILS | Mail Check-in Source - (HCUF Housing Unit Record) | 363-363 | \$1 |
| SFVU | Field Verification Universe - (HCUF Housing Unit Record) | 364-364 | \$1 |
| SRSOURCE | Source of Return (recode) (from DRF2 processing) - (HCUF Housing Unit Record) | 365-366 | \$2 |
| SUSTAT | Unit Status (from MAF) - (HCUF Housing Unit Record) | 367-368 | \$2 |
| SNRD | NRFU Check-in Month and Day (from OCS2000) - (HCUF Housing Unit Record) | 369-372 | \$4 |
| SNRS | NRFU Status (from OCS2000) - (HCUF Housing Unit Record) | 373-373 | \$1 |
| SNRC | NRFU Vacancy Status (from OCS2000) - (HCUF Housing Unit Record) | 374-374 | \$1 |
| SFVS | Field Verification Status - (HCUF Housing Unit Record) | 375-375 | \$1 |
| SCID | CIFU Check-in Month and Day (from OCS2000) - (HCUF Housing Unit Record) | 376-379 | \$4 |
| SCIS | CIFU Status (from OCS2000) - (HCUF Housing Unit Record) | 380-380 | \$1 |
| SCIC | CIFU Vacancy Status (from OCS2000) - (HCUF Housing Unit Record) | 381-381 | \$1 |
| SREPDATE | Earliest Form Processing Date - (HCUF Housing Unit Record) | 382-385 | \$4 |
| SRCMODE | Response Collection Mode - (HCUF Housing Unit Record) | 386-386 | \$1 |
| SHHMEM | Respondent Household Member? [EQ only] - (HCUF Housing Unit Record) | 387-387 | \$1 |
| HCUF PERSON RECORD CHARACTERISTICS | | | |
| Formed by "S" concatenated with the HCUF variable name | | | |

| Name | Variable Description | Position | Length |
|---|---|----------|--------|
| SPCMODE | Response Collection Mode - (HCUF Person Record) | 388-388 | \$1 |
| SPCLANG | Language of Captured Form - (HCUF Person Record) | 389-389 | \$1 |
| A.C.E. Revision II POST-STRATIFICATION | | | |
| EFULLLONG | A.C.E. Revision II Production E Sample Long Post-stratification Code | 390-396 | \$7 |
| EFULLSHORT | A.C.E. Revision II Production E Sample Short Post-stratification Code | 397-400 | \$4 |
| | blank | 401-409 | \$9 |
| INTEGRATION OF DUPLICATE LINKS AND A.C.E. Revision II ESTIMATION | | | |
| SID | Source (E-sample) Person ID Concatenation of PUID(12)/PSEQ(2)/PNC(5) Blank When No Duplicate Link Outside Search Area | 410-428 | \$19 |
| TID | Target (Census) Person ID Concatenation of PUID(12)/PSEQ(2)/PNC(5) Blank When No Duplicate Link Outside Search Area | 429-447 | \$19 |
| DTCELL | Domain/Tenure Cell for Probability of Correct Enumeration Given a Duplicate Link (Recode of A.C.E. Race/Hispanic Origin Domain with Tenure) 1=Hispanic Owner 2=Hispanic Renter 3=Non-Hispanic Black Owner 4=Non-Hispanic Black Renter 5=Everyone else Owner 6=Everyone else Renter Blank When No Duplicate Link Outside Search Area | 448-448 | \$1 |
| CEPROBIND | Recoded E-sample A.C.E. Probability of Correct Enumeration 1=Probability of Correction Enumeration greater than zero 0=Probability of Correction Enumeration equal to zero Blank When No Duplicate Link Outside Search Area | 449-449 | \$1 |
| SITUATION | Situation Describing the Type of Duplicate Link for A.C.E. E Sample Blank When No Duplicate Link Outside Search Area | 450-450 | \$1 |
| ETARGET | Target Record Indicator 1=E-sample Eligible 2=Group Quarters 3=Reinstated 4=Deleted Blank When No Duplicate Link Outside Search Area | 451-451 | \$1 |
| ZT1 | Probability of Correct Enumeration Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records - Used in A.C.E. Revision II estimates (Set to zero for E-Sample Without Duplicate Links) – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. | 452-461 | 10.8 |
| ZT2 | Probability of Correct Enumeration Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (Set to zero for E-Sample Without Duplicate Links) – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. | 462-471 | 10.8 |

