# The Record of American Democracy, 1984-1990

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The **R**ecord **O**f **A**merican **D**emocracy (ROAD) data includes election returns, socioeconomic summaries, and demographic measures of the American public at unusually low levels of geographic aggregation. The NSF-supported ROAD project covers every state in the country from 1984 through 1990 (including some off-year elections). One collection of data sets includes every election at and above State House, along with party registration and other variables, in each state for the roughly 170,000 precincts nationwide (about 60 times the number of counties). Another collection has added to these (roughly 30-40) political variables an additional 3,725 variables merged from the 1990 U.S. Census for 47,327 aggregate units (about 15 times the number of counties) about the size one or more cities or towns. These units completely tile the U.S. landmass. The collection also includes geographic boundary files so users can easily draw maps with these data.

If you are reading this document from a CD-Rom or other local media, you may wish to see the most recent version which you can find at http://data.fas.harvard.edu/ROAD/. The "home" button at the top of every page of this documentation links to that same site.

The data are available from the ICPSR and on-line from the Harvard-MIT Data Center here.

# Chapter 1

# *Preface*

## 1.1 Introduction

The NSF-supported **R**ecord **O**f **A**merican **D**emocracy (ROAD) project provides a wide variety of election returns, socioeconomic summaries, and demographic details about the American public at unusually low levels of geographic aggregation. The ROAD project spans every state in the country from 1984 through 1990 (including some off-year elections). The data sets include 30-40 electoral data variables, all elections at and above the State House for each election and state, and for all of the roughly 170,000 precincts nationwide. They also include all these political variables for each year and state and 3,725 additional variables merged from the 1990 U.S. Census, for 47,327 aggregate units about the size one or more cities or towns. The collection also includes geographic boundary files so users can easily draw maps with these data.

This ROAD Guide provides comprehensive information on the ROAD databases in a form useful for those who may wish to use the data, and (in separate sections) for those who may wish to extend our collection. We also describe the technical details of the preparation of the ROAD datasets, including exactly how every file was produced and could be replicated, extended, or improved.

## 1.2 Justification

At the inception of the ROAD Project, the Harvard-MIT Data Center received a donation of an extremely detailed and extensive set of election data from numerous offices in electoral precincts in every state and the District of Columbia. These data were collected during the 1990s redistricting process at a cost of approximately $3.5 million. The data were used for practical political and legal purposes by a wide variety of minority groups over the last few years. The aim of the ROAD Project is to make these data useful for academic purposes — to clean and document the data, to supplement the data with 3,725 variables (such as race, income, and education) from the U.S. Census, to make it possible to draw geographic maps with all the political and census data, and to make all of this generally available to the scholarly community.

These data represent an unparalleled opportunity for political scientists, political and economic geographers, quantitative historians, sociologists, and others to learn about electoral behavior, the political characteristics of local community context, electoral geography, the role of minority groups in elections and legislative redistricting, split ticket voting and divided government, elections under federalism, and numerous other topics of central importance to many disciplines.

Some examples:

- With few exceptions, scholars until now have had access to district-level (i.e. state or constituency) electoral information at best, usually for only one office at a time. Presidential election results broken down by congressional districts are impossible to obtain except for a few recent years, and are of dubious quality; more detailed disaggregation is usually unobtainable. In contrast, our data can provide presidential (and other) election results broken down by the much smaller State House districts and even show detailed geographic variation across precincts within a State House district. This can be supplemented by voter turnout or party registration, race and occupation, as well as much other information.

- A recent state legislative data collection project led by Malcolm Jewell provided valuable district-level data to scholars who continue to discover much useful knowledge. Precinct-level data will increase the resolution of our knowledge of electoral politics substantially. In contrast to data on the 50 States, 435 U.S. House Districts, 1,916 State

Senate Districts, and even the 4,675 districts of the lower house of state legislatures, the approximately 170,000 precincts in the U.S. provide considerably more detailed information. They contain information about small, local communities, with much more variation than the higher level aggregates.

- Scholars using electoral data recognize the geographical nature of electoral data, but they have only rarely been able to access geographical information. As a result, the vast majority of published analyses, even those on topics such as redistricting, have necessarily ignored the geographic placement of districts. The ROAD Project data enables scholars to study the geographic nature of American politics and to draw maps easily. That is, not only are precinct-level data available, but we provide the data in geographic formats, providing links between districts. In particular, scholars will be able to use mapping software, such as ArcView or MapInfo, to analyze geographical features of American politics and to merge them with other types of geographical data.

- For the first time, scholars will be able to study data from numerous offices at many different levels of aggregation — from precincts, to state assembly districts, to state senate districts, to U.S. House districts, or to states. (Counties and other aggregation levels are also possible.) Even without survey data, this will make it possible to study how the same voter groups cast their ballots across many different offices. ROAD data will enable more detailed study of split ticket voting and of the factors leading to divided government at many levels, for any or all states.

- The ROAD Project data should make possible many new studies of legislative redistricting, and associated analyses and forecasts of political and racial fairness, compactness, the consequences of equal population constraints on gerrymanderers, and related issues. These data should also make possible new studies of aggregation bias in electoral data.

- This is the first dataset to be generally available to the academic community that is on par in terms of quality and quantity with the data politicians and political strategists have been using for decades to target campaign resources. As a result, this data set could also produce a new, more detailed type of study of campaign strategy, with all the

local flavor of V.O. Key's (1949) classic book, *Southern Politics*, but on a massive and comprehensive nationwide scale.

## 1.3 The ROAD Crew

The ROAD Project was directed by principal investigators Gary King and Bradley Palmquist of Harvard University's Department of Government. Graduate students who took important leadership roles in the project at various times include Greg Adams, Micah Altman, Kenneth Benoit, Claudine Gay, Jeff Lewis, Russ Mayer, and Eric Reinhardt.

Other valuable members of our team have included, over the years, Sarah Dix, Grant Emison, Jim Goldman, James Honaker, Debra Javeline, Michael Vaughan, and Steve Voss.

## 1.4 Acknowledgments

We thank the National Science Foundation programs in political science; methods, models and measurement; and geography for research support (grant SBR-9321212 to Gary King), and an unrestricted donation of electoral data to the Harvard-MIT Data Center from a now-defunct, but then officially nonpartisan foundation (called "Fairness for the 90s"). These electoral data included a donation of the largest set of U.S. precinct-level electoral data ever assembled in one place (originally collected to aid minorities during redistricting). We thank Bill Krump for arranging the donation and for physically driving a large moving van to Cambridge with all the materials. King thanks Nuffield College at Oxford University for a visiting fellowship and the John Simon Guggenheim Memorial Foundation for a fellowship.

The ROAD Team thanks the wizards at the Harvard-MIT data center, including William Wei, Bill Mahoney, and Yi Wang. Special thanks to David Cobb and Arlene Olivero at the Harvard Map Collection for much advice and assistance. Thanks also to the Littauer Library at Harvard University for providing us caverns of valuable space to store the massive materials we received.

We thank Clark Bensen of POLIDATA for providing Census geographical codes for the voting data files for Ohio and Illinois and for much valuable advice throughout the project. Thanks also to Kenneth McCue and Wendy Tam who, through the Institute of Governmental Studies at Berkeley, put

together much of our data from California. Lee Sigelman was incredibly generous in providing manpower in D.C. for some of our initial data acquisitions. MaconUSA provided access to their commercial geographic data and allowed us to distribute what we created from them without charge. Darrell Donakowski, from the ICPSR, was very helpful at the final stages in reconciling various logical inconsistencies.

## 1.5 A ROAD Map

The remainder of this documentation proceeds in three parts. We begin with an overview of the project and the data, including some of the purposes to which the data might be put, th conceptual organization of the data, and the units of analysis and variables provided. All users should read this part.

The overview is followed by a User's Guide to the ROAD datasets. Scholars who plan to use our data for substantive research should also read this section, as all variables, states, units of analysis, etc., are fully documented here. (You can, of course, draw real maps with ROAD data.)

The final part includes all technical details of the process we used to generate the ROAD files. This part need only be consulted by those who wish to extend or improve our data.

The Glossary defines terms used throughout this document.

## 1.6 How to Cite This Work

If you use these data or documentation, please include this citation:

> Gary King; Bradley Palmquist; Greg Adams; Micah Altman; Kenneth Benoit; Claudine Gay; Jeffrey B. Lewis; Russ Mayer; and Eric Reinhardt. 1997. "The Record of American Democracy, 1984–1990," Harvard University, Cambridge, MA [producer], Ann Arbor, MI: ICPSR [distributor].

# Part I

# *Overview*

# Chapter 2

# The Units of Analysis: Precincts and "MCD-Groups"

We provide data at the *precinct* and *MCD-Group* level, each of which makes somewhat different information available:

**Precinct-Level Electoral Data** This unit of analysis is the ballot box or voting booth. In most counties, eligible citizens in a geographically contiguous area are assigned to a single voting booth to cast their ballot. We refer to the geographical description of the unit of analysis as a *precinct*, although in some states it is called an election district, and occasionally several voting booths exist within one precinct. The number of precincts nationwide is approximately 170,000, with some variation over time. More detailed official electoral data than precinct returns cannot be created for the entire nation unless the laws governing the secret ballot are revoked.

Our collection includes data from each precinct during 1984–1990 for general elections for all federal offices (President, U.S. House, and U.S. Senate), all partisan statewide elections (such as Governor, Lt. Governor, Secretary of State, Attorney General, Treasurer, Secretary of Insurance, College Trustees, etc.), all state legislative elections (State House and Senate), some statewide ballot initiatives and referenda, and party registration and enrollment where available. The data also include numerical and character descriptions of community, precinct,

and district names. The collection includes an average of 33 variables for each state and year, for a total count of 6,628.

Since very few states had established centralized election data collection mechanisms or archives, the original raw precinct-level election data were collected directly from individual local election authorities in every state. Collection was undertaken during 1989–1991. City and town election authorites in New England, and county election officials in other states, were contacted first by letter, and subsequently if necessary by additional letters and phone calls. Missing data in the final collection is due to the lack of responses (after numerous attempts via letters and phone calls) or the absence of physical material to send (i.e., the returns were destroyed or never located). Essentially everything was done to avoid missing data short of physically visiting each locality.[1]

**"MCD Group"-Level Electoral and Census Data** This geographic designation is one we devised. Each one combines some number of what the Census Bureau calls Minor Civil Divisions or MCDs (or "Census County Divisions" when MCDs are not well defined, although we refer to them both as MCDs). Individual MCDs correspond roughly to towns and cities. There are 25,973 of these MCD-groups in the U.S. outside of California and an additional 21,200 within California, and completely tile the U.S. land mass. For each of these units, we provide all our electoral data aggregated from the precinct level, as well as 3,725 variables from the U.S. Census long form. This is the smallest level of aggregation at which publicly-available census data and electoral data can be made to coincide. The ROAD map files make it easy

[1]Since the precinct-level election data were originally prepared to provide minority groups in the upcoming 1990 redistricting cycle the ability to draw their own alternative plans, and to defend them in the litigation that inevitably follows most redistrictings, the standards of care used in the collection, processing, and proofing phases of the project was quite high. The paper records, which varied widely across local jurisdictions, were first physically cut and pasted (to keep variables in their appropriate columns) and then given to the keypunchers, who entered and verified their entries. Many versions of checking were implemented. There were detailed keypunch checks against totals; vertical reconciliation with all available levels of political geography, such as congressional district, state senate and house districts, MCD, and county; and horizontal review for inconsistencies across races in the same year (such as requiring that the same people's votes for governor and senator in the same year appear in the records for the same precinct). About two dozen computerized checks were also made for logical inconsistencies with turnout and transpositions by local election officials.

to draw maps of MCD-Groups with any of our variables.[2]

Our data include a variety of geographic codes that can be used to create aggregations from these data at many levels (such as various legislative districts).

In addition to cleaning and documenting the precinct-level election data, a fundamental problem this project addresses is that geographic units used by the U.S. Census Bureau to provide socioeconomic demographic data do not match the electoral precincts used by U.S. counties to provide voting data. For this project, two forms of Census data are relevant:

`PL94-171` These data were created for redistricting purposes and only include counts of the numbers of people by race and (to some extent) age. This data is form the Census Bureau's "short form."

`STF3a` These are the Bureau's "long form" data, representing 3,725 economic and demographic variables.

Wherever possible, we use the `STF3a` data.

[2]Although the ROAD Project computer files do not reflect it, we also have a large amount of raw data in paper form. (Quantifying the extent of this information is difficult, but by one estimate there are roughly 100 large boxes, which took most of a large moving van to get to Cambridge.) We judge that one half of this information fully documents and duplicates the electronic data. The remaining paper records are not all uniform across all states. But they include election data for other offices (those not mentioned above) at the city, county, and other local levels. We also have an extensive set of maps of precincts, districts, and states for many legislatures, as well as for many proposed and actual redistricting plans. A lot of contextual information about individual districts and counties is also included. *If you are interested in these paper records, please contact us at once; it is not feasible for us to store them indefinitely.*

# Chapter 3

# Sample Uses for Our Data

The ROAD Project contains two primary types of variables, electoral and census variables, and two levels of analysis, precinct-level and MCD-Group level . ROAD files can be used to analyze local, state, and national political phenomenon. This chapter contains two examples of how the different ROAD Project data files might be used to analyze substantive political issues. As should be obvious, these are illustrative and hardly exhaustive. We also describe a methodological issue to be aware of in analyzing these, and other, aggregate data.

## 3.1 Precinct-Level Electoral Data: A Study of Voting Dropoff

Turnout rates differ across offices in a given election. In general, political scientists have found that as one proceeds down the ballot, from the most prominent races for national and statewide offices to the the least prominent races for state and local offices, voting rates decrease. This dropoff phenomenon is of interest, in part, because citizens who fail to vote in less prominent elections have already overcome existing psychological and structural barriers to turning out to vote. Still, for some reason they choose not to vote for certain offices even though this a relatively costless action given they are already in the voting booth. Differences in these dropoff rates might indicate how election specific stimuli affect voting behavior.

The ROAD files can be used at their lowest level of aggregation to study voting dropoff. The precinct level electoral data files contain information

on voting for every contested office in a given general election. The data for this analysis would consist of a dropoff rate between two offices for each precinct in a state in a given year. Given how many observations there are available, it would be wise to do an analysis for a single state, or perhaps for one state at a time. It might even be worth dropping down to a separate analysis for each county for test runs.

In general, any analysis that involves only voting behavior can be examined using the precinct-level electoral data files. This is the lowest level at which voting behavior is measured in the ROAD project. There is no need to incorporate census data in this analysis. Hence, there is no need to use data aggregated to the MCD-group level.

## 3.2 MCD-Group Data: An Analysis of the Correlates of Voting Behavior

One of the most significant contributions of the ROAD project is that it provides appropriate data for examining the relationship between the local environment and actual political behavior. While, political scientists have recognized that local context affects political behavior, the kind of detailed information need to test hypotheses regarding this relationship has heretofore been unavailable. An analysis of this type using the ROAD project files might consider a variety of electoral variables, including voter turnout, the vote for various candidates, registration rates, and partisan differentials in voting or registration. The explanatory variables in such an analysis would consists of census variables, including education levels, racial composition, and urbanicity.

Examining the correlates of voting behavior necessitates using both census and electoral data. The MCD-group level files combine these two types of data at their lowest unit of aggregation. For certain states, these MCD-groups are actually MCDs because no precincts cross MCD boundaries. MCD-groups can also be mapped with our ROAD Map files.

## 3.3 A Caution: Distinguishing Ecological Inferences and Contextual Effects

The difference between turnout for president and turnout for state house — or the difference between the vote for the Democratic candidate for president

and state house — is an aggregate description. This description is politically important at the aggregate level. But suppose instead we were interested in the fraction of individual people splitting their tickets. In this case, we would need to use the ROAD data to make an ecological inference.

Similarly, models that explain or predict geographic variations in electoral vote totals for candidates as a function of economic and demographic variables could be studied as contextual effects. For example, we may wish to know whether the vote for Democratic candidates is higher in areas with universities (college towns). But if we were instead interested in the individual-level question about whether college students are more likely to vote for the Democrats, then we need to make an ecological inference.

For information on how to make ecological inferences, see Gary King's, *A Solution to the Ecological Inference Program: Reconstructing Individual Behavior from Aggregate Data* (Princeton University Press, 1997), and the related software programs. See also some of Bradley Palmquist's papers on ecological inference.

# Chapter 4

# Merging Electoral and Census Data to Create MCD-Groups

Many—although far from all—interesting applications of our electoral data require that the researcher merge them with relevant variables from the U.S. Census, such as race, income, education, occupation, journey to work, etc. With such merged data, scholars can characterize the social, economic, and demographic characteristics of local communities at the same time as their voting behavior. One aim of the ROAD Project was to provide such merged files.