Attachment B

| Name | Variable Description | Position | Length |
|---------------------------------------|---|----------|--------|
| PT1 | Duplication Probability of E-Sample Link Outside A.C.E. Search Area, Includes Links to Reinstated and Deleted Census Records - Used in A.C.E. Revision II estimates (Set to zero for E-Sample Without Duplicate Links) | 472-481 | 10.8 |
| PT2 | Duplication Probability of E-Sample Link Outside A.C.E. Search Area, Does Not Include Links to Reinstated and Deleted Census Records (Set to zero for E-Sample Without Duplicate Links) | 482-491 | 10.8 |
| STATISTICAL MODELING VARIABLES | | | |
| GEOCAT | Geographic Category 1=Within Cluster 2=Surrounding Block 3=Outside Surrounding Block, Within Cluster 4=Different County, same State 5=Different State Blank When No Duplicate Link Outside Search Area | 492-499 | \$8 |
| GEOCAT2 | Geographic Category 2 1=Block 2=Outside Block, Within Tract 3=Outside Tract, Within County 4=Different County, same State 5=Different State Blank When No Duplicate Link Outside Search Area | 500-507 | \$8 |

A.C.E. Revision II Full P-Sample File Layout

Below is the layout for the A.C.E. Revision II Full P-Sample File. This layout is separated by “Headers” which are in **bold**. These “Headers” represent the source of the variables contained within that section.

A.C.E. Revision II Full P-Sample File

| Name | Variable Description | Position | Length |
|---|--|----------|--------|
| P-SAMPLE PERSON DUAL SYSTEM ESTIMATION | | | |
| FIPS_STATE | FIPS State Code | 001-002 | 2\$ |
| REGION | Census Region 1=Northeast 2=Midwest 3=South 4=West 0 = Puerto Rico | 003-003 | 1\$ |
| DIV | Census Division 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 0=Puerto Rico | 004-004 | 1\$ |
| AICIND | American Indian Country Indicator 0=Not American Indian Country 1=American Indian Reservation/Trust Land 2=Oklahoma Tribal Statistical Area (OTSA) 3=Alaska Native Village Statistical Area (ANVSA) 4=Tribal Designated Statistical Area (TDSA) | 005-005 | 1 |
| SAMPSTR | Sampling Stratum 1=Small (0-2 housing units) 2=Medium (3-79 housing units) 3=Large (80+ housing units) 4=Medium/Large on American Indian Reservation | 006-006 | 1 |

Attachment C

| Name | Variable Description | Position | Length |
|-------------|---|----------|--------|
| TEA | Type of Enumeration Area 1=Mailout/Mailback 2=Update/Leave 3=List/Enumerate 4=Remote Alaska (out of scope) 5=Rural Update/Enumerate 6=Military in Update/Leave 7=Urban Update/Leave 8=Urban Update/Enumerate 9=Mailout/Mailback to Update/Leave Conversion | 007-007 | 1 |
| CCOU | Current FIPS County Code | 008-010 | 3\$ |
| TRACT | Pseudo-Tract Number | 011-016 | 6\$ |
| CLUSTER | Cluster Number and Check Digit | 017-022 | 6\$ |
| BLOCK | Block Number and Suffix | 023-028 | 6\$ |
| LCO | Local Census Office | 029-032 | 4\$ |
| ECLUSURB | Estimated Cluster Urbanicity 1=Urban with Population \geq 250,000 2=Other Urban 3=Non-Urban | 033-033 | 1 |
| TESIND0 | Targeted Extended Search Indicator 0=TES not conducted for Cluster 1=TES conducted for Cluster | 034-034 | 1 |
| IL_MAP_SPOT | Enhanced IL Map Spot Number | 035-039 | 5\$ |
| UNIT_ID | Within Map Spot Unit ID | 040-043 | 4\$ |
| FINOUTC | Final A.C.E. Outcome Code for Census Day | 044-045 | 2 |
| FINOUTI | Final A.C.E. Outcome Code for Interview Day | 046-047 | 2 |
| CST | Current FIPS State Code | 048-049 | 2\$ |
| COU | Collection FIPS County Code | 050-052 | 3\$ |
| | Blank | 053-053 | 1 |
| PERID | Unique Person ID | 054-057 | 4\$ |
| ST | Collection FIPS State Code | 058-059 | 2\$ |
| MID | Census Unit ID of Matching Census Person | 060-071 | 12\$ |
| MSEQ | Census Return Sequence Number of Matching Census Person | 072-073 | 2\$ |
| MPNC | Computed Census Person Number of Matching Census Person | 074-078 | 5\$ |
| DTCODE | Demographic/Tenure Group Code for Cluster | 079-080 | 2 |
| PREPOSPC | Total Possible P-Sample Persons in Household for Census Day (Preliminary) | 081-082 | 2 |
| PRENDDC | Number of Data-Defined Possible P-Sample Persons in Household for Census Day (Preliminary) | 083-084 | 2 |
| POSSPSC | Total Possible P-Sample Persons in Household for Census Day (Final, after follow-up) | 085-086 | 2 |
| NDATDFC | Number of Data-Defined Possible P-Sample Persons in Household for Census Day (Final, after follow-up) | 087-088 | 2 |

Attachment C

| Name | Variable Description | Position | Length |
|---------|---|----------|--------|
| POSSPSI | Total P-Sample Persons in Household for Interview Day | 089-090 | 2 |
| NDATDFI | Number of Data-Defined P-Sample Persons in Household for Interview Day | 091-092 | 2 |
| POPCT | Total Population Count of nonmovers and outmovers for Household without regard to residence status | 093-094 | 2 |
| TENURE | Tenure (from the CAPI path in which the person was collected) 1=Own (with mortgage or own free and clear) 2=Rent 3=Occupy without payment 9=Missing | 095-095 | 1 |
| TOBA | Type of Basic Address 1=One-family house-detached or attached 2=Basic address with 2 or more housing units 3=Mobile home/trailer not in a park 4=Mobile home/trailer park 5=One-family unit in special place 6=Multi-unit in special place 7=Other | 096-096 | 1 |
| AGE | Age 999=Missing | 097-099 | 3 |
| RACE | Race Code 1=Other Race 2=Pacific Islander (PI)(includes Native Hawaiians) 3=PI and Other Race 4=Asian 5=Asian and Other Race 6=Asian and PI 7=Asian, PI and Other Race 8=American Indian or Alaska Native (AI) 9=AI and Other Race 10=AI and PI 11=AI, PI, and Other Race 12=AI and Asian 13=AI, Asian, and Other Race 14=AI, Asian, and PI 15=AI, Asian, PI, and Other Race 16=Black 17=Black and Other Race 18=Black and PI 19=Black, PI, and Other Race 20=Black and Asian 21=Black, Asian, and Other Race 22=Black, Asian, and PI 23=Black, Asian, PI, and Other Race 24=Black and AI 25=Black, AI, and Other Race 26=Black, AI, and PI 27=Black, AI, PI, and Other Race 28=Black, AI, and Asian 29=Black, AI, Asian, and Other Race | 100-101 | 2 |