## 4.1 The Roadblock

Merging Census and electoral data is not a straightforward task. The central problem is that the Census data does not include a voting precinct geographic unit. Thus, matching Census data to precinct-level voting data for the entire country meant mapping each of the 7 million Census blocks into the 190,000 voting precincts in the U.S.

Fortunately, beginning with the 1990 Census, the Census bureau and the states cooperated to match voting and Census data as best as they could in order to meet legislative redistricting guidelines. As part of `PL94-171` (Public Law 94-171), the states (in 1985) suggested to the Census geographic features that would be appropriate for drawing Census block boundaries for

the 1990 Census. Then, after the Census delineated the block boundaries and produced maps with the Census blocks to be used in the 1990 Census, the states (in 1989) outlined their current precinct boundaries on these maps and returned them to the Census. Finally, the Census (in 1991) supplied population counts from the 1990 Census aggregated at the voting precinct level using the precinct boundaries supplied by the states.

The result of this process was a precinct-like Census geographical unit, the Voting District (or VTD, which we also refer to as Voter Tabulation District). We quote from the 1990 Census of Population and Housing Technical Documentation:

> A voting district (VTD) is any of a variety of types of areas (for example, election districts, precincts, wards, legislative districts) established by State and local governments for purposes of elections. For Census purposes, each State participating in Phase 2 of the 1990 Census Redistricting Data Program outlined the boundaries of VTDs around groups of whole Census blocks on Census maps. The entities identified as VTDs are not necessarily those legally or currently established. Also, to meet the "whole block" criterion, a State may have had to adjust VTD boundaries to nearby block boundaries. Therefore, the VTD's shown on the 1990 Census tapes, listings, and maps may not represent the actual VTDs in effect at the time of the Census.

(What is confusing is that in the 1980 census, VTDs were called "precincts" even though "census precincts" had virtually nothing to do with real electoral precincts. In the 1990 Census, which we rely on, the census units are always called VTDs.)

There are several points to note here. First, census VTDs are *not* the same as electoral precincts: precinct boundaries were defined locally (usually by county governments), and VTDs were defined by the Census Bureau in cooperation with local governments to closely approximate existing precincts. Precincts are defined for political purposes, and VTDs were created to suit the purposes of the census. VTDs are generally demarcated by natural landmarks, such as roads and rivers, but not so for precincts.

Second, VTD definitions, like all Census area units, were based on the lowest Census geographical unit: the block. Yet the precinct definitions actually used in elections were not based on such a constraint. Thus, in the worst cases, Census blocks are not neatly nested within precincts. As a result, VTDs are not identical to voting precincts and cannot be perfectly

reaggregated into precincts. Indeed, on average, VTDs are a bit larger, i.e., more highly aggregated. However, note that in all cases, the perimeter lines for the two aggregation units are never off by more than half a block per road. The vast majority of a precinct, not near the perimeter, is accurately reflected in a VTD.

Third, the Census VTD mapping program was voluntary: certain governments did not participate. Hence some states and some counties lack VTD definitions. VTDs do not completely "tile" the nation, i.e., break it into mutually exclusive, exhaustive, and contiguous areal units.

A further difficulty is that Census data at the VTD-level was released in just the `PL94-171` set of files. Unfortunately, these files only contain the few population counts useful for redistricting, such as according to voting age and race. The 3,725 other demographic variables of interest to social scientists are not included in the `PL94-171` datasets. Hence, in order to use other demographic variables from the Census, one must go to a higher level of aggregation. The next highest level of aggregation that exhaustively "tiles" a state is the Minor Civil DivisionIV (or MCD), which is also referred to by the Census as summary level 060. There are typically several MCDs within a county, depending on the population of the county. Unfortunately, MCDs only have logically consistent definitions for political and census data for the northeastern states and a few others (NY, NJ, PA, VT, NH, MA, ME, CT, RI, IN, IL, OH, and WI).

## 4.2 Paving the Way

Given the problems described above, there were two different ways to merge Census and electoral data. One approach would be to match Census VTDs to electoral precincts, producing merged files with the limited set of Census variables available in the `PL94-171` datasets; we did not want to start with this approach because we would need to hope that the overlapping pieces of geography were not very important. The second approach, which we adopted, was to aggregate precincts up to the next higher Census geographical unit for which the full suite of demographic variables was available.

The ROAD Project created a number of experimental datasets of the former type, but not for every state. The reason we did not produce more was because (1) VTD definitions are not available for all states or counties and (2) even where fully defined, VTDs are not the same entities as precincts. Hence our VTD-level datasets could not possibly tile the entire country, and

the merged data would be relatively suspect even in some cases where VTD definitions exist.

Rather than emphasize what in some cases would be a shaky VTD-level merge, we chose to take the latter approach: to produce a comprehensive national merge of Census and electoral data at a higher level of aggregation (while still providing the electoral data at the precinct level of course). This method had the advantage of including the full range of Census demographic variables. As we shall see, it also made matching of units on either side of the merge much more reliable. Furthermore, this approach also generated a number of byproducts useful for other purposes.

## 4.3 The End of the Road

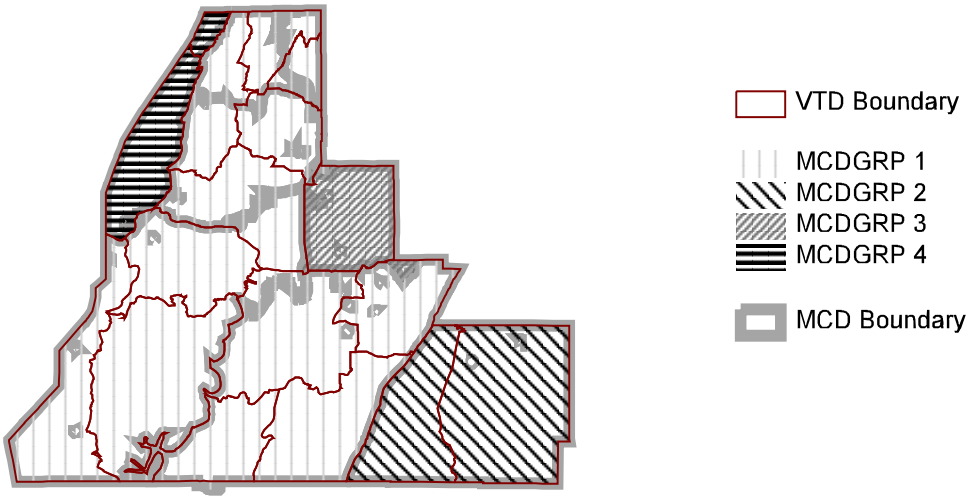
The lowest fully tiled Census geography above VTD is the MCD. Hence the ROAD Project sought to aggregate precincts to MCDs and then merge the Census data with the precinct-level electoral data files. This was possible for a number of states—primarily the Northeast plus a few from the Midwest—but the precinct-level electoral data files for the vast majority of states do not contain MCD identifiers and do not neatly nest VTDs within MCDs.

This problem is illustrated nicely in Figure 4.1. This figure shows a map of Walker County, Georgia. It also shows the Census VTD and MCD boundaries, with thin red and wide gray lines, respectively. Notice how the two VTDs in the lower right hand corner of the county neatly fit within one MCD. Compare this to the top portion of the map, in which at least three VTDs are not fully contained within single MCDs.

Because of this problem, we could not merge properly at the MCD level for the majority of states. We would have had to arbitrarily assign an overlapping VTD to a single one of its MCDs. In Walker County, for instance, 3 of 8 of the MCDs would have been shorn of at least half their area (and presumably a similar proportion of population), and the other MCDs would have also inappropriately absorbed the excess. The population from which the voting data was drawn would simply not match the population on which the Census data was gathered.

Thus, in order to merge these two sets of data, we had to create an entirely new unit of analysis. *This unit is the smallest possible aggregation of MCDs such that no VTD within its borders is also a member of any other such aggregate.* We call this unit the MCD Group. Since no VTD or MCD ever crosses county lines, an MCD Group can be no larger than a county

Figure 4.1: 1990 Census Geography in Walker County, Georgia




and no smaller than a single MCD.

Figure 4.1 illustrates how MCD Groups relate to MCDs and VTDs in Walker County. Recall how the VTDs in the top portion of the map overlap MCDs. All the MCDs linked by a chain of overlapping VTDs are members of the same MCD Group, the large central area described by the vertical light gray stripes. Yet those MCDs not sharing VTDs with others constitute their own MCD Groups, as you can see in the lower right hand corner of the map, for example. In total, Walker County has 17 VTDs, 8 MCDs, and 4 MCD Groups.

## 4.4 Outline of the Merging Process

In order to merge Census data with voting data at the MCD Group level, several steps were necessary:

1. Construct MCD Groups from the existing Census geographical definitions of VTDs, MCDs, and counties.

2. Match electoral precincts to Census VTDs, as defined in the Census `PL94-171` files.

3. Aggregate the precincts to MCD Groups using their new VTD codes.

4. Aggregate Census MCDs to MCD Groups.

5. Merge the two datasets at the MCD Group level.

Note that Step 2 above accomplishes most of the work necessary to merge Census and voting data at the VTD-level. (As we note below, even though the matching at this point is not perfect, the small errors are for the most part inconsequential once the data are aggregated to MCD-Groups.)

Also, recall that MCD-level merges were possible for some states (i.e., those in which electoral precincts precisely matched VTDs and in which VTDs were fully nested within MCDs). In such states, MCD Groups were equivalent to MCDs. In those states with few or no VTD definitions, the optimal MCD Groups were entire counties. However, unless otherwise noted, when we discuss MCD Group-level merged data, we refer to both these trivial MCD Group states as well as the states in which MCD Groups are not in all cases equal to MCDs or counties.

Unfortunately, a difficulty in Step 2 was that the naming conventions for the precincts usually were not identical across the voting data and the Census `PL94-171` data. To correctly assign the voting precincts to the Census precincts, we wrote a SAS program to match as many precincts as possible, given cues such as county name, precinct name, and precinct number. After the program matched as many precincts as possible (typically 50–80 percent of them), a person manually matched the remaining precincts based on a precisely-defined set of coding rules.

Often a precinct could not be conclusively matched to a precinct in the `PL94-171` data. In such cases it was occasionally possible to figure out which MCD (or MCD Group) the precinct resided in. As long as a precinct could be correctly assigned to an MCD or MCD Group, it did not matter that a precinct could not be matched directly to a Census VTD, since the two datasets would be aggregated up to the MCD Group-level anyway.

Sometimes, an electoral precinct could not be matched to even an MCD (or MCD Group). In these cases nothing was done with the precinct (it is still included in the precinct-level electoral dataset, but not assigned in the MCD Group-level merge file). Statistics about the total number of precincts assigned and unassigned for each state and for each county in each state are recorded in log files produced during the merge process.

Relatedly, because not all of the precincts from the vote data could be matched to an MCD Group, some MCD Groups are not exhaustively covered by the precincts from the vote data. That is, there are "gaps" in

some MCD Groups caused by unassigned precincts. For these MCD Groups, voting turnout is artificially low, because voters in the unassigned precincts are missing. There is no way to calculate precisely the number of missing voters per MCD Group; we can only ascertain the number not included in a county's worth of MCD Groups. In general, however, the number of precincts and registered voters not matched into MCD Groups is quite low—typically less than one percent of the total for a state. We believe the ROAD Project MCD Group-level data are highly reliable. Moreover, the files used in the merge process are available for interested researchers to further refine these merged datasets.

# Chapter 5

# Statistics on Precincts and MCD-Groups

The ROAD Project's MCD Group data include

- 1 state merged at the Census blockgroup level (California).
- 13 states merged at the MCD level (Connecticut, Illinois, Indiana, Massachusetts, Maine, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Wisconsin).
- 26 states merged at conglomerations of one or more MCDs (Alabama, Arkansas, Arizona, Colorado, Florida, Georgia, Iowa, Idaho, Kansas, Louisiana, Maryland, Michigan, Minnesota, Missouri, North Carolina, North Dakota, Nebraska, Nevada, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Virginia, Washington, West Virginia).
- 9 states merged at the county level (DE, HI, KY, MS, MT, NM, OR, TX, WY). Of these, 4 (KY, MS, MT, OR) did not participate at all in the Census `PL94-171` project; 1 (TX) did only partially, such that no single county was capable of supporting more than one MCD Group; and 4 (DE, NM, WY, HI) coincidentally had VTD definitions that overlapped MCDs to such an extent in every county that no nontrivial MCD Groups were possible.
- 1 state (Alaska) and the District of Columbia, merged at the state level.

Note that our definition of MCD Groups could theoretically differ across years. We sought to avoid this wherever possible. However, for two states (South Carolina and West Virginia), we performed MCD Group-level merges differently for 1984 than for 1986-1990 because the 1984 precinct-level electoral data precincts were substantially different than the 1986-1990 precinct-level electoral data precinct definitions. To use the same MCD Grouping for 1986-1990 as for 1984 would have unnecessarily limited the number of MCD Groups. For the other states, there was no consequential difference across years, so we used the same MCD Group definitions.

Finally, we present a table showing the number of counties, MCD Groups, MCDs, and VTDs in each state.

# Part II

# *User's Guide*

# Chapter 6

# Data Files

This section is a guide to the data files distributed by the ROAD Project, identifies each file type, explains how the files are organized, and provides information on the contents of the documentation files. (ROAD Data mapping files are described separately.)

## 6.1 Overview of ROAD Files

In addition to the ROAD Data mapping files, the ROAD data includes four types of files, which we list here. The most important three are:

1. **Precinct electoral files**. A number of files containing electoral results, each for a different year (1984-1990), at the precinct level. Each state has a set of these files.
2. **MCD Group level** files. Merged files of 1990 Census `STF3a` and voting data from 1984-1990, including every state and national election during that time period, at the MCD Group-level. There is one such file per state.
3. **Documentation files**. These describe any special considerations for a given state. They also record information about the merge process—how many precincts and voters were dropped due to no match being made, how many precincts were matched to VTDs by the match program, etc.

One remaining type of file was instrumental in the creation of the merged files. However, we release them primarily to provide others with the flexi-

bility (1) to create their own lower-level merges should it become possible for a given subset of the data and (2) to use the MCD Group-level data with mapping software or in another capacity that requires integration into existing Census databases at any level of aggregation.

1. **Key files**. Files mapping precincts to MCDs, counties, and MCD Groups and the programs, input, and output files used to create these keys. Each state has two key files, one for matching precincts to MCDs and MCD groups, and the other matches MCDs to MCD groups.

## 6.2 Where to Find ROAD Files

The root directory of the first ROAD CD contains a readme.txt file that describes the files contained on that CD. There are 6 directories on the first CD arranged as follows.

In the DOCS directory the documentation, in HTML format. The file `road.html` is the root file, and contains the table of contents and links to all other files.

In the BOUNDS directory the shape files describing the geographic boundaries of each MCDgroup in ArcView 2.0 format.

- Archived in a zip file *bounds*.zip, for each state-level set of MCDgroups there are three files: sum*xx*.dbf, sum*xx*.shx, sum*xx*.shp .i.e., sum*al*.dbf, sum*al*.shx, sum*al*.shp,... sum*wv*.dbf, sum*wv*.shx, sum*wv*.shp.