Attachment C

| Name | Variable Description | Position | Length |
|------|--|----------|--------|
| | 30=Black, AI, Asian, and PI | | |
| | 31=Black, AI, Asian, PI, and Other Race | | |
| | 32=White | | |
| | 33=White and Other Race | | |
| | 34=White and PI | | |
| | 35=White, PI, and Other Race | | |
| | 36=White and Asian | | |
| | 37=White, Asian, and Other Race | | |
| | 38=White, Asian, and PI | | |
| | 39=White, Asian, PI, and Other Race | | |
| | 40=White and AI | | |
| | 41=White, AI, and Other Race | | |
| | 42=White, AI, and PI | | |
| | 43=White, AI, PI, and Other Race | | |
| | 44=White, AI, and Asian | | |
| | 45=White, AI, Asian, and Other Race | | |
| | 46=White, AI, Asian, and PI | | |
| | 47=White, AI, Asian, PI, and Other Race | | |
| | 48=White and Black | | |
| | 49=White, Black, and Other Race | | |
| | 50=White, Black, and PI | | |
| | 51=White, Black, PI, and Other Race | | |
| | 52=White, Black and Asian | | |
| | 53=White, Black, Asian, and Other Race | | |
| | 54=White, Black, Asian, and PI | | |
| | 55=White, Black, Asian, PI, and Other Race | | |
| | 56=White, Black, and AI | | |
| | 57=White, Black, AI, and Other Race | | |
| | 58=White, Black, AI, and PI | | |
| | 59=White, Black, AI, PI, and Other Race | | |
| | 60=White, Black, AI, and Asian | | |
| | 61=White, Black, AI, Asian, and Other Race | | |
| | 62=White, Black, AI, Asian, and PI | | |
| | 63=White, Black, AI, Asian, PI, and Other Race | | |
| SEX | Sex Code | 102 | 1 |
| | 1=Male | | |
| | 2=Female | | |
| HISP | Hispanic Code | 103 | 1 |
| | 1=Not Spanish/Hispanic/Latino | | |
| | 2=Mexican, Mexican-American, Chicano | | |
| | 3=Puerto Rican | | |
| | 4=Cuban | | |
| | 5=Other Spanish/Hispanic/Latino | | |
| | 9=Missing | | |

Attachment C

| Name | Variable Description | Position | Length |
|----------|---|----------|--------|
| RELATE | Relationship to Reference Person 1=A.C.E. Reference Person 2=Husband/wife 3=Natural born or adopted son/daughter 4=Stepson/stepdaughter 5=Brother/sister 6=Father/mother 7=Grandchild 8=Other relative 9=Roomer, boarder, or foster child 10=Housemate/roommate 11=Unmarried partner 12=Other nonrelative 13 (Not Used in P-Sample file) 14=Missing | 104-105 | 2 |
| PRXYIN | Proxy/Nonproxy Respondent 1=Proxy 2=Nonproxy | 106 | 1 |
| MOVERPER | Person Mover Flag 1=Nonmover 2=Inmover 3=Outmover | 107 | 1 |
| MOVERHH | Household Mover Flag 1=Person from outmover household 2=Other | 108 | 1 |
| RSC | Computer Residence Status Code (A.C.E. Status Code) N=Nonmover I=Inmover O=Outmover U=Unresolved R=Remove | 109 | 1\$ |
| | Blank | 110-112 | 3 |
| CMPMAT | Computer Match Code | 113-114 | 2\$ |
| CLEMAT | Before Follow-up Clerical Match Code | 115-116 | 2\$ |
| BFUMAT | Before Follow-up Match Code | 117-118 | 2\$ |
| AFUMAT | After Follow-up Match Code | 119-120 | 2\$ |
| FINMAT | Final Match Code | 121-122 | 2\$ |
| FUFLAG | DSE Follow-up Flag Blank=No one in household needs follow-up 0=Someone in household needs follow-up but person doesn't 1=Person needs follow-up 2=Person needs follow-up (special question) 3=RSC equals I or R | 123 | 1\$ |

Attachment C

| Name | Variable Description | Position | Length |
|----------|---|----------|--------|
| MATEIND | E-Sample Indicator of Matching Census Person blank=No Matching Census Person 1=E-Sample Person 2=Non E-Sample Person in Same Cluster 3=Census Person in Surrounding Block | 124 | 1 |
| TESPER | TES Person Indicator 0=Not TES Person 1=TES Person | 125 | 1 |
| WPINIT | Initial Whole/Partial Match Code 0=Housing unit did not go to person matching 1=Partial household match 2=Whole household nonmatch 3=Whole household match 4=Other | 126 | 1 |
| WPFIN | Final Whole/Partial Match Code 0=Housing unit did not go to person matching 1=Partial household match 2=Whole household nonmatch 3=Whole household match 4=Other | 127 | 1 |
| ADDCDE | Address Code 0=HU did not go to person matching 1=HU matched during HU Phase 2=HU not matched during HU Phase 4=Conflicting households | 128 | 1 |
| TESWGT | Targeted Extended Search Sampling Weight (TES Take-Every) | 129-135 | 7.4 |
| FU_CODE1 | After Follow-up Code | 136 | 1\$ |
| FU_CODE2 | Recoded After Follow-Up Code 1=Potentially fictitious (FU_CODE1 = "b") 2=Potentially lived elsewhere on census day (FU_CODE1 = "e", "f", or "g") 3=Person went to follow-up (FU_CODE2 ≠ 1 or 2) 8=Person went to follow-up (no information used) (FU_CODE1 is blank and FUFLAG = 1 or 2) 9=Person did not go to follow-up (FU_CODE1 is blank and FUFLAG = 0, 3, or blank) | 137 | 1 |
| | Blank | 138-145 | 8 |
| TENURE2 | Recoded Tenure 1=Owner 2=Renter | 146 | 1 |
| AGE2 | Age Category 1=0-17 2=18-29 3=30-49 4=50+ | 147 | 1 |

Attachment C

| Name | Variable Description | Position | Length |
|--------|---|----------|--------|
| RACE2 | Recoded race for Hispanic origin imputation 0=Missing 1=White 2=Other race or white and other race 3=Remaining race categories | 148 | 1 |
| | Blank | 149 | 1 |
| HISP2 | Recoded Hispanic Origin 1=Non-Hispanic 2=Hispanic | 150 | 1 |
| RTYPE | Recoded Type of Basic Address 1=One-family 2=Apartments (2 or more) 3=Other (TOBA=3-7) | 151 | 1 |
| RELAT2 | Recoded Relationship to Reference Person 0=Missing 1=Spouse 2=Child 3=Sibling 4=Parent 5=Other relative 6=Nonrelative 9=A.C.E. Reference Person | 152 | 1 |
| TENIFL | Imputation Flag for Recoded Tenure 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 153 | 1 |
| AGEIFL | Imputation Flag for Age Category 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 154 | 1 |
| SEXIFL | Imputation Flag for Sex 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 155 | 1 |
| HISPIF | Imputation Flag for Recoded Hispanic Origin 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 156 | 1 |
| RACEIF | Imputation Flag for Race 1=No Imputation 2=Imputation because of edit failure 3=Imputation because of missing value | 157 | 1 |
| AMTIMP | Flag for any variables imputed 0=No Imputation 1=At least one variable imputed | 158 | 1 |