In the PRECINCT directory the Precinct Electoral files

- Archived in zip files Part*X*.zip, for each state for each year an SPSS portable file, *xxyy*mp20.por, containing electoral data, i.e., *al84*mp20.por, *al86*mp20.por, *al88*mp20.por, *al90*mp20.por ... *wv88*mp20.por, *wv90*mp20.por

In the MCDGRP directory the MCD Group level files

- For each state an SPSS portable file, mg_*xx*.por, containing merged Census and electoral data at the MCDgroup level, i.e., mg_*ak*.por, mg_*al*.por, mg_*ar*.por, mg_*az*.por . . . mg_*wa*.por, mg_*wv*.por

In the NOTES directory the notes and exceptions documentation files

- In the MATCH_C sub-directory
  For each state, where informative, a matc_*xx*.log, i.e., matc_*ak*.log, matc_*al*.log, matc_*ar*.log, matc_*az*.log . . . matc_*wa*.log, matc_*wv*.log
- In the MATCH_F sub-directory
  For each state, where informative, a matf_*xx*.log, i.e., matf_*ak*.log, matf_*al*.log, matf_*ar*.log, matf_*az*.log . . . matf_*wa*.log, matf_*wv*.log
- In the MATCH_H sub-directory
  For each state, where informative, a math_*xx*.log, i.e., math_*ak*.log, math_*al*.log, math_*ar*.log, math_*az*.log . . . math_*wa*.log, math_*wv*.log
- In the EXCEPT sub-directory
  For each state, where informative, a excep_*xx*.txt, i.e., excep_*ak*.txt, excep_*al*.txt, excep_*ar*.txt, excep_*az*.txt . . . excep_*wa*.txt, excep_*wv*.txt

In the KEY directory the Key files

- In the KEYS sub-directory
  When appropriate, each state has two zip files, key.zip and pkey.zip. These contain SPSS portable files key*xx*.por, and pkey*xx*.por providing matches of MCDs (or counties) to MCDgroups, and precincts to MCDgroups (respectively), i.e., key_*ak*.por, key*ak*.por, pkey*ak*.por, . . . key*wv*.por, pkey*wv*.por.
- In the INPUT sub-directory
  For each state an ascii file, *xx*.mcd, listing precincts and MCDs (by precinct) used as input for plvdkey.exe program, see the description in Chapter 12. i.e., *ak*.mcd, *al*.mcd, *ar*.mcd, *az*.mcd . . . *wa*.mcd, *wv*.mcd
- In the PROGRAMS sub-directory
  The program used to create the match files described above, i.e., plvdkey.exe, and the C++ code used to create this plvdkey.exe program contained in a series of files: plvdkey.cpp, plvdkey.dsk, plvdkey.h, plvdkey.obj, plvdkey.prj, alphanum.cpp, alphanum.h, alphanum.ob
- In the OUTPUT sub-directory
  For each state three ascii files, *xx*.mg, *xx*.mgl, and *xx*.mgs, that are an output file, a log file, and a statistics file generated from the plvdkey.exe program that is a list of precincts and mcds (by precinct), see the description in Chapter 12. i.e., *ak*.mg, *ak*.mgl, *ak*.mgs, *al*.mg, *al*.mgl, . . . .*wv*.mg, *wv*.mgl, *wv*.mgs

The root directory of the second ROAD CD contains a readme.txt file that describes the files contained on that CD. It contains only a CAMCDGRP directory containing the MCDgroup data for California, and a CAbounds directory containing only the boundary files for California.

# Chapter 7

# Variable Definitions

This section describes the contents of the ROAD Project files. It describes the voting and Census variables in each kind of file; it details the kinds of information provided in a set of auxiliary documentation files for each state; it notes a series of special considerations for each state; and, finally, it lists the exact voting data variables available for each state.

## 7.1 Voting Data Variables

The variables below are included in the files with voting data — the MCD-group level files (`mg_`*xx*`.por`) and the precinct electoral data files (*xxyy*`mp20`.por). Some variables — as noted below — are not present in the MCDgroup level files, because they do not make sense when aggregated or have uniformly missing values. Not all of variables listed below are available in every single precinct electoral data file. As above, *yy* stands for the year abbreviation (e.g., 90). Numeric fields contain only numbers. Alphanumeric may contain letters and numbers. All variables beginning with G are numeric.

Missing values are set to system missing in SPSS. Be aware that in some precincts, it is not possible to ascertain definitively whether a 0 code indicates no votes or a missing value. In most cases, this has little consequence when the data are aggregated into MCD-groups. However, for the precinct-level electoral data, it pays to look at the number of valid precincts for each variable in the tables of descriptive statistics we provide for each state. When these differ across variables within the same year (especially for the total vote variables), it is always due to some variables' missing values being coded as 0 and others coded as missing. Most cases with mixed 0s and miss-

ing data codes are artificial "precincts" added to the data set to represent absentee ballots, or split actual precincts (i.e., those which contain voters for more than one district).

**ST** State code [Numeric]. Uses FIPS (Federal Information Processing Standards) codes. Only in precinct electoral data files.

**CY** County code [Numeric]. Uses FIPS codes. Only in precinct electoral data files.

**MCD** Minor civil division code [Numeric]. Uses Census codes. Only in precinct electoral data files. Has values only for NY, NJ, PA, VT, NH, MA, ME, CT, RI, IN, and WI.

**MCDGRP** MCD group code [Numeric]. Unique identifier for each MCD group that the ROAD project created for the purpose of merging voting and census data. Only in precinct electoral data. Note: Each case is an MCD group in the MCD group level data.

**WD** Ward code, [Alphanumeric]. For those precincts that are part of a ward system, predominantly urban precincts, this field identifies the ward in which the precinct is contained. Only in precinct electoral data files.

**PR** Precinct identifier [Numeric]. Precincts designated for absentee ballots are coded 9999. Only in precinct electoral data files.

**PRS** Precinct suffix [Alphanumeric]. Where precincts are identified by a number+letter this field contains the alphabetic component. E.g., In the case of precincts identified as 1A and 1B, both precincts would have a PR value of 1, but each would have unique PRS values of A and B. Only in precinct electoral data files.

**AF** Absentee flag [Alphanumeric]. Flag is set to 'Y' if the record is a reporting unit for absentee votes. Only in precinct electoral data files.

**SF** Split precinct flag [Alphanumeric]. Flag is set to 'Y' if the physical precinct is split across two reporting units. Each unit is identified with a unique ballot box code, see BB below. Only in precinct electoral data files.

**BB** Ballot box [Alphanumeric]. If physical precinct is split into different reporting units, each unit will have a unique value in this field. Only in precinct electoral data files.

**CD** Congressional district code [Numeric]. 99 is at-large state. Only in precinct electoral data files.

**SD** State Senate district code [Numeric]. If a state does not use a numeric code to identify districts, the ROAD project has assigned codes sequentially, beginning with a values of 101. See the list of district codes. Only in precinct electoral data files.

**LD** State House/Assembly district code [Numeric]. If a state does not use a numeric code to identify districts, the ROAD projects has assigned codes sequentially, beginning with a values of 201. See the list of district codes. Only in precinct electoral data files.

**LDS** State House suffix [Alphanumeric]. Where State House/Assembly districts are identified by a number+letter this field contains the alphabetic component. E.g., In the case of districts identified as 1A and 1B, both districts would have a LD value of 1, but each would have unique LDS values of A and B. Only in precinct electoral data files.

**PNAME** Precinct name [Alphanumeric]. Precinct name used by local officials. Only in precinct electoral data files.

**G*yy*Q_DV** Democratic Party registration, year-specific.

**G*yy*Q_RV** Republican Party registration, year-specific.

**G*yy*Q_O1V** Other Party 1 registration, year-specific.

**G*yy*Q_O2V** Other Party 2 registration, year-specific.

**G*yy*Q_O3V** Other Party 3 registration, year-specific.

**G*yy*Q_O4V** Other Party 4 registration, year-specific.

**G*yy*Q_O9V** All Others registration, year-specific.

**G*yy*Q_TV** Total (in-party) enrollment, year-specific.

**G*yy*R** Total registration, year-specific.

**G*yy*V** Turnout, general election, year-specific, calculated by dividing the votes from the highest vote total race in the precinct by the number of individuals registered to vote in the precinct.

**G*yy*TAPR** Turnout in the general election as a percentage of total registration, year-specific.

**G*yy*P_DV** Votes for the Democratic presidential candidate in the general election, year-specific.

**G*yy*P_RV** Votes for the Republican presidential candidate in the general election, year-specific.

**G*yy*P_O1V** Votes for the Other Party 1 presidential candidate in the general election, year-specific.

**G*yy*P_O2V** Votes for the Other Party 2 presidential candidate in the general election, year-specific.

**G*yy*P_O9V** Votes for All Other presidential candidates in the general election, year-specific.

**G*yy*P_TV** Total Votes for presidential candidate in the general election, year-specific.

**G*yy*VORIG** Ballots cast in the general election. Actual ballots counted, if available, year specific.

**G*yy*XA_TV** For State House Post A, the number of Total votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*X e.g., G84XB_TV.

**G*yy*XA_DV** For State House Post A, the number of Democratic votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*X e.g., G84XB_DV. If field G*yy*X_DV has anything, it is the partisan average of all Democrats in XA..XB..XC..etc.

**G*yy*XA_RV** For State House Post A, the number of Republican votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*X e.g., G84XB_RV. If field G*yy*X_RV has anything, it is the partisan average of all Republicans in XA..XB..XC..etc.

**G*yy*XA_O1** For State House Post A, the number of Other Party votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*X e.g., G84XB_O1. If field G*yy*X_O1 has anything, it is the average of all other party candidates in XA..XB..XC..etc.

**G*yy*YA_TV** For State Senate Post A, the number of Total votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*Y e.g., G84YB_TV.

**G*yy*YA_DV** For State Senate Post A, the number of Democratic votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*Y e.g., G84YB_DV. If field G*yy*Y_DV has anything, it is the partisan average of all Democrats in YA..YB..YC..etc.

**G*yy*YA_RV** For State Senate Post A, the number of Republican votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*Y e.g., G84YB_RV. If field G*yy*Y_RV has anything, it is the partisan average of all Republicans in YA..YB..YC..etc.

**G*yy*YA_O1** For State Senate Post A, the number of Other Party votes in the general election, year specific. If state uses seats/positions, individual votes are placed here for position A. Additional positions are appended to G*yy*Y e.g., G84YB_O1. If field G*yy*Y_O1 has anything, it is the average of all other party candidates in YA..YB..YC..etc.

**G*yy*X_TTU** For the State House, if a state uses multi-member elections, total votes cast in the general election.

**G*yy*X_RTU** For the State House, if a state uses multi-member elections, total Republican votes cast in the general election. If field G*yy*X_RV has anything, it is the partisan average for all multi-member seat Republicans, e.g. R1U..R2U..etc.

**G*yy*X_DTU** For the State House, if a state uses multi-member elections, total Democratic votes cast in the general election. If field G*yy*X_DV has anything, it is the partisan average for all multi-member seat Democrats, e.g. D1U..D2U..etc.

**G*yy*X_OTU** For the State House, if a state uses multi-member elections, total Other Party votes cast in the general election. If field G*yy*X_OV has anything, it is the average for all multi-member seat other party candidates, e.g. O1U..O2U..etc.

**G*yy*X_R1U** For the State House, if a state uses multi-member elections, votes cast for the first Republican on the ballot in the general election.

If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*X_R e.g., G84X_R2U. In NH, WV, and WY seats are listed in the format _R01, _R02, _R03, etc.

**G*yy*X_D1U** For the State House, if a state uses multi-member elections, votes cast for the first Democrat on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*X_D e.g., G84X_D2U. In NH, WV, and WY seats are listed in the format _D01, _D02, _D03, etc.

**G*yy*X_O1U** For the State House, if a state uses multi-member elections, votes cast for the first Other Party candidate on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*X_O e.g., G84X_O2U. In NH, WV, and WY seats are listed in the format _O01, _O02, _O03, etc.

**G*yy*Y_TTU** For the State Senate, if a state uses multi-member elections, total votes cast in the general election.

**G*yy*Y_RTU** For the State Senate, if a state uses multi-member elections, total Republican votes cast in the general election. If field G*yy*Y_RV has anything, it is the partisan average for all multi-member seat Republicans, e.g. R1U..R2U..etc.

**G*yy*Y_DTU** For the State Senate, if a state uses multi-member elections, total Democratic votes cast in the general election. If field G*yy*Y_DV has anything, it is the partisan average for all multi-member seat Democrats, e.g. D1U..D2U..etc.

**G*yy*Y_OTU** For the State Senate, if a state uses multi-member elections, total Other Party votes cast in the general election. If field G*yy*Y_OV has anything, it is the average for all multi-member seat other party candidates, e.g. O1U..O2U..etc.

**G*yy*Y_R1U** For the State Senate, if a state uses multi-member elections, votes cast for the first Republican on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*Y_R e.g., G84Y_R2U. In NH, WV, and WY seats are listed in the format _R01, _R02, _R03, etc.

**G*yy*Y_D1U** For the State Senate, if a state uses multi-member elections, votes cast for the first Democrat on the ballot in the general election.

If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*Y_D e.g., G84Y_D2U. In NH, WV, and WY seats are listed in the format _D01, _D02, _D03, etc.

**G*yy*Y_O1U** For the State Senate, if a state uses multi-member elections, votes cast for the first Other Party candidate on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*Y_O e.g., G84Y_O2U. In NH, WV, and WY seats are listed in the format _O01, _O02, _O03, etc.

**G*yy*M_TTU** For the State Public Service Commission, if a state uses multi-member elections, total votes cast in the general election.

**G*yy*M_RTU** For the State Public Service Commission, if a state uses multi-member elections, total Republican votes cast in the general election. If field G*yy*M_RV has anything, it is the partisan average for all multi-member seat Republicans, e.g. R1U..R2U..etc.

**G*yy*M_DTU** For the State Public Service Commission, if a state uses multi-member elections, total Democratic votes cast in the general election. If field G*yy*M_DV has anything, it is the partisan average for all multi-member seat Democrats, e.g. D1U..D2U..etc.

**G*yy*M_OTU** For the State Public Service Commission, if a state uses multi-member elections, total Other Party votes cast in the general election. If field G*yy*M_OV has anything, it is the average for all multi-member seat other party candidates, e.g. O1U..O2U..etc.

**G*yy*M_R1U** For the State Public Service Commission, if a state uses multi-member elections, votes cast for the first Republican on the ballot in the general election. If a state has more than one multi-member seat, additional multi-member seats are appended to G*yy*M_R e.g., G84M_R2U. In NH, WV, and WY seats are listed in the format _R01, _R02, _R03, etc.

**G*yy*M_D1U** For the State Public Service Commission, if a state uses multi-member elections, votes cast for the first Democrat on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*M_D e.g., G84M_D2U. In NH, WV, and WY seats are listed in the format _D01, _D02, _D03, etc.

**G*yy*M_O1U** For the State Public Service Commission, if a state uses multi-member elections, votes cast for the first Other Party candidate on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*M_O e.g., G84M_O2U. In NH, WV, and WY seats are listed in the format _O01, _O02, _O03, etc.

**G*yy*K_TTU** For other state multi-member elections, total votes cast in the general election.

**G*yy*K_RTU** For other state multi-member elections, total Republican votes cast in the general election. If field G*yy*K_RV has anything, it is the partisan average for all multi-member seat Republicans, e.g. R1U..R2U..etc.

**G*yy*K_DTU** For other state multi-member elections, total Democratic votes cast in the general election. If field G*yy*K_DV has anything, it is the partisan average for all multi-member seat Democrats, e.g. D1U..D2U..etc.

**G*yy*K_OTU** For other state multi-member elections, total Other Party votes cast in the general election. If field G*yy*K_OV has anything, it is the average for all multi-member seat other party candidates, e.g. O1U..O2U..etc.

**G*yy*K_R1U** For other state multi-member elections, votes cast for the first Republican on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*K_R e.g., G84K_R2U. In NH, WV, and WY seats are listed in the format _R01, _R02, _R03, etc.

**G*yy*K_D1U** For other state multi-member elections, votes cast for the first Democrat on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*K_D e.g., G84K_D2U. In NH, WV, and WY seats are listed in the format _D01, _D02, _D03, etc.

**G*yy*K_O1U** For other state multi-member elections, votes cast for the first Other Party candidate on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*K_O e.g., G84K_O2U. In NH, WV, and WY seats are listed in the format _O01, _O02, _O03, etc.

**G*yy*O_TTU** For other state multi-member elections, total votes cast in the general election.

**G*yy*O_RTU** For other state multi-member elections, total Republican votes cast in the general election. If field G*yy*O_RV has anything, it is the partisan average for all multi-member seat Republicans, e.g. R1U..R2U..etc.

**G*yy*O_DTU** For other state multi-member elections, total Democratic votes cast in the general election. If field G*yy*O_DV has anything, it is the partisan average for all multi-member seat Democrats, e.g. D1U..D2U..etc.

**G*yy*O_OTU** For other state multi-member elections, total Other Party votes cast in the general election. If field G*yy*O_OV has anything, it is the average for all multi-member seat other party candidates, e.g. O1U..O2U..etc.

**G*yy*O_R1U** For other state multi-member elections, votes cast for the first Republican on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*O_R e.g., G84O_R2U. In NH, WV, and WY seats are listed in the format _R01, _R02, _R03, etc.

**G*yy*O_D1U** For other state multi-member elections, votes cast for the first Democrat on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*O_D e.g., G84O_D2U. In NH, WV, and WY seats are listed in the format _D01, _D02, _D03, etc.

**G*yy*O_O1U** For other state multi-member elections, votes cast for the first Other Party candidate on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*O_O e.g., G84O_O2U. In NH, WV, and WY seats are listed in the format _O01, _O02, _O03, etc.

**G*yy*Z_TTU** For other state multi-member elections, total votes cast in the general election.

**G*yy*Z_RTU** For other state multi-member elections, total Republican votes cast in the general election. If field G*yy*Z_RV has anything, it is the partisan average for all multi-member seat Republicans, e.g. R1U..R2U..etc.

**G*yy*Z_DTU** For other state multi-member elections, total Democratic votes cast in the general election. If field G*yy*Z_DV has anything, it is the partisan average for all multi-member seat Democrats, e.g. D1U..D2U..etc.

**G*yy*Z_OTU** For other state multi-member elections, total Other Party votes cast in the general election. If field G*yy*Z_OV has anything, it is the average for all multi-member seat other party candidates, e.g. O1U..O2U..etc.

**G*yy*Z_R1U** For other state multi-member elections, votes cast for the first Republican on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*Z_R e.g., G84Z_R2U. In NH, WV, and WY seats are listed in the format _R01, _R02, _R03, etc.

**G*yy*Z_D1U** For other state multi-member elections, votes cast for the first Democrat on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*Z_D e.g., G84Z_D2U. In NH, WV, and WY seats are listed in the format _D01, _D02, _D03, etc.

**G*yy*Z_O1U** For other state multi-member elections, votes cast for the first Other Party candidate on the ballot in the general election. If a state has more than one multi-member seats, additional multi-member seats are appended to G*yy*Z_O e.g., G84Z_O2U. In NH, WV, and WY seats are listed in the format _O01, _O02, _O03, etc.

**XCANS** Number of candidates in multi-member districts in the lower house [Numeric]. Only in precinct electoral data files.

**XDEMS** Number of Democrat candidates in multi-member districts in the lower house [Numeric]. Only in precinct electoral data files.

**XREPS** Number of Republican candidates in multi-member districts in the lower house [Numeric]. Only in precinct electoral data files.

**XOTHS** Number of Other party candidates in multi-member districts in the lower house [Numeric]. Only in precinct electoral data files.

**YCANS** Number of candidates in multi-member districts in the upper house [Numeric]. Only in precinct electoral data files.

**YDEMS** Number of Democrat candidates in multi-member districts in the upper house [Numeric]. Only in precinct electoral data files.

**YREPS** Number of Republican candidates in multi-member districts in the upper house [Numeric]. Only in precinct electoral data files.

**YOTHS** Number of Other party candidates in multi-member districts in the upper house [Numeric]. Only in precinct electoral data files.