Attachment C

| Name | Variable Description | Position | Length |
|----------|--|----------|--------|
| BFUGP | P-Sample Before Follow-up Match Code Group 0=RSC of I or R 1=Matches needing follow-up 2=Possible matches 3=Nonmatches needing follow-up from partial household nonmatches 4=Nonmatches needing followup from whole-household nonmatches 5=Nonmatches from conflicting households 6=Persons resolved before follow-up 7=Persons with insufficient information for matching | 159-160 | 2 |
| FRS | Numeric Final Residence Status 0=Nonresident 1=Resident 2=Unresolved 9=Inmover with RSC=I | 161-165 | 5.3 |
| RPROB | Probability of Residence (Set to 0 for in-movers) | 166-175 | 10.8 |
| MPROB | Match Probability (Set to 0 for in-movers and nonresidents) | 176-186 | 11.8 |
| PWGHT | Initial P-Sample Weight (Trimmed Weight) | 187-200 | 14.6 |
| NIWGTO | P-Sample Noninterview Adjusted Weight based on Census Day Interview Status | 201-215 | 15.6 |
| NIWGTI | P-Sample Noninterview Adjusted Weight based on A.C.E. Interview Day Interview Status | 216-230 | 15.6 |
| TESFINWT | P-Sample Final TES-Adjusted Weight for Census Day | 231-245 | 15.6 |
| FIPS_MSA | MSA/CMSA FIPS Code 9999 = Non-MSA | 246-249 | 4\$ |
| MSAGROUP | MSA Group L=Large (U.S.) M=Medium (U.S.) S=Small (U.S.) X=Non-MSA (U.S.) 1=San Juan CMSA (PR) 2=Other MSA (PR) 3=Non-MSA (PR) | 250 | 1\$ |
| MSANAME | MSA Name | 251-310 | 60\$ |
| RETRATE | Tract-level Return Rate - See DSSD memos Q-38 and Q-48 for details. | 311-315 | 5.1 |
| RRNUM | Numerator of Return Rate - See DSSD memos Q-38 and Q-48 for details. | 316-325 | 10 |
| RRDEN | Denominator of Return Rate - See DSSD memos Q-38 and Q-48 for details. | 326-335 | 10 |
| DOMAIN | A.C.E. Race/Hispanic Origin Domain 1=American Indian on Reservation 2=American Indian off Reservation 3=Hispanic 4=Non-Hispanic Black 5=Native Hawaiian or Pacific Islander 6=Non-Hispanic Asian 7=Non-Hispanic White or "Some other race" | 336 | 1 |
| CUTOFF | Cut-Off Return Rate - See DSSD memos Q-38 and Q-48 for details. | 337-341 | 5.1 |

| Name | Variable Description | Position | Length |
|---|--|----------|--------|
| RRATEIND | Return Rate Indicator - See DSSD memos Q-38 and Q-48 for details. 1=High 0=Low 9=Not Applicable | 342 | 1 |
| MSATEA | MSA/TEA Post-Stratification Variable 0=Puerto Rico 1=Large MSA MO/MB (U.S.) 2=Medium MSA MO/MB (U.S.) 3=Small MSA and Non-MSA MO/MB (U.S.) 4=All Other TEAs (U.S.) | 343 | 1 |
| AGESEX | Age/Sex Post-Stratification Variable 1=0-17 Male and Female 2=18-29 Male 3=18-29 Female 4=30-49 Male 5=30-49 Female 6=50+ Male 7=50+ Female | 344 | 1 |
| POSTSTR | A.C.E. Pre-Collapsed Post-Stratum Code - See DSSD memos Q-38 and Q-48 for details. | 345-347 | 3\$ |
| CPOSTSTR | A.C.E. Post-Collapsed Post-Stratum Code - See DSSD memos Q-38 and Q-48 for details. | 348-350 | 3\$ |
| | Blank | 351-351 | 1\$ |
| IMPUTED AGE (from Missing Data) | | | |
| NEWAGE | Imputed single year of age (Takes on value of AGE but includes an imputed value when AGE has value of 999=Missing and when AGE has a value that exceeds 115) | 352-354 | 3\$ |
| A.C.E. Revision II POST-STRATIFICATION | | | |
| PFULLLONG | A.C.E. Revision II Production P Sample Long Post-stratification Code | 355-361 | \$7 |
| PFULLSHORT | A.C.E. Revision II Production P Sample Short Post-stratification Code | 362-365 | \$4 |
| | blank | 366-374 | \$9 |
| INTEGRATION OF DUPLICATE LINKS AND A.C.E. Revision II ESTIMATION | | | |
| SID | Source (P-sample) Person ID Concatenation of CLUST(6)/MSN(5)/WMSN(4)/MOVER(1)/PER(2) MOVER was a character variable set by Mule by recoding MOVERPER, RSC, and RPROB. The remaining variables are the unique identifier for a P-sample record. Blank When No Duplicate Link Outside Search Area | 375-393 | \$19 |
| TID | Target Person ID Concatenation of PUID(12)/PSEQ(2)/PNC(5) Blank When No Duplicate Link Outside Search Area | 394-412 | \$19 |