**MCANS** Number of candidates for Public Service Commission [Numeric].

**MDEMS** Number of Democrat candidates for Public Service Commission [Numeric].

**MREPS** Number of Republican candidates for Public Service Commission [Numeric].

**MOTHS** Number of Other party candidates for Public Service Commission [Numeric].

**KCANS** Number of candidates for other statewide race [Numeric].

**KDEMS** Number of Democrat candidates for other statewide race [Numeric].

**KREPS** Number of Republican candidates for other statewide race [Numeric].

**KOTHS** Number of Other party candidates for other statewide race [Numeric].

**OCANS** Number of candidates for other statewide race [Numeric].

**ODEMS** Number of Democrat candidates for other statewide race [Numeric].

**OREPS** Number of Republican candidates for other statewide race [Numeric].

**OOTHS** Number of Other party candidates for other statewide race [Numeric].

**ZCANS** Number of candidates for other statewide race [Numeric].

**ZDEMS** Number of Democrat candidates for other statewide race [Numeric].

**ZREPS** Number of Republican candidates for other statewide race [Numeric].

**ZOTHS** Number of Other party candidates for other statewide race [Numeric].

**G*yy*S_DV** Votes for the Democratic Senate candidate in the general election, year-specific.

**G*yy*S_RV** Votes for the Republican Senate candidate in the general election, year-specific.

**G*yy*S_O1V** Votes for the Other Party 1 Senate candidate in the general election, year-specific.

**G*yy*S_O2V** Votes for the Other Party 2 Senate candidate in the general election, year-specific.

**G*yy*S_O9V** Votes for All Other Senate candidates in the general election, year-specific.

**G*yy*S_TV** Total Votes for Senate candidate in the general election, year-specific.

**G*yy*W_DV** Votes for the Democratic Special Senate candidate in the general election, year-specific.

**G*yy*W_RV** Votes for the Republican Special Senate candidate in the general election, year-specific.

**G*yy*W_O1V** Votes for the Other Party 1 Special Senate candidate in the general election, year-specific.

**G*yy*W_O2V** Votes for the Other Party 2 Special Senate candidate in the general election, year-specific.

**G*yy*W_O9V** Votes for All Other Special Senate candidates in the general election, year-specific.

**G*yy*W_TV** Total Votes for Special Senate candidate in the general election, year-specific.

**G*yy*H_DV** Votes for the Democratic U.S. House candidate in the general election, year-specific.

**G*yy*H_RV** Votes for the Republican U.S. House candidate in the general election, year-specific.

**G*yy*H_O1V** Votes for the Other Party 1 U.S. House candidate in the general election, year-specific.

**G*yy*H_O2V** Votes for the Other Party 2 U.S. House candidate in the general election, year-specific.

**G*yy*H_O9V** Votes for All Other U.S. House candidates in the general election, year-specific.

**G*yy*H_TV** Total Votes for U.S. House candidate in the general election, year-specific.

**G*yy*G_DV** Votes for the Democratic Governor candidate in the general election, year-specific.

**G*yy*G_RV** Votes for the Republican Governor candidate in the general election, year-specific.

**G*yy*G_O1V** Votes for the Other Party 1 Governor candidate in the general election, year-specific.

**G*yy*G_O2V** Votes for the Other Party 2 Governor candidate in the general election, year-specific.

**G*yy*G_O9V** Votes for All Other Governor candidates in the general election, year-specific.

**G*yy*G_TV** Total Votes for Governor candidate in the general election, year-specific.

**G*yy*L_DV** Votes for the Democratic Lt. Governor candidate in the general election, year-specific.

**G*yy*L_RV** Votes for the Republican Lt. Governor candidate in the general election, year-specific.

**G*yy*L_O1V** Votes for the Other Party 1 Lt. Governor candidate in the general election, year-specific.

**G*yy*L_O2V** Votes for the Other Party 2 Lt. Governor candidate in the general election, year-specific.

**G*yy*L_O9V** Votes for All Other Lt. Governor candidates in the general election, year-specific.

**G*yy*L_TV** Total Votes for Lt. Governor candidate in the general election, year-specific.

**G*yy*T_DV** Votes for the Democratic Secretary of State candidate in the general election, year-specific.

**G*yy*T_RV** Votes for the Republican Secretary of State candidate in the general election, year-specific.

**G*yy*T_O1V** Votes for the Other Party 1 Secretary of State candidate in the general election, year-specific.

**G*yy*T_O2V** Votes for the Other Party 2 Secretary of State candidate in the general election, year-specific.

**G*yy*T_O9V** Votes for All Other Secretary of State candidates in the general election, year-specific.

**G*yy*T_TV** Total Votes for Secretary of State candidate in the general election, year-specific.

**G*yy*A_DV** Votes for the Democratic Attorney General candidate in the general election, year-specific.

**G*yy*A_RV** Votes for the Republican Attorney General candidate in the general election, year-specific.

**G*yy*A_O1V** Votes for the Other Party 1 Attorney General candidate in the general election, year-specific.

**G*yy*A_O2V** Votes for the Other Party 2 Attorney General candidate in the general election, year-specific.

**G*yy*A_O9V** Votes for All Other Attorney General candidates in the general election, year-specific.

**G*yy*A_TV** Total Votes for Attorney General candidate in the general election, year-specific.

**G*yy*J_DV** Votes for the Democratic Treasurer candidate in the general election, year-specific.

**G*yy*J_RV** Votes for the Republican Treasurer candidate in the general election, year-specific.

**G*yy*J_O1V** Votes for the Other Party 1 Treasurer candidate in the general election, year-specific.

**G*yy*J_O2V** Votes for the Other Party 2 Treasurer candidate in the general election, year-specific.

**G*yy*J_O9V** Votes for All Other Treasurer candidates in the general election, year-specific.

**G*yy*J_TV** Total Votes for Treasurer candidate in the general election, year-specific.

**G*yy*I_DV** Votes for the Democratic Auditor candidate in the general election, year-specific.

**G*yy*I_RV** Votes for the Republican Auditor candidate in the general election, year-specific.

**G*yy*I_O1V** Votes for the Other Party 1 Auditor candidate in the general election, year-specific.

**G*yy*I_O2V** Votes for the Other Party 2 Auditor candidate in the general election, year-specific.

**G*yy*I_O9V** Votes for All Other Auditor candidates in the general election, year-specific.

**G*yy*I_TV** Total Votes for Auditor candidate in the general election, year-specific.

**G*yy*C_DV** Votes for the Democratic Comptroller candidate in the general election, year-specific.

**G*yy*C_RV** Votes for the Republican Comptroller candidate in the general election, year-specific.

**G*yy*C_O1V** Votes for the Other Party 1 Comptroller candidate in the general election, year-specific.

**G*yy*C_O2V** Votes for the Other Party 2 Comptroller candidate in the general election, year-specific.

**G*yy*C_O9V** Votes for All Other Comptroller candidates in the general election, year-specific.

**G*yy*C_TV** Total Votes for Comptroller candidate in the general election, year-specific.

**G*yy*B_DV** Votes for the Democratic Education Commissioner candidate in the general election, year-specific.

**G*yy*B_RV** Votes for the Republican Education Commissioner candidate in the general election, year-specific.

**G*yy*B_O1V** Votes for the Other Party 1 Education Commissioner candidate in the general election, year-specific.

**G*yy*B_O2V** Votes for the Other Party 2 Education Commissioner candidate in the general election, year-specific.

**G*yy*B_O9V** Votes for All Other Education Commissioner candidates in the general election, year-specific.

**G*yy*B_TV** Total Votes for Education Commissioner candidate in the general election, year-specific.

**G*yy*F_DV** Votes for the Democratic Agriculture Commissioner candidate in the general election, year-specific.

**G*yy*F_RV** Votes for the Republican Agriculture Commissioner candidate in the general election, year-specific.

**G*yy*F_O1V** Votes for the Other Party 1 Agriculture Commissioner candidate in the general election, year-specific.

**G*yy*F_O2V** Votes for the Other Party 2 Agriculture Commissioner candidate in the general election, year-specific.

**G*yy*F_O9V** Votes for All Other Agriculture Commissioner candidates in the general election, year-specific.

**G*yy*F_TV** Total Votes for Agriculture Commissioner candidate in the general election, year-specific.

**G*yy*N_DV** Votes for the Democratic Insurance Commissioner candidate in the general election, year-specific.

**G*yy*N_RV** Votes for the Republican Insurance Commissioner candidate in the general election, year-specific.

**G*yy*N_O1V** Votes for the Other Party 1 Insurance Commissioner candidate in the general election, year-specific.

**G*yy*N_O2V** Votes for the Other Party 2 Insurance Commissioner candidate in the general election, year-specific.

**G*yy*N_O9V** Votes for All Other Insurance Commissioner candidates in the general election, year-specific.

**G*yy*N_TV** Total Votes for Insurance Commissioner candidate in the general election, year-specific.

**G*yy*M_DV** Votes for the Democratic Public Service Commissioner candidate in the general election, year-specific.

**G*yy*M_RV** Votes for the Republican Public Service Commissioner candidate in the general election, year-specific.

**G*yy*M_O1V** Votes for the Other Party 1 Public Service Commissioner candidate in the general election, year-specific.

**G*yy*M_O2V** Votes for the Other Party 2 Public Service Commissioner candidate in the general election, year-specific.

**G*yy*M_O9V** Votes for All Other Public Service Commissioner candidates in the general election, year-specific.

**G*yy*M_TV** Total Votes for Public Service Commissioner candidate in the general election, year-specific.

**G*yy*K_DV** Votes for the Democratic Other 1 candidate in the general election, year-specific.

**G*yy*K_RV** Votes for the Republican Other 1 candidate in the general election, year-specific.

**G*yy*K_O1V** Votes for the Other Party 1 Other 1 candidate in the general election, year-specific.

**G*yy*K_O2V** Votes for the Other Party 2 Other 1 candidate in the general election, year-specific.

**G*yy*K_O9V** Votes for All Other Other 1 candidates in the general election, year-specific.

**G*yy*K_TV** Total Votes for Other 1 candidate in the general election, year-specific.

**G*yy*O_DV** Votes for the Democratic Other 2 candidate in the general election, year-specific.

**G*yy*O_RV** Votes for the Republican Other 2 candidate in the general election, year-specific.

**G*yy*O_O1V** Votes for the Other Party 1 Other 2 candidate in the general election, year-specific.

**G*yy*O_O2V** Votes for the Other Party 2 Other 2 candidate in the general election, year-specific.

**G*yy*O_O9V** Votes for All Other Other 2 candidates in the general election, year-specific.

**G*yy*O_TV** Total Votes for Other 2 candidate in the general election, year-specific.

**G*yy*Z_DV** Votes for the Democratic Other 3 candidate in the general election, year-specific.

**G*yy*Z_RV** Votes for the Republican Other 3 candidate in the general election, year-specific.

**G*yy*Z_O1V** Votes for the Other Party 1 Other 3 candidate in the general election, year-specific.

**G*yy*Z_O2V** Votes for the Other Party 2 Other 3 candidate in the general election, year-specific.

**G*yy*Z_O9V** Votes for All Other Other 3 candidates in the general election, year-specific.

**G*yy*Z_TV** Total Votes for Other 3 candidate in the general election, year-specific.

**G*yy*U_DV** Votes for the Democratic Labor Commissioner candidate in the general election, year-specific.

**G*yy*U_RV** Votes for the Republican Labor Commissioner candidate in the general election, year-specific.

**G*yy*U_O1V** Votes for the Other Party 1 Labor Commissioner candidate in the general election, year-specific.

**G*yy*U_O2V** Votes for the Other Party 2 Labor Commissioner candidate in the general election, year-specific.

**G*yy*U_O9V** Votes for All Other Labor Commissioner candidates in the general election, year-specific.

**G*yy*U_TV** Total Votes for Labor Commissioner candidate in the general election, year-specific.

**G*yy*Y_DV** Votes for the Democratic State Senate candidate in the general election, year-specific.

**G*yy*Y_RV** Votes for the Republican State Senate candidate in the general election, year-specific.

**G*yy*Y_O1V** Votes for the Other Party 1 State Senate candidate in the general election, year-specific.

**G*yy*Y_O2V** Votes for the Other Party 2 State Senate candidate in the general election, year-specific.

**G*yy*Y_O9V** Votes for All Other State Senate candidates in the general election, year-specific.

**G*yy*Y_TV** Total Votes for State Senate candidate in the general election, year-specific.

**G*yy*X_DV** Votes for the Democratic State House candidate in the general election, year-specific.

**G*yy*X_RV** Votes for the Republican State House candidate in the general election, year-specific.

**G*yy*X_O1V** Votes for the Other Party 1 State House candidate in the general election, year-specific.

**G*yy*X_O2V** Votes for the Other Party 2 State House candidate in the general election, year-specific.

**G*yy*X_O9V** Votes for All Other State House candidates in the general election, year-specific.

**G*yy*X_TV** Total Votes for State House candidate in the general election, year-specific.

## 7.2 Census Variables in MCD Group-Level Files

The MCD Group-level ROAD files contain over 3000 variables, most of which are from the 1990 Census `STF3a` databases, aggregated up from the MCD level. These variables are named and described below, with the exact terminology used in the 1990 Census `STF3a` CD-ROM documentation. The reader can obtain further information about these variables, the sampling procedures used, etc., directly from the U.S. Bureau of the Census (`http://www.census.gov`).

```
P1. PERSONS(1) [1]
    Universe:  Persons
    Total                                   P0010001

P2. UNWEIGHTED SAMPLE COUNT OF PERSONS(1) [1]
    Universe:  Persons
    Total                                   P0020001

P3. 100 PERCENT COUNT OF PERSONS(1) [1]
    Universe:  Persons
    Total                                   P0030001

P3A.PERCENT OF PERSONS IN SAMPLE(1) [1]
    1 implied decimal(s)
    Universe:  Persons
    Total                                   P003A001

P4. FAMILIES(1) [1]
    Universe:  Families
    Total                                   P0040001

P5. HOUSEHOLDS(1) [1]
    Universe:  Households
    Total                                   P0050001

P6. URBAN AND RURAL(4) [4]
    Universe:  Persons
    Urban:
      Inside urbanized area                 P0060001
```

```
      Outside urbanized area                P0060002
    Rural:
      Farm                                  P0060003
      Nonfarm                               P0060004

P7. SEX(2) [2]
    Universe:  Persons
    Male                                    P0070001
    Female                                  P0070002

P8. RACE(5) [5]
    Universe:  Persons
    White                                   P0080001
    Black                                   P0080002
    American Indian, Eskimo, or Aleut       P0080003
    Asian or Pacific Islander               P0080004
    Other race                              P0080005

P9. RACE(25) [25]
    Universe:  Persons
    White (800 869, 971)                    P0090001
    Black (870 934, 972)                    P0090002
    American Indian, Eskimo, or Aleut
     (000 599, 935 970, 973 975):
      American Indian (000 599, 973)        P0090003
      Eskimo (935 940, 974)                 P0090004
      Aleut (941 970, 975)                  P0090005
    Asian or Pacific Islander
     (600 699, 976 985):
      Asian (600 652, 976, 977, 979
       982, 985):
        Chinese (605 607, 976)              P0090006
        Filipino (608, 977)                 P0090007
        Japanese (611, 981)                 P0090008
        Asian Indian (600, 982)             P0090009
        Korean (612, 979)                   P0090010
        Vietnamese (619, 980)               P0090011
        Cambodian (604)                     P0090012
        Hmong (609)                         P0090013
        Laotian (613)                       P0090014
```

```
         Thai (618)                          P0090015
         Other Asian (601 603, 610,
          614 617, 620 652, 985)             P0090016
       Pacific Islander (653 699, 978,
        983, 984):
         Polynesian (653 659, 978, 983):
            Hawaiian (653, 654, 978)         P0090017
            Samoan (655, 983)                P0090018
            Tongan (657)                     P0090019
            Other Polynesian (656, 658,
             659)                            P0090020
         Micronesian (660 675, 984):
            Guamanian (660, 984)             P0090021
            Other Micronesian (661 675)      P0090022
         Melanesian (676 680)                P0090023
         Pacific Islander, not specified
          (681 699)                          P0090024
    Other race (700 799, 986 999)            P0090025

P10.PERSONS OF HISPANIC ORIGIN(1) [1]
    Universe:  Persons of Hispanic origin
    Total                                    P0100001

P11.HISPANIC ORIGIN(16) [16]
    Universe:  Persons
    Not of Hispanic origin (000 001,
     006 199)                                P0110001
    Hispanic origin (002 005, 200 999):
      Mexican (002, 210 220)                 P0110002
      Puerto Rican (003, 261 270)            P0110003
      Cuban (004, 271 274)                   P0110004
      Other Hispanic (005, 200 209,
       221 260, 275 999):
         Dominican (Dominican Republic)
          (275 289)                          P0110005
         Central American (221 230):
            Guatemalan (222)                 P0110006
            Honduran (223)                   P0110007
            Nicaraguan (224)                 P0110008
            Panamanian (225)                 P0110009
```

```
            Salvadoran (226)              P0110010
            Other Central American
             (221, 227 230)               P0110011
         South American (231 249):
            Colombian (234)               P0110012
            Ecuadorian (235)              P0110013
            Peruvian (237)                P0110014
            Other South American
             (231 233, 236, 238 249)      P0110015
         Other Hispanic (005, 200 209,
          250 260, 290 999)               P0110016

P12. HISPANIC ORIGIN(2) BY RACE(5) [10]
    Universe:  Persons
    Not of Hispanic origin:
      White                               P0120001
      Black                               P0120002
      American Indian, Eskimo, or Aleut   P0120003
      Asian or Pacific Islander           P0120004
      Other race                          P0120005
    Hispanic origin:
      (Repeat RACE)                       P0120006

P13. AGE(31) [31]
    Universe:  Persons
    Under 1 year                          P0130001
    1 and 2 years                         P0130002
    3 and 4 years                         P0130003
    5 years                               P0130004
    6 years                               P0130005
    7 to 9 years                          P0130006
    10 and 11 years                       P0130007
    12 and 13 years                       P0130008
    14 years                              P0130009
    15 years                              P0130010
    16 years                              P0130011
    17 years                              P0130012
    18 years                              P0130013
    19 years                              P0130014
    20 years                              P0130015
```

```
    21 years                                P0130016
    22 to 24 years                          P0130017
    25 to 29 years                          P0130018
    30 to 34 years                          P0130019
    35 to 39 years                          P0130020
    40 to 44 years                          P0130021
    45 to 49 years                          P0130022
    50 to 54 years                          P0130023
    55 to 59 years                          P0130024
    60 and 61 years                         P0130025
    62 to 64 years                          P0130026
    65 to 69 years                          P0130027
    70 to 74 years                          P0130028
    75 to 79 years                          P0130029
    80 to 84 years                          P0130030
    85 years and over                       P0130031

P14A. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  White males
    White:
      Male:
         Under 1 year                       P014A001
         1 and 2 years                      P014A002
         3 and 4 years                      P014A003
         5 years                            P014A004
         6 years                            P014A005
         7 to 9 years                       P014A006
         10 and 11 years                    P014A007
         12 and 13 years                    P014A008
         14 years                           P014A009
         15 years                           P014A010
         16 years                           P014A011
         17 years                           P014A012
         18 years                           P014A013
         19 years                           P014A014
         20 years                           P014A015
         21 years                           P014A016
         22 to 24 years                     P014A017
         25 to 29 years                     P014A018
         30 to 34 years                     P014A019
```

```
         35 to 39 years                    P014A020
         40 to 44 years                    P014A021
         45 to 49 years                    P014A022
         50 to 54 years                    P014A023
         55 to 59 years                    P014A024
         60 and 61 years                   P014A025
         62 to 64 years                    P014A026
         65 to 69 years                    P014A027
         70 to 74 years                    P014A028
         75 to 79 years                    P014A029
         80 to 84 years                    P014A030
         85 years and over                 P014A031

P14B. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  White females
    White:
      Female:
         (Repeat AGE)(2)                   P014B001

P14C. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  Black males
    Black:
      Male:
         (Repeat AGE)(2)                   P014C001

P14D. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  Black females
    Black:
      Female:
         (Repeat AGE)(2)                   P014D001

P14E. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  American Indian, Eskimo, or Aleut males
    American Indian, Eskimo, or Aleut:
      Male:
         (Repeat AGE)(2)                   P014E001

P14F. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  American Indian, Eskimo, or
     Aleut females
```

```
    American Indian, Eskimo, or Aleut:
      Female:
         (Repeat AGE)(2)                  P014F001

P14G. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  Asian or Pacific Islander males
    Asian or Pacific Islander:
      Male:
         (Repeat AGE)(2)                  P014G001

P14H. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  Asian or Pacific Islander females
    Asian or Pacific Islander:
      Female:
         (Repeat AGE)(2)                  P014H001

P14I. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  Other race males
    Other race:
      Male:
         (Repeat AGE)(2)                  P014I001

P14J. RACE(1) BY SEX(1) BY AGE(31) [31]
    Universe:  Other race females
    Other race:
      Female:
         (Repeat AGE)(2)                  P014J001

P15A. SEX(1)
     BY AGE(31) [31]
    Universe:  Males of Hispanic origin
    Male:
      Under 1 year                        P015A001
      1 and 2 years                       P015A002
      3 and 4 years                       P015A003
      5 years                             P015A004
      6 years                             P015A005
      7 to 9 years                        P015A006
      10 and 11 years                     P015A007
      12 and 13 years                     P015A008
```

```
      14 years                              P015A009
      15 years                              P015A010
      16 years                              P015A011
      17 years                              P015A012
      18 years                              P015A013
      19 years                              P015A014
      20 years                              P015A015
      21 years                              P015A016
      22 to 24 years                        P015A017
      25 to 29 years                        P015A018
      30 to 34 years                        P015A019
      35 to 39 years                        P015A020
      40 to 44 years                        P015A021
      45 to 49 years                        P015A022
      50 to 54 years                        P015A023
      55 to 59 years                        P015A024
      60 and 61 years                       P015A025
      62 to 64 years                        P015A026
      65 to 69 years                        P015A027
      70 to 74 years                        P015A028
      75 to 79 years                        P015A029
      80 to 84 years                        P015A030
      85 years and over                     P015A031

P15B. SEX(1)
     BY AGE(31) [31]
    Universe:  Females of Hispanic origin
    Female:
      (Repeat AGE)(2)                       P015B001

P16. PERSONS IN HOUSEHOLD(7) [7]
    Universe:  Households
    1 person                                P0160001
    2 persons                               P0160002
    3 persons                               P0160003
    4 persons                               P0160004
    5 persons                               P0160005
    6 persons                               P0160006
    7 or more persons                       P0160007
```

P17. HOUSEHOLD TYPE AND RELATIONSHIP(15) [15]

| | |
|---|---|
| Universe: Persons | |
| In family households: | |
| Householder | P0170001 |
| Spouse | P0170002 |
| Child: | |
| Natural born or adopted | P0170003 |
| Step | P0170004 |
| Grandchild | P0170005 |
| Other relatives | P0170006 |
| Nonrelatives | P0170007 |
| In nonfamily households: | |
| Male householder: | |
| Living alone | P0170008 |
| Not living alone | P0170009 |
| Female householder: | |
| Living alone | P0170010 |
| Not living alone | P0170011 |
| Nonrelatives | P0170012 |
| In group quarters: | |
| Institutionalized persons | P0170013 |
| Other persons in group quarters | P0170014 |
| Filler | P0170015 |

P18. HOUSEHOLD TYPE AND RELATIONSHIP(12) [12]

| | |
|---|---|
| Universe: Persons 65 years and over | |
| In family households: | |
| Householder | P0180001 |
| Spouse | P0180002 |
| Other relatives | P0180003 |
| Nonrelatives | P0180004 |
| In nonfamily households: | |
| Male householder: | |
| Living alone | P0180005 |
| Not living alone | P0180006 |
| Female householder: | |
| Living alone | P0180007 |
| Not living alone | P0180008 |
| Nonrelatives | P0180009 |
| In group quarters: | |

```
      Institutionalized persons            P0180010
      Other persons in group quarters      P0180011
    Filler                                 P0180012

P19. HOUSEHOLD TYPE AND PRESENCE AND AGE OF CHILDREN(7) [7]
    Universe:  Households
    Family households:
      Married couple family:
         With own children under 18 years  P0190001
         No own children under 18 years    P0190002
      Other family:
         Male householder, no wife present:
            With own children under 18
             years                         P0190003
            No own children under 18 years P0190004
         Female householder, no husband
          present:
            With own children under 18
             years                         P0190005
            No own children under 18 years P0190006
    Nonfamily households                   P0190007

P20. RACE OF HOUSEHOLDER(5) BY HOUSEHOLD
     TYPE AND PRESENCE AND AGE OF CHILDREN(7) [35]
    Universe:  Households
    White:
      Family households:
         Married couple family:
            With own children under 18
             years                         P0200001
            No own children under 18 years P0200002
         Other family:
            Male householder, no wife
             present:
              With own children under 18
               years                       P0200003
              No own children under 18
               years                       P0200004
            Female householder, no husband
             present:
```

```
            With own children under 18
             years                          P0200005
            No own children under 18
             years                          P0200006
      Nonfamily households                  P0200007
    Black:
      (Repeat HOUSEHOLD TYPE AND PRESENCE
        AND AGE OF CHILDREN)                P0200008
    American Indian, Eskimo, or Aleut:
      (Repeat HOUSEHOLD TYPE AND PRESENCE
        AND AGE OF CHILDREN)                P0200015
    Asian or Pacific Islander:
      (Repeat HOUSEHOLD TYPE AND PRESENCE
        AND AGE OF CHILDREN)                P0200022
    Other race:
      (Repeat HOUSEHOLD TYPE AND PRESENCE
        AND AGE OF CHILDREN)                P0200029

P21. HOUSEHOLD TYPE AND PRESENCE AND AGE OF CHILDREN(7) [7]
    Universe:  Households with householder of Hispanic origin
    Family households:
      Married couple family:
         With own children under 18 years   P0210001
         No own children under 18 years     P0210002
      Other family:
         Male householder, no wife present:
            With own children under 18
             years                          P0210003
            No own children under 18 years  P0210004
         Female householder, no husband
          present:
            With own children under 18
             years                          P0210005
            No own children under 18 years  P0210006
    Nonfamily households                    P0210007

P22. FAMILY TYPE AND PRESENCE AND AGE OF CHILDREN(6) [6]
    Universe:  Families
    Married couple family:
      With children 18 years and over       P0220001
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      No children 18 years and over        P0220002
    Other family:
      Male householder, no wife present:
         With children 18 years and over   P0220003
         No children 18 years and over     P0220004
      Female householder, no husband present:
         With children 18 years and over   P0220005
         No children 18 years and over     P0220006

P23. FAMILY TYPE AND AGE OF CHILDREN(21) [21]
    Universe:  Own children under 18 years
    In married couple family:
      Under 3 years                        P0230001
      3 and 4 years                        P0230002
      5 years                              P0230003
      6 to 11 years                        P0230004
      12 and 13 years                      P0230005
      14 years                             P0230006
      15 to 17 years                       P0230007
    In other family:
      Male householder, no wife present:
         Under 3 years                     P0230008
         3 and 4 years                     P0230009
         5 years                           P0230010
         6 to 11 years                     P0230011
         12 and 13 years                   P0230012
         14 years                          P0230013
         15 to 17 years                    P0230014
      Female householder, no husband present:
         Under 3 years                     P0230015
         3 and 4 years                     P0230016
         5 years                           P0230017
         6 to 11 years                     P0230018
         12 and 13 years                   P0230019
         14 years                          P0230020
         15 to 17 years                    P0230021

P24. HOUSEHOLD TYPE(2) BY AGE OF HOUSEHOLDER(7) [14]
    Universe:  Households
    Family households:
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      15 to 24 years                        P0240001
      25 to 34 years                        P0240002
      35 to 44 years                        P0240003
      45 to 54 years                        P0240004
      55 to 64 years                        P0240005
      65 to 74 years                        P0240006
      75 years and over                     P0240007
    Nonfamily households:
      (Repeat AGE OF HOUSEHOLDER)           P0240008

P25. SUBFAMILY TYPE AND PRESENCE AND AGE OF CHILDREN(4) [4]
    Universe:  Subfamilies
    Married couple subfamily:
      With own children under 18 years      P0250001
      No own children under 18 years        P0250002
    Mother child subfamily                  P0250003
    Father child subfamily                  P0250004

P26. SUBFAMILY TYPE AND RELATIONSHIP(7) [7]
    Universe:  Persons in subfamilies
    Persons in married couple subfamily:
      Reference person                      P0260001
      Spouse                                P0260002
      Child                                 P0260003
    Persons in mother child subfamily:
      Parent                                P0260004
      Child                                 P0260005
    Persons in father child subfamily:
      Parent                                P0260006
      Child                                 P0260007

P27. SEX(2) BY MARITAL STATUS(6) [12]
    Universe:  Persons 15 years and over
    Male:
      Never married                         P0270001
      Now married:
         Married, spouse present            P0270002
         Married, spouse absent:
            Separated                       P0270003
            Other                           P0270004
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      Widowed                                P0270005
      Divorced                               P0270006
    Female:
      (Repeat MARITAL STATUS)                P0270007

P28. AGE(3) BY LANGUAGE SPOKEN AT HOME AND ABILITY TO
      SPEAK ENGLISH(10) [30]
    Universe:  Persons 5 years and over
    5 to 17 years:
      Speak only English                     P0280001
      Speak Spanish:
         Speak English "very well"           P0280002
         Speak English "well"                P0280003
         Speak English "not well"
          or "not at all"                    P0280004
      Speak Asian or Pacific Island language:
         Speak English "very well"           P0280005
         Speak English "well"                P0280006
         Speak English "not well"
          or "not at all"                    P0280007
      Speak other language:
         Speak English "very well"           P0280008
         Speak English "well"                P0280009
         Speak English "not well"
          or "not at all"                    P0280010
    18 to 64 years:
      (Repeat LANGUAGE SPOKEN AT HOME AND ABILITY TO
        SPEAK ENGLISH)                       P0280011
    65 years and over:
      (Repeat LANGUAGE SPOKEN AT HOME AND ABILITY TO
        SPEAK ENGLISH)                       P0280021

P29. HOUSEHOLD LANGUAGE AND LINGUISTIC ISOLATION(7) [7]
    Universe:  Households
    English                                  P0290001
    Spanish:
      Linguistically isolated                P0290002
      Not linguistically isolated            P0290003
    Asian or Pacific Island language:
      Linguistically isolated                P0290004
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      Not linguistically isolated          P0290005
    Other language:
      Linguistically isolated              P0290006
      Not linguistically isolated          P0290007

P30. AGE, LANGUAGE SPOKEN AT HOME, AND LINGUISTIC
     ISOLATION(33) [33]
    Universe:  Persons 5 years and over
    Persons in households:
      5 to 13 years:
         Speak only English:
            Linguistically isolated:
              Spanish spoken in household  P0300001
              Asian or Pacific Island
               language spoken in
               household                   P0300002
              Other language spoken in
               household                   P0300003
            Not linguistically isolated    P0300004
         Speak Spanish:
            Linguistically isolated        P0300005
            Not linguistically isolated    P0300006
         Speak Asian or Pacific Island
          language:
            Linguistically isolated        P0300007
            Not linguistically isolated    P0300008
         Speak other language:
            Linguistically isolated        P0300009
            Not linguistically isolated    P0300010
      14 to 17 years:
         Speak only English                P0300011
         Speak Spanish:
            Linguistically isolated        P0300012
            Not linguistically isolated    P0300013
         Speak Asian or Pacific Island
          language:
            Linguistically isolated        P0300014
            Not linguistically isolated    P0300015
         Speak other language:
            Linguistically isolated        P0300016
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            Not linguistically isolated    P0300017
      18 to 64 years:
         Speak only English                P0300018
         Speak Spanish:
            Linguistically isolated        P0300019
            Not linguistically isolated    P0300020
         Speak Asian or Pacific Island
          language:
            Linguistically isolated        P0300021
            Not linguistically isolated    P0300022
         Speak other language:
            Linguistically isolated        P0300023
            Not linguistically isolated    P0300024
      65 years and over:
         Speak only English                P0300025
         Speak Spanish:
            Linguistically isolated        P0300026
            Not linguistically isolated    P0300027
         Speak Asian or Pacific Island
          language:
            Linguistically isolated        P0300028
            Not linguistically isolated    P0300029
         Speak other language:
            Linguistically isolated        P0300030
            Not linguistically isolated    P0300031
    Persons in group quarters              P0300032
    Filler                                 P0300033

P31. LANGUAGE SPOKEN AT HOME(26) [26]
    Universe:  Persons 5 years and over
    Speak only English                     P0310001
    German (607, 613)                      P0310002
    Yiddish (609)                          P0310003
    Other West Germanic language (608,
     610 612)                              P0310004
    Scandinavian (614 618)                 P0310005
    Greek (637)                            P0310006
    Indic (662 678)                        P0310007
    Italian (619)                          P0310008
    French or French Creole (620 624)      P0310009
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    Portuguese or Portuguese Creole
     (629 630)                              P0310010
    Spanish or Spanish Creole (625,
     627 628)                               P0310011
    Polish (645)                            P0310012
    Russian (639)                           P0310013
    South Slavic (647 652)                  P0310014
    Other Slavic language (640 644, 646)    P0310015
    Other Indo European language
     (601 606, 626, 631 636,
     638, 653 661)                          P0310016
    Arabic (777)                            P0310017
    Tagalog (742)                           P0310018
    Chinese (708 715)                       P0310019
    Hungarian (682)                         P0310020
    Japanese (723)                          P0310021
    Mon Khmer (726)                         P0310022
    Korean (724)                            P0310023
    Native North American languages
     (800 955, 959 966, 977 982)            P0310024
    Vietnamese (728)                        P0310025
    Other and unspecified languages
     (679 681, 683 707, 716 722,            P0310026
     725, 727, 729 741, 743 776,
     778 799, 956 958, 967 976, 983 999)

P32. ANCESTRY(4) [4]
    Universe:  Persons
    Ancestry specified:
      Single ancestry                       P0320001
      Multiple ancestry                     P0320002
    Ancestry unclassified                   P0320003
    Ancestry not reported                   P0320004

P33. ANCESTRY(36) [36]
    Universe:  Persons
    First ancestry reported (000 999):
      Arab (400 415, 417 418, 421 430,
       435 481, 490 499)                    P0330001
      Austrian (003 004)                    P0330002
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| | |
|---|---|
| Belgian (008 010) | P0330003 |
| Canadian (931 934) | P0330004 |
| Czech (111 114) | P0330005 |
| Danish (020, 023) | P0330006 |
| Dutch (021, 029) | P0330007 |
| English (015, 022) | P0330008 |
| Finnish (024 025) | P0330009 |
| French (except Basque) (000 001, 016, 026 028, 083 | P0330010 |
| French Canadian (935 938) | P0330011 |
| German (032 045) | P0330012 |
| Greek (046 048) | P0330013 |
| Hungarian (125 126) | P0330014 |
| Irish (050, 081, 099) | P0330015 |
| Italian (030 031, 051 074) | P0330016 |
| Lithuanian (129) | P0330017 |
| Norwegian (082) | P0330018 |
| Polish (142 143) | P0330019 |
| Portuguese (084 086) | P0330020 |
| Romanian (144 147) | P0330021 |
| Russian (148 151) | P0330022 |
| Scotch Irish (087) | P0330023 |
| Scottish (088) | P0330024 |
| Slovak (153) | P0330025 |
| Subsaharan African (500 599) | P0330026 |
| Swedish (089 090) | P0330027 |
| Swiss (091 096) | P0330028 |
| Ukrainian (171 174) | P0330029 |
| United States or American (939 994) | P0330030 |
| Welsh (097) | P0330031 |
| West Indian (excluding Hispanic origin groups) (300 359) | P0330032 |
| Yugoslavian (152, 154, 176 177) | P0330032 |
| Race or Hispanic origin groups (200 299, 900 928) | P0330034 |
| Other groups (002, 005 007, 011 014, 017 019, 049, 075 080, 098, 100 110, 115 124, 127 128, 130 141,155 170, 175, 178 199, 360 399, 416, 419 420,431 | P0330035 |

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       434, 482 489, 600 862, 929 930, 998)
      Unclassified or not reported
       (863 899, 995 997, 999)             P0330036

P34. ANCESTRY(36) [36]
    Universe:  Persons
    Second ancestry reported (000 999):
      Arab (400 415, 417 418, 421 430,
      435 481, 490 499)                    P0340001
      Austrian (003 004)                   P0340002
      Belgian (008 010)                    P0340003
      Canadian (931 934)                   P0340004
      Czech (111 114)                      P0340005
      Danish (020, 023)                    P0340006
      Dutch (021, 029)                     P0340007
      English (015, 022)                   P0340008
      Finnish (024 025)                    P0340009
      French (except Basque) (000 001,
       016, 026 028, 083)                  P0340010
      French Canadian (935 938)            P0340011
      German (032 045)                     P0340012
      Greek (046 048)                      P0340013
      Hungarian (125 126)                  P0340014
      Irish (050, 081, 099)                P0340015
      Italian (030 031, 051 074)           P0340016
      Lithuanian (129)                     P0340017
      Norwegian (082)                      P0340018
      Polish (142 143)                     P0340019
      Portuguese (084 086)                 P0340020
      Romanian (144 147)                   P0340021
      Russian (148 151)                    P0340022
      Scotch Irish (087)                   P0340023
      Scottish (088)                       P0340024
      Slovak (153)                         P0340025
      Subsaharan African (500 599)         P0340026
      Swedish (089 090)                    P0340027
      Swiss (091 096)                      P0340028
      Ukrainian (171 174)                  P0340029
      United States or American (939 994)  P0340030
      Welsh (097)                          P0340032
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      West Indian (excluding Hispanic
       origin groups) (300 359)            P0340032
      Yugoslavian (152, 154, 176 177)      P0340033
      Race or Hispanic origin groups
       (200 299, 900 928)                  P0340034
      Other groups (002, 005 007, 011
       014, 017 019, 049,                  P0340035
       075 080, 098, 100 110, 115 124,
       127 128, 130 141,155 170, 175,
       178 199, 360 399, 416, 419 420,
       431 434, 482 489, 600 862, 929
       930, 998)
      Unclassified or not reported
       (863 899, 995 997, 999)             P0340036

P35. ANCESTRY(37) [37]
    Universe:  Persons
    Reported single ancestry
     (000 862, 900 994, 998):
      Arab (400 415, 417 418, 421 430,
       435 481, 490 499)                   P0350001
      Austrian (003 004)                   P0350002
      Belgian (008 010)                    P0350003
      Canadian (931 934)                   P0350004
      Czech (111 114)                      P0350005
      Danish (020, 023)                    P0350006
      Dutch (021, 029)                     P0350007
      English (015, 022)                   P0350008
      Finnish (024 025)                    P0350009
      French (except Basque)
       (000 001, 016, 026 028, 083)        P0350010
      French Canadian (935 938)            P0350011
      German (032 045)                     P0350012
      Greek (046 048)                      P0350013
      Hungarian (125 126)                  P0350014
      Irish (050, 081, 099)                P0350015
      Italian (030 031, 051 074)           P0350016
      Lithuanian (129)                     P0350017
      Norwegian (082)                      P0350018
      Polish (142 143)                     P0350019
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| | |
|---|---|
| Portuguese (084 086) | P0350020 |
| Romanian (144 147) | P0350021 |
| Russian (148 151) | P0350022 |
| Scotch Irish (087) | P0350023 |
| Scottish (088) | P0350024 |
| Slovak (153) | P0350025 |
| Subsaharan African (500 599) | P0350026 |
| Swedish (089 090) | P0350027 |
| Swiss (091 096) | P0350028 |
| Ukrainian (171 174) | P0350029 |
| United States or American (939 994) | P0350030 |
| Welsh (097) | P0350031 |
| West Indian (excluding Hispanic origin groups) (300 359) | P0350032 |
| Yugoslavian (152, 154, 176 177) | P0350033 |
| Race or Hispanic origin groups (200 299, 900 928) | P0350034 |
| Other groups (002, 005 007, 011 014, 017 019, 049, 075 080, 098, 100 110, 115 124, 127 128, 130 141,155 170, 175, 178 199, 360 399, 416, 419 420, 431 434, 482 489, 600 862, 929 930, 998) | P0350035 |
| Reported multiple ancestry (000 998) | P0350036 |
| Unclassified or not reported (863 899, 995 997, 999) | P0350037 |

P36. YEAR OF ENTRY(10) [10]

Universe: Foreign born persons

| | |
|---|---|
| 1987 to 1990 | P0360001 |
| 1985 or 1986 | P0360002 |
| 1982 to 1984 | P0360003 |
| 1980 or 1981 | P0360004 |
| 1975 to 1979 | P0360005 |
| 1970 to 1974 | P0360006 |
| 1965 to 1969 | P0360007 |
| 1960 to 1964 | P0360008 |
| 1950 to 1959 | P0360009 |
| Before 1950 | P0360010 |

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P37. AGE(2)
     BY CITIZENSHIP(3) [6]
    Universe:  Persons
    Under 18 years:
      Native                                P0370001
      Foreign born:
         Naturalized citizen                P0370002
         Not a citizen                      P0370003
    18 years and over:
      (Repeat CITIZENSHIP)                  P0370004

P38. MARITAL STATUS(2) BY AGE(4) [8]
    Universe:  Females 15 years and over
    Never married:
      15 to 24 years                        P0380001
      25 to 34 years                        P0380002
      35 to 44 years                        P0380003
      45 years and over                     P0380004
    Ever married:
      (Repeat AGE)                          P0380005

P39. AGGREGATE NUMBER OF CHILDREN EVER BORN(1) BY
     MARITAL STATUS(2) BY AGE(4) [8]
    Universe:  Females 15 years and over
    Total:
    Never married:
      15 to 24 years                        P0390001
      25 to 34 years                        P0390002
      35 to 44 years                        P0390003
      45 years and over                     P0390004
    Ever married:
      (Repeat AGE)                          P0390005

P40. GROUP QUARTERS(10) [10]
    Universe:  Persons in group quarters
    Institutionalized persons (00I 99I):
      Correctional institutions
       (20I 24I, 27I, 28I, 95I)             P0400001
      Nursing homes (60I 67I)               P0400002
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      Mental (Psychiatric) hospitals
       (45I 48I)                          P0400003
      Juvenile institutions (01I 05I,
       10I 12I, 15I)                      P0400004
      Other institutions (00I, 06I 09I,
       13I, 14I, 16I 19I,                 P0400005
       25I, 26I, 29I 44I, 49I 59I, 68I
       94I, 96I 99I)
    Other persons in group quarters (00N 99N):
      College dormitories (87N)           P0400006
      Military quarters (96N 98N)         P0400007
      Emergency shelters for homeless
       persons (82N, 83N)                 P0400008
      Visible in street locations
       (84N, 85N)                         P0400009
      Other noninstitutional group
       quarters (00N 81N,                 P0400010
       86N, 88N 95N, 99N)

P41. GROUP QUARTERS(2) BY AGE(3) [6]
    Universe:  Persons in group quarters
    Institutionalized persons:
      Under 18 years                      P0410001
      18 to 64 years                      P0410002
      65 years and over                   P0410003
    Other persons in group quarters:8451
      (Repeat AGE)                        P0410004

P42. PLACE OF BIRTH(9) [9]
    Universe:  Persons
    Native (001 099):
      Born in State of residence          P0420001
      Born in other State in the United
       States (001 059):
        Northeast (009, 023, 025, 033
         034, 036, 042 044, 050)          P0420002
        Midwest (017 020, 026 027, 029,
         031, 038 039, 046, 055)          P0420003
        South (001, 005, 010 014, 021
         022, 024, 028,                   P0420004
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          037, 040, 045, 047 048, 051
          052, 054)
        West (002 004, 006 008, 015
          016, 030, 032, 035,              P0420005
          041, 049, 053, 056 059)
    Born outside the United States (060 099):
        Puerto Rico (072 075)              P0420006
        U.S. outlying area (060 071,
          076 099)                         P0420007
        Born abroad of American parent(s)  P0420008
  Foreign born (100 999)                   P0420009

P43. RESIDENCE IN 1985   STATE AND COUNTY LEVEL(10) [10]
  Universe:  Persons 5 years and over
  Same house in 1985                       P0430001
  Different house in United States
   in 1985:
    Same county                            P0430002
    Different county:
        Same State                         P0430003
        Different State:
            Northeast                      P0430004
            Midwest                        P0430005
            South                          P0430006
            West                           P0430007
  Abroad in 1985:
    Puerto Rico                            P0430008
    U.S. outlying area                     P0430009
    Foreign country                        P0430010

P44. RESIDENCE IN 1985   MSA/PMSA LEVEL(12) [12]
  Universe:  Persons 5 years and over
  Living in an MSA/PMSA in 1990:
    Same house in 1985                     P0440001
    Different house in United States in 1985:
        This MSA/PMSA in 1985:
            Central city                   P0440002
            Remainder of this MSA/PMSA     P0440003
        Different MSA/PMSA in 1985:
            Central city                   P0440004
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            Remainder of different
             MSA/PMSA                        P0440005
         Not in an MSA/PMSA in 1985          P0440006
      Abroad in 1985                         P0440007
    Not living in an MSA/PMSA in 1990:
      Same house in 1985                     P0440008
      Different house in United States in 1985:
         In an MSA/PMSA in 1985:
            Central city                     P0440009
            Remainder of MSA/PMSA            P0440010
         Not in an MSA/PMSA in 1985          P0440011
      Abroad in 1985                         P0440012

P45. PLACE OF WORK   STATE AND COUNTY LEVEL(3) [3]
    Universe:  Workers 16 years and over
    Worked in State of residence:
      Worked in county of residence          P0450001
      Worked outside county of residence     P0450002
    Worked outside State of residence        P0450003

P46. PLACE OF WORK   PLACE LEVEL(3) [3]
    Universe:  Workers 16 years and over
    Living in a place:
      Worked in place of residence           P0460001
      Worked outside place of residence      P0460002
    Not living in a place                    P0460003

P47. PLACE OF WORK   MSA/PMSA LEVEL(8) [8]
    Universe:  Workers 16 years and over
    Living in an MSA/PMSA:
      Worked in MSA/PMSA of residence:
         Central city                        P0470001
         Remainder of this MSA/PMSA          P0470002
      Worked outside MSA/PMSA of residence:
         Worked in a different MSA/PMSA:
            Central city                     P0470003
            Remainder of different
             MSA/PMSA                        P0460004
         Worked outside any MSA/PMSA         P0470005
    Not living in an MSA/PMSA:
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      Worked in an MSA/PMSA:
         Central city                      P0470006
         Remainder of MSA/PMSA             P0470007
      Worked outside any MSA/PMSA          P0470008

P48. PLACE OF WORK   MINOR CIVIL DIVISION LEVEL(3) [3]
    Universe:  Workers 16 years and over
    Living in the 9 Northeastern States:
      Worked in the minor civil division
       of residence                        P0480001
      Worked outside minor civil division
       of residence                        P0480002
    Not living in the 9 Northeastern
     States                                P0480003

P49. MEANS OF TRANSPORTATION TO WORK(13) [13]
    Universe:  Workers 16 years and over
    Car, truck, or van:
      Drove alone                          P0490001
      Carpooled                            P0490002
    Public transportation:9
      Bus or trolley bus                   P0490003
      Streetcar or trolley car             P0490004
      Subway or elevated                   P0490005
      Railroad                             P0490006
      Ferryboat                            P0490007
      Taxicab                              P0490008
    Motorcycle                             P0490009
    Bicycle                                P0490010
    Walked                                 P0490011
    Other means                            P0490012
    Worked at home                         P0490013

P50. TRAVEL TIME TO WORK(13) [13]
    Universe:  Workers 16 years and over
    Did not work at home:
      Less than 5 minutes                  P0500001
      5 to 9 minutes                       P0500002
      10 to 14 minutes                     P0500003
      15 to 19 minutes                     P0500004
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      20 to 24 minutes                    P0400005
      25 to 29 minutes                    P0500006
      30 to 34 minutes                    P0500007
      35 to 39 minutes                    P0400008
      40 to 44 minutes                    P0500009
      45 to 59 minutes                    P0500010
      60 to 89 minutes                    P0500011
      90 or more minutes                  P0500012
    Worked at home                        P0500013

P51. AGGREGATE TRAVEL TIME TO WORK (IN MINUTES)(1) [1]
    Universe:  Workers 16 years and over
     who did not work at home
    Total                                 P0510001

P52. TIME LEAVING HOME TO GO TO WORK(15) [15]
    Universe:  Workers 16 years and over
    Did not work at home:
      12:00 a.m. to 4:59 a.m.             P0520001
      5:00 a.m. to 5:29 a.m.              P0520002
      5:30 a.m. to 5:59 a.m.              P0520003
      6:00 a.m. to 6:29 a.m.              P0520004
      6:30 a.m. to 6:59 a.m.              P0520005
      7:00 a.m. to 7:29 a.m.              P0520006
      7:30 a.m. to 7:59 a.m.              P0520007
      8:00 a.m. to 8:29 a.m.              P0520008
      8:30 a.m. to 8:59 a.m.              P0520009
      9:00 a.m. to 9:59 a.m.              P0520010
      10:00 a.m. to 10:59 a.m.            P0520011
      11:00 a.m. to 11:59 a.m.            P0520012
      12:00 p.m. to 3:59 p.m.             P0520013
      4:00 p.m. to 11:59 p.m.             P0520014
    Worked at home                        P0520015

P53. PRIVATE VEHICLE OCCUPANCY(8) [8]
    Universe:  Workers 16 years and over
    Car, truck, or van:
      Drove alone                         P0530001
      In 2 person carpool                 P0530002
      In 3 person carpool                 P0530003
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      In 4 person carpool                  P0530004
      In 5 person carpool                  P0530005
      In 6 person carpool                  P0530006
      In 7 or more person carpool          P0530007
    Other means                            P0530008

P54. SCHOOL ENROLLMENT AND TYPE OF SCHOOL(7) [7]
    Universe:  Persons 3 years and over
    Enrolled in preprimary school:
      Public school                        P0540001
      Private school                       P0540002
    Enrolled in elementary or high school:
      Public school                        P0540003
      Private school                       P0540004
    Enrolled in college:
      Public school                        P0540005
      Private school                       P0540006
    Not enrolled in school                 P0540007

P55. RACE(5) BY SCHOOL ENROLLMENT(4) [20]
    Universe:  Persons 3 years and over
    White:
      Enrolled in preprimary school        P0550001
      Enrolled in elementary or high
       school                              P0550002
      Enrolled in college                  P0550003
      Not enrolled in school               P0550004
    Black:
      (Repeat SCHOOL ENROLLMENT)           P0550005
    American Indian, Eskimo, or Aleut:
      (Repeat SCHOOL ENROLLMENT)           P0550009
    Asian or Pacific Islander:
      (Repeat SCHOOL ENROLLMENT)           P0550013
    Other race:
      (Repeat SCHOOL ENROLLMENT)           P0550017

P56. SCHOOL ENROLLMENT(4) [4]
    Universe:  Persons of Hispanic origin 3 years and over
    Enrolled in preprimary school          P0560001
    Enrolled in elementary or high school  P0560002
```

```
    Enrolled in college                    P0560003
    Not enrolled in school                 P0560004

P57. EDUCATIONAL ATTAINMENT(7) [7]
    Universe:  Persons 25 years and over
    Less than 9th grade                    P0570001
    9th to 12th grade, no diploma          P0570002
    High school graduate (includes
     equivalency)                          P0570003
    Some college, no degree                P0570004
    Associate degree                       P0570005
    Bachelor's degree                      P0570006
    Graduate or professional degree        P0570007

P58. RACE(5) BY EDUCATIONAL ATTAINMENT(7) [35]
    Universe:  Persons 25 years and over
    White:
      Less than 9th grade                  P0580001
      9th to 12th grade, no diploma        P0580002
      High school graduate (includes
       equivalency)                        P0580003
      Some college, no degree              P0580004
      Associate degree                     P0580005
      Bachelor's degree                    P0580006
      Graduate or professional degree      P0580007
    Black:
      (Repeat EDUCATIONAL ATTAINMENT)      P0580008
    American Indian, Eskimo, or Aleut:
      (Repeat EDUCATIONAL ATTAINMENT)      P0580015
    Asian or Pacific Islander:
      (Repeat EDUCATIONAL ATTAINMENT)      P0580022
    Other race:
      (Repeat EDUCATIONAL ATTAINMENT)      P0580029

P59. EDUCATIONAL ATTAINMENT(7) [7]
    Universe:  Persons of Hispanic origin 25 years and over
    Less than 9th grade                    P0590001
    9th to 12th grade, no diploma          P0590002
    High school graduate (includes
     equivalency)                          P0590003
```