Attachment C

| Name | Variable Description | Position | Length |
|-----------|--|----------|--------|
| DTCELL | Domain/Tenure Cell for Probability of Residence Given a Duplicate Link (Recode of A.C.E. Race/Hispanic Origin Domain with Tenure) 1=Hispanic Owner 2=Hispanic Renter 3=Non-Hispanic Black Owner 4=Non-Hispanic Black Renter 5=Everyone else Owner 6=Everyone else Renter Blank When No Duplicate Link Outside Search Area | 413-413 | \$1 |
| RPROBIND | Recoded P-sample A.C.E. Probability of Residence 1=Probability of Residence greater than zero 0=Probability of Residence equal to zero Blank When No Duplicate Link Outside Search Area | 414-414 | \$1 |
| SITUATION | Situation Describing the Type of Duplicate Link for A.C.E. P Sample Blank When No Duplicate Link Outside Search Area | 415-415 | \$1 |
| ETARGET | Target Record Indicator 1=E-sample Eligible 2=Group Quarters 3=Reinstated 4=Deleted Blank When No Duplicate Link Outside Search Area | 416-416 | \$1 |
| HT1 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records - Used in A.C.E. Revision II estimates (Set to zero for P-Sample Without Duplicate Links) = $0 \leq HT1 \leq 1$ - See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 417-427 | 11.8 |
| HT2 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records (Set to zero for P- Sample Without Duplicate Links) = $0 \leq HT2 \leq 1$ - See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 428-438 | 11.8 |
| HT3 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records (Set to zero for P- Sample Without Duplicate Links) = $0 \leq HT3 \leq 1$ - See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 439-449 | 11.8 |

| Name | Variable Description | Position | Length |
|------|---|----------|--------|
| HT4 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Includes Links to Reinstated and Deleted Census Records (Set to zero for P-Sample Without Duplicate Links) = $0 \leq HT4 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 450-460 | 11.8 |
| HT5 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (Set to zero for P-Sample Without Duplicate Links) = $0 \leq HT5 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 461-471 | 11.8 |
| HT6 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (Set to zero for P-Sample Without Duplicate Links) = $0 \leq HT6 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 472-482 | 11.8 |
| HT7 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (Set to zero for P-Sample Without Duplicate Links) = $0 \leq HT7 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 483-493 | 11.8 |
| HT8 | Probability of Residence Given a Duplicate Link Based on A.C.E. Coding, Does Not Include Links to Reinstated and Deleted Census Records (Set to zero for P-Sample Without Duplicate Links) = $0 \leq HT8 \leq 1$ – See DSSD A.C.E. REVISION II MEMORANDUM SERIES #PP-25 for more details. = -1 Probability not applicable for A.C.E. Outmovers, Inmovers, and Removed (RSC=R) | 494-504 | 11.8 |
| PT1 | Duplication Probability of P-Sample Link Outside A.C.E. Search Area, Includes Links to Reinstated and Deleted Census Records - Used in A.C.E. Revision II estimates (Set to zero for P Sample Without Duplicate Links) | 505-514 | 10.8 |
| PT2 | Duplication Probability of P-Sample Link Outside A.C.E. Search Area, Does Not Include Links to Reinstated and Deleted Census Records (Set to zero for P Sample Without Duplicate Links) | 515-524 | 10.8 |

STATISTICAL MODELING VARIABLES

Attachment C

| Name | Variable Description | Position | Length |
|---------|--|----------|--------|
| GEOCAT | Geographic Category 1=Within Cluster 2=Surrounding Block 3=Outside Surrounding Block, Within Cluster 4=Different County, same State 5=Different State Blank When No Duplicate Link Outside Search Area | 525-532 | \$8 |
| GEOCAT2 | Geographic Category 2 1=Block 2=Outside Block, Within Tract 3=Outside Tract, Within County 4=Different County, same State 5=Different State Blank When No Duplicate Link Outside Search Area | 533-540 | \$8 |