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    Some college, no degree                P0590004
    Associate degree                       P0590005
    Bachelor's degree                      P0590006
    Graduate or professional degree        P0590007

P60. EDUCATIONAL ATTAINMENT(7) [7]
    Universe:  Persons 18 years and over
    Less than 9th grade                    P0600001
    9th to 12th grade, no diploma          P0600002
    High school graduate (includes
     equivalency)                          P0600003
    Some college, no degree                P0600004
    Associate degree                       P0600005
    Bachelor's degree                      P0600006
    Graduate or professional degree        P0600007

P61. SCHOOL ENROLLMENT, EDUCATIONAL ATTAINMENT, AND
       EMPLOYMENT STATUS(13) [13]
    Universe:  Persons 16 to 19 years
    In Armed Forces:
      Enrolled in school:
         High school graduate              P0610001
         Not high school graduate          P0610002
      Not enrolled in school:
         High school graduate              P0610003
         Not high school graduate          P0610004
    Civilian:
      Enrolled in school:
         Employed                          P0610005
         Unemployed                        P0610006
         Not in labor force                P0610007
      Not enrolled in school:
         High school graduate:
            Employed                       P0610008
            Unemployed                     P0610009
            Not in labor force             P0610010
         Not high school graduate:
            Employed                       P0610011
            Unemployed                     P0610012
            Not in labor force             P0610013
```

1This field size includes all fields in the repeat within the table.

P62. RACE(5) BY SCHOOL ENROLLMENT, EDUCATIONAL ATTAINMENT, AND EMPLOYMENT STATUS(13) [65]

| | |
|---|---|
| Universe: Persons 16 to 19 years | |
| White: | |
| In Armed Forces: | |
| Enrolled in school: | |
| High school graduate | P0620001 |
| Not high school graduate | P0620002 |
| Not enrolled in school: | |
| High school graduate | P0620003 |
| Not high school graduate | P0620004 |
| Civilian: | |
| Enrolled in school: | |
| Employed | P0620005 |
| Unemployed | P0620006 |
| Not in labor force | P0620007 |
| Not enrolled in school: | |
| High school graduate: | |
| Employed | P0620008 |
| Unemployed | P0620009 |
| Not in labor force | P0620010 |
| Not high school graduate: | |
| Employed | P0620011 |
| Unemployed | P0620012 |
| Not in labor force | P0620013 |
| Black: | |
| (Repeat SCHOOL ENROLLMENT, EDUCATIONAL ATTAINMENT,AND EMPLOYMENT STATUS) | P0620014 |
| American Indian, Eskimo, or Aleut: | |
| (Repeat SCHOOL ENROLLMENT, EDUCATIONAL ATTAINMENT, AND EMPLOYMENT STATUS) | P0620027 |
| Asian or Pacific Islander: | |
| (Repeat SCHOOL ENROLLMENT, EDUCATIONAL ATTAINMENT, AND EMPLOYMENT STATUS) | P0620040 |
| Other race: | |

```
      (Repeat SCHOOL ENROLLMENT,
        EDUCATIONAL ATTAINMENT, AND
        EMPLOYMENT STATUS)                P0620053

P63. SCHOOL ENROLLMENT, EDUCATIONAL ATTAINMENT,
      AND EMPLOYMENT STATUS(13) [13]
    Universe:  Persons of Hispanic origin
     16 to 19 years
    In Armed Forces:
      Enrolled in school:
         High school graduate             P0630001
         Not high school graduate         P0630002
      Not enrolled in school:
         High school graduate             P0630003
         Not high school graduate         P0530004
    Civilian:
      Enrolled in school:
         Employed                         P0630005
         Unemployed                       P0630006
         Not in labor force               P0630007
      Not enrolled in school:
         High school graduate:
            Employed                      P0630008
            Unemployed                    P0630009
            Not in labor force            P0630010
         Not high school graduate:
            Employed                      P0630011
            Unemployed                    P0630012
            Not in labor force            P0630013

P64. SEX(2) BY AGE(2) BY VETERAN STATUS(3) [12]
    Universe:  Persons 16 years and over
    Male:
      16 to 64 years:
         In Armed Forces                  P0640001
         Civilian:
            Veteran                       P0640002
            Nonveteran                    P0640003
      65 years and over:
         (Repeat VETERAN STATUS)          P0640004
```

```
    Female:
      (Repeat AGE By VETERAN STATUS)       P0640007

P65. PERIOD OF MILITARY SERVICE(13) [13]
    Universe:  Civilian veterans 16 years and over
    May 1975 or later only:
      September 1980 or later only:
         With less than 2 years of service P0650001
         With 2 or more years of service   P0650002
      May 1975 to August 1980 only         P0650003
      Both, May 1975 to August 1980 and
       September 1980 or later             P0650004
    Vietnam era, no Korean conflict nor
     World War II                         P0650005
    Vietnam era and Korean conflict,
     no World War II                      P0650006
    Vietnam era, Korean conflict, and
     World War II                         P0650007
    February 1955 to July 1964 only       P0650008
    Korean conflict, no Vietnam era
     nor World War II                     P0650009
    Korean conflict and World War II,
     no Vietnam era                       P0650010
    World War II, no Korean conflict
     nor Vietnam era                      P0650011
    World War I                           P0650012
    Other service                         P0650013

P66. SEX(2) BY AGE(2) BY WORK DISABILITY STATUS AND
       EMPLOYMENT STATUS(7) [28]
    Universe:  Civilian noninstitutionalized
     persons 16 years and over
    Male:
      16 to 64 years:
         With a work disability:
            In labor force:
              Employed                     P0660001
              Unemployed                   P0660002
            Not in labor force:
              Prevented from working       P0660003
```

```
              Not prevented from working   P0660004
         No work disability:
            In labor force:
              Employed                     P0660005
              Unemployed                   P0660006
            Not in labor force             P0660007
       65 years and over:
          (Repeat WORK DISABILITY STATUS AND
            EMPLOYMENT STATUS)             P0660008
    Female:
      (Repeat AGE By WORK DISABILITY STATUS AND
        EMPLOYMENT STATUS)                 P0660015

P67. SEX(2) BY AGE(2) BY MOBILITY LIMITATION STATUS(2) BY
       EMPLOYMENT STATUS(3) [24]
    Universe:  Civilian noninstitutionalized
     persons 16 years and over
    Male:
      16 to 64 years:
         With a mobility limitation:
            In labor force:
              Employed                     P0670001
              Unemployed                   P0670002
            Not in labor force             P0670003
         No mobility limitation:
            (Repeat EMPLOYMENT STATUS)     P0670004
      65 years and over:
         (Repeat MOBILITY LIMITATION
           STATUS By EMPLOYMENT STATUS)    P0670007
    Female:
      (Repeat AGE By MOBILITY LIMITATION
        STATUS By EMPLOYMENT STATUS)       P0670013

P68. SEX(2) BY AGE(2) BY WORK DISABILITY
      STATUS(2) BY MOBILITY AND SELF CARE
      LIMITATION STATUS(2) [16]
    Universe:  Civilian noninstitutionalized
     persons 16 years and over
    Male:
      16 to 64 years:
```

```
         With a work disability:
            With a mobility or self care
             limitation                    P0680001
            No mobility or self care
             limitation                    P0680002
         No work disability:
            (Repeat MOBILITY AND SELF
              CARE LIMITATION STATUS)      P0680003
      65 years and over:
         (Repeat WORK DISABILITY STATUS By
           MOBILITY AND SELF CARE LIMITATION
           STATUS)                         P0680005
    Female:
      (Repeat AGE By WORK DISABILITY
        STATUS By MOBILITY AND SELF CARE
        LIMITATION STATUS)                 P0680009

P69. SEX(2) BY AGE(3) BY MOBILITY AND SELF CARE
       LIMITATION STATUS(4) [24]
    Universe:  Civilian noninstitutionalized
     persons 16 years and over
    Male:
      16 to 64 years:
         With a mobility or self care
          limitation:
            Mobility limitation only       P0690001
            Self care limitation only      P0690002
            Mobility and self care
             limitation                    P0690003
         No mobility or self care
          limitation                       P0690004
      65 to 74 years:
         (Repeat MOBILITY AND SELF CARE
           LIMITATION
           STATUS)                         P0690005
      75 years and over:
         (Repeat MOBILITY AND SELF CARE
           LIMITATION STATUS)              P0690009
    Female:
      (Repeat AGE By MOBILITY AND SELF
```

```
        CARE LIMITATION STATUS)            P0690013

P70. SEX(2) BY EMPLOYMENT STATUS(4) [8]
    Universe:  Persons 16 years and over
    Male:
      In labor force:
         In Armed Forces                   P0700001
         Civilian:
            Employed                       P0700002
            Unemployed                     P0700003
      Not in labor force                   P0700004
    Female:
      (Repeat EMPLOYMENT STATUS)           P0700005

P71. RACE(5) BY SEX(2) BY EMPLOYMENT STATUS(4) [40]
    Universe:  Persons 16 years and over
    White:
      Male:
         In labor force:
            In Armed Forces                P0710001
            Civilian:
              Employed                     P0710002
              Unemployed                   P0710003
         Not in labor force                P0710004
      Female:
         (Repeat EMPLOYMENT STATUS)        P0710005
    Black:
      (Repeat SEX By EMPLOYMENT STATUS)    P0710009
    American Indian, Eskimo, or Aleut:
      (Repeat SEX By EMPLOYMENT STATUS)    P0710017
    Asian or Pacific Islander:
      (Repeat SEX By EMPLOYMENT STATUS)    P0710025
    Other race:
      (Repeat SEX By EMPLOYMENT STATUS)    P0710033

P72. SEX(2) BY EMPLOYMENT STATUS(4) [8]
    Universe:  Persons of Hispanic origin 16 years and over
    Male:
      In labor force:
         In Armed Forces                   P0720001
```

```
         Civilian:
            Employed                          P0720002
            Unemployed                        P0720003
      Not in labor force                      P0720004
    Female:
      (Repeat EMPLOYMENT STATUS)              P0720005

P73. PRESENCE AND AGE OF CHILDREN AND EMPLOYMENT
       STATUS(12) [12]
    Universe:  Females 16 years and over
    With own children under 18 years:
      Under 6 years only:
         In labor force:
            Employed or in Armed Forces       P0730001
            Unemployed                        P0730002
         Not in labor force                   P0730003
      6 to 17 years only:
         In labor force:
            Employed or in Armed Forces       P0730004
            Unemployed                        P0730005
         Not in labor force                   P0730006
      Under 6 years and 6 to 17 years:
         In labor force:
            Employed or in Armed Forces       P0730007
            Unemployed                        P0730008
         Not in labor force                   P0730009
    No own children under 18 years:
      In labor force:
         Employed or in Armed Forces          P0730010
         Unemployed                           P0730011
      Not in labor force                      P0730012

P74. PRESENCE AND AGE OF CHILDREN(2) BY EMPLOYMENT
       STATUS OF PARENTS(8) [16]
    Universe:  Own children under 18 years in
     families and subfamilies
    Under 6 years:
      Living with two parents:
         Both parents in labor force          P0740001
         Father only in labor force           P0740002
```

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         Mother only in labor force        P0740003
         Neither parent in labor force     P0740004
      Living with one parent:
         Living with father:
             In labor force                P0740005
             Not in labor force            P0740006
         Living with mother:
            In labor force                 P0740007
            Not in labor force             P0740008
    6 to 17 years:
      (Repeat EMPLOYMENT STATUS OF
        PARENTS)                           P0740009

P75. SEX(2) BY WORK STATUS IN 1989(2) [4]
    Universe:  Persons 16 years and over
    Male:
      Worked in 1989                       P0750001
      Did not work in 1989                 P0750002
    Female:
      (Repeat WORK STATUS IN 1989)         P0750003

P76. SEX(2) BY WORK STATUS IN 1989,
      USUAL HOURS WORKED PER WEEK IN 1989,
      AND WEEKS WORKED IN 1989(19) [38]
    Universe:  Persons 16 years and over
    Male:
      Worked in 1989:
            Usually worked 35 or more hours per week:
            50 to 52 weeks                 P0760001
            48 to 49 weeks                 P0760002
            40 to 47 weeks                 P0760003
            27 to 39 weeks                 P0760004
            14 to 26 weeks                 P0760005
            1 to 13 weeks                  P0760006
         Usually worked 15 to 34 hours per week:
            50 to 52 weeks                 P0760007
            48 to 49 weeks                 P0760008
            40 to 47 weeks                 P0760009
            27 to 39 weeks                 P0760010
            14 to 26 weeks                 P0760011
```

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          1 to 13 weeks                  P0760012
       Usually worked 1 to 14 hours per week:
          50 to 52 weeks                 P0760013
          48 to 49 weeks                 P0760014
          40 to 47 weeks                 P0760015
          27 to 39 weeks                 P0760016
          14 to 26 weeks                 P0760017
          1 to 13 weeks                  P0760018
    Did not work in 1989                 P0760019
  Female:
    (Repeat WORK STATUS IN 1989, USUAL
      HOURS WORKED PER WEEK IN 1989, AND
      WEEKS WORKED IN 1989)              P0760020

P77. INDUSTRY(17) [17]
  Universe:  Employed persons 16 years
   and over
  Agriculture, forestry, and fisheries
   (000 039)                             P0770001
  Mining (040 059)                       P0770002
  Construction (060 099)                 P0770003
  Manufacturing, nondurable goods
   (100 229)                             P0770004
  Manufacturing, durable goods (230 399) P0770005
  Transportation (400 439)               P0770006
  Communications and other public
   utilities (440 499)                   P0770007
  Wholesale trade (500 579)              P0770008
  Retail trade (580 699)                 P0770009
  Finance, insurance, and real estate
   (700 720)                             P0770010
  Business and repair services (721 760) P0770011
  Personal services (761 799)            P0770012
  Entertainment and recreation services
   (800 811)                             P0770013
  Professional and related services (812 899):
    Health services (812 840)            P0770014
    Educational services (842 860)       P0770015
    Other professional and related
     services (841, 861 899)             P0770016
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    Public administration (900 939)        P0770017

P78. OCCUPATION(13) [13]
    Universe:  Employed persons 16 years
     and over
    Managerial and professional specialty
     occupations (000 202):
      Executive, administrative, and
       managerial occupations (000 042)    P0780001
      Professional specialty occupations
       (043 202)                           P0780002
      Technical, sales, and administrative
       support occupations (203 402):
      Technicians and related support
       occupations (203 242)               P0780003
      Sales occupations (243 302)          P0780004
      Administrative support occupations,
       including clerical (303 402)        P0780005
    Service occupations (403 472):
      Private household occupations
       (403 412)                           P0780006
      Protective service occupations
       (413 432)                           P0780007
      Service occupations, except
       protective and household (433 472)  P0760008
    Farming, forestry, and fishing
     occupations (473 502)                 P0780009
    Precision production, craft, and
     repair occupations (503 702)          P0780010
    Operators, fabricators, and laborers
     (703 902):
      Machine operators, assemblers, and
       inspectors (703 802)                P0780011
      Transportation and material moving
       occupations (803 863)               P0780012
      Handlers, equipment cleaners,
       helpers, and laborers (864 902)     P0780013

P79. CLASS OF WORKER(7) [7]
    Universe:  Employed persons 16
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     years and over
    Private for profit wage and salary
     workers                                P0790001
    Private not for profit wage and salary
     workers                                P0790002
    Local government workers                P0790003
    State government workers                P0790004
    Federal government workers              P0790005
    Self employed workers                   P0790006
    Unpaid family workers                   P0790007

P80. HOUSEHOLD INCOME IN 1989(25) [25]
    Universe:  Households
    Less than \$5,000                        P0800001
    \$5,000 to \$9,999                       P0800002
    \$10,000 to \$12,499                     P0800003
    \$12,500 to \$14,999                     P0800004
    \$15,000 to \$17,499                     P0800005
    \$17,500 to \$19,999                     P0800006
    \$20,000 to \$22,499                     P0800007
    \$22,500 to \$24,999                     P0800008
    \$25,000 to \$27,499                     P0800009
    \$27,500 to \$29,999                     P0800010
    \$30,000 to \$32,499                     P0800011
    \$32,500 to \$34,999                     P0800012
    \$35,000 to \$37,499                     P0800013
    \$37,500 to \$39,999                     P0800014
    \$40,000 to \$42,499                     P0800015
    \$42,500 to \$44,999                     P0800016
    \$45,000 to \$47,499                     P0800017
    \$47,500 to \$49,999                     P0800018
    \$50,000 to \$54,999                     P0800019
    \$55,000 to \$59,999                     P0800020
    \$60,000 to \$74,999                     P0800021
    \$75,000 to \$99,999                     P0800022
    \$100,000 to \$124,99                    P0800023
    \$125,000 to \$149999                    P0800024
    \$150,000 or more                        P0800025

P80A. MEDIAN HOUSEHOLD INCOME IN 1989(1) [1]
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    Universe:  Households
    Median household income in 1989        P080A001

P81. AGGREGATE HOUSEHOLD INCOME IN 1989(2) [2]
    Universe:  Households
    Total:
      Less than \$150,000                  P0810001
      \$150,000 or more                    P0810002

P82. RACE OF HOUSEHOLDER(5) BY HOUSEHOLD
      INCOME IN 1989(9) [45]
    Universe:  Households
    White:
      Less than \$5,000                    P0820001
      \$5,000 to \$9,999                   P0820002
      \$10,000 to \$14,999                 P0820003
      \$15,000 to \$24,999                 P0820004
      \$25,000 to \$34,999                 P0820005
      \$35,000 to \$49,999                 P0820006
      \$50,000 to \$74,999                 P0820007
      \$75,000 to \$99,999                 P0820008
      \$100,000 or more                    P0820009
    Black:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0820010
    American Indian, Eskimo, or Aleut:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0820019
    Asian or Pacific Islander:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0820028
    Other race:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0820037

P83. HOUSEHOLD INCOME IN 1989(9) [9]
    Universe:  Households with householder
     of Hispanic origin
    Less than \$5,000                       P0830001
    \$5,000 to \$9,999                      P0830002
    \$10,000 to \$14,999                    P0830003
    \$15,000 to \$24,999                    P0830004
    \$25,000 to \$34,999                    P0830005
    \$35,000 to \$49,999                    P0830006
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    \$50,000 to \$74,999                    P0830007
    \$75,000 to \$99,999                    P0830008
    \$100,000 or more                       P0830009

P84. AGGREGATE HOUSEHOLD INCOME IN 1989(1)
       BY RACE OF HOUSEHOLDER(5) [5]
    Universe:  Households
    Total:
      White                                 P0840001
      Black                                 P0840002
      American Indian, Eskimo, or Aleut     P0840003
      Asian or Pacific Islander             P0840004
      Other race                            P0840005

P85. AGGREGATE HOUSEHOLD INCOME IN 1989(1) [1]
    Universe:  Households with householder
     of Hispanic origin
    Total                                   P0850001

P86. AGE OF HOUSEHOLDER(7) BY HOUSEHOLD
       INCOME IN 1989(9) [63]
    Universe:  Households
    Under 25 years:
      Less than \$5,000                     P0860001
      \$5,000 to \$9,999                    P0860002
      \$10,000 to \$14,999                  P0860003
      \$15,000 to \$24,999                  P0860004
      \$25,000 to \$34,999                  P0860005
      \$35,000 to \$49,999                  P0860006
      \$50,000 to \$74,999                  P0860007
      \$75,000 to \$99,999                  P0860008
      \$100,000 or more                     P0860009
    25 to 34 years:
      (Repeat HOUSEHOLD INCOME IN 1989)     P0860010
    35 to 44 years:
      (Repeat HOUSEHOLD INCOME IN 1989)     P0860019
    45 to 54 years:
      (Repeat HOUSEHOLD INCOME IN 1989)     P0860028
    55 to 64 years:
      (Repeat HOUSEHOLD INCOME IN 1989)     P0860037
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    65 to 74 years:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0860046
    75 years and over:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0860055

P87A. RACE OF HOUSEHOLDER(1) BY AGE OF HOUSEHOLDER(7)
       BY HOUSEHOLD INCOME IN 1989(9) [63]
    Universe:  White households
    White:
      Under 25 years:
         Less than \$5,000                 P087A001
         \$5,000 to \$9,999                P087A002
         \$10,000 to \$14,999              P087A003
         \$15,000 to \$24,999              P087A004
         \$25,000 to \$34,999              P087A005
         \$35,000 to \$49,999              P087A006
         \$50,000 to \$74,999              P087A007
         \$75,000 to \$99,999              P087A008
         \$100,000 or more                 P087A009
      25 to 34 years:
         (Repeat HOUSEHOLD INCOME IN 1989) P087A010
      35 to 44 years:
         (Repeat HOUSEHOLD INCOME IN 1989) P087A019
      45 to 54 years:
         (Repeat HOUSEHOLD INCOME IN 1989) P087A028
      55 to 64 years:
         (Repeat HOUSEHOLD INCOME IN 1989) P087A037
      65 to 74 years:
         (Repeat HOUSEHOLD INCOME IN 1989) P087A046
      75 years and over:
         (Repeat HOUSEHOLD INCOME IN 1989) P087A055

P87B. RACE OF HOUSEHOLDER(1) BY AGE OF HOUSEHOLDER(7)
       BY HOUSEHOLD INCOME IN 1989(9) [63]
    Universe:  Black households
    Black:
      (Repeat AGE OF HOUSEHOLDER By HOUSEHOLD
         INCOME IN 1989)(2)                P087B001

P87C. RACE OF HOUSEHOLDER(1) BY AGE OF HOUSEHOLDER(7)
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       BY HOUSEHOLD INCOME IN 1989(9) [63]
    Universe:  American Indian, Eskimo, or
     Aleut households
    American Indian, Eskimo, or Aleut:
      (Repeat AGE OF HOUSEHOLDER By
        HOUSEHOLD INCOME IN 1989)(2)       P087C001

P87D. RACE OF HOUSEHOLDER(1) BY AGE OF HOUSEHOLDER(7)
       BY HOUSEHOLD INCOME IN 1989(9) [63]
    Universe:  Asian or Pacific Islander
     households
    Asian or Pacific Islander:
      (Repeat AGE OF HOUSEHOLDER By
        HOUSEHOLD INCOME IN 1989)(2)       P087D001

P87E. RACE OF HOUSEHOLDER(1) BY AGE OF HOUSEHOLDER(7)
       BY HOUSEHOLD INCOME IN 1989(9) [63]
    Universe:  Other race households
    Other race:
      (Repeat AGE OF HOUSEHOLDER By
        HOUSEHOLD INCOME IN 1989)(2)       P087E001

P88. AGE OF HOUSEHOLDER(7) BY HOUSEHOLD INCOME
       IN 1989(9) [63]
    Universe:  Households with householder
     of Hispanic origin
    Under 25 years:
      Less than \$5,000                    P0880001
      \$5,000 to \$9,999                   P0880002
      \$10,000 to \$14,999                 P0880003
      \$15,000 to \$24,999                 P0880004
      \$25,000 to \$34,999                 P0880005
      \$35,000 to \$49,999                 P0880006
      \$50,000 to \$74,999                 P0880007
      \$75,000 to \$99,999                 P0880008
      \$100,000 or more                    P0880009
    25 to 34 years:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0880010
    35 to 44 years:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0880019
```

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    45 to 54 years:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0880028
    55 to 64 years:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0880037
    65 to 74 years:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0880046
    75 years and over:
      (Repeat HOUSEHOLD INCOME IN 1989)    P0880055

P89. EARNINGS IN 1989(2) [2]
    Universe:  Households
    With earnings                          P0890001
    No earnings                            P0890002

P90. WAGE OR SALARY INCOME IN 1989(2) [2]
    Universe:  Households
    With wage or salary income             P0900001
    No wage or salary income               P0900002

P91. NONFARM SELF EMPLOYMENT INCOME IN 1989(2) [2]
    Universe:  Households
    With nonfarm self employment income    P0910001
    No nonfarm self employment income      P0910002

P92. FARM SELF EMPLOYMENT INCOME IN 1989(2) [2]
    Universe:  Households
    With farm self employment income       P0920001
    No farm self employment income         P0920002

P93. INTEREST, DIVIDEND, OR NET RENTAL
      INCOME IN 1989(2) [2]
    Universe:  Households
    With interest, dividend, or net
     rental income                         P0930001
    No interest, dividend, or net
     rental income                         P0930002

P94. SOCIAL SECURITY INCOME IN 1989(2) [2]
    Universe:  Households
    With Social Security income            P0940001
```

```
    No Social Security income              P0940002

P95. PUBLIC ASSISTANCE INCOME IN 1989(2) [2]
    Universe:  Households
    With public assistance income          P0950001
    No public assistance income            P0950002

P96. RETIREMENT INCOME IN 1989(2) [2]
    Universe:  Households
    With retirement income                 P0960001
    No retirement income                   P0960002

P97. OTHER TYPE OF INCOME IN 1989(2) [2]
    Universe:  Households
    With other income                      P0970001
    No other income                        P0970002

P98. AGGREGATE WAGE OR SALARY INCOME IN 1989(1) [1]
    Universe:  Households
    Total                                  P0980001

P99. AGGREGATE NONFARM SELF EMPLOYMENT INCOME IN
      1989(1) [1]
    Universe:  Households
    Total                                  P0990001

P100. AGGREGATE FARM SELF EMPLOYMENT INCOME IN
      1989(1) [1]
    Universe:  Households
    Total                                  P1000001

P101. AGGREGATE INTEREST, DIVIDEND, OR NET
     RENTAL INCOME IN 1989(1) [1]
    Universe:  Households
    Total                                  P1010001

P102. AGGREGATE SOCIAL SECURITY INCOME IN 1989(1) [1]
    Universe:  Households
    Total                                  P1020001
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P103. AGGREGATE PUBLIC ASSISTANCE INCOME IN 1989(1) [1]
    Universe:  Households
    Total                                   P1030001

P104. AGGREGATE RETIREMENT INCOME IN 1989(1) [1]
    Universe:  Households
    Total                                   P1040001

P105. AGGREGATE OTHER TYPE OF INCOME IN 1989(1) [1]
    Universe:  Households
    Total                                   P1050001

P106. AGGREGATE PERSONS IN HOUSEHOLDS(1) BY PUBLIC
     ASSISTANCE INCOME IN 1989(2) BY AGE(3) [6]
    Universe:  Persons in households
    Total:
      With public assistance income:
         Under 15 years                     P1060001
         15 to 64 years                     P1060002
         65 years and over                  P1060003
      No public assistance income:
         (Repeat AGE)                       P1060004

P107. FAMILY INCOME IN 1989(25) [25]
    Universe:  Families
    Less than \$5,000                       P1070001
    \$5,000 to \$9,999                      P1070002
    \$10,000 to \$12,499                    P1070003
    \$12,500 to \$14,999                    P1070004
    \$15,000 to \$17,499                    P1070005
    \$17,500 to \$19,999                    P1070006
    \$20,000 to \$22,499                    P1070007
    \$22,500 to \$24,999                    P1070008
    \$25,000 to \$27,499                    P1070009
    \$27,500 to \$29,999                    P1070010
    \$30,000 to \$32,499                    P1070011
    \$32,500 to \$34,999                    P1070012
    \$35,000 to \$37,499                    P1070013
    \$37,500 to \$39,999                    P1070014
    \$40,000 to \$42,499                    P1070015
```

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    \$42,500 to \$44,999                    P1070016
    \$45,000 to \$47,499                    P1070017
    \$47,500 to \$49,999                    P1070018
    \$50,000 to \$54,999                    P1070019
    \$55,000 to \$59,999                    P1070020
    \$60,000 to \$74,999                    P1070021
    \$75,000 to \$99,999                    P1070022
    \$100,000 to \$124,999                  P1070023
    \$125,000 to \$149,999                  P1070024
    \$150,000 or more                       P1070025

P107A. MEDIAN FAMILY INCOME IN 1989(1) [1]
    Universe:  Families
    Median family income in 1989            P107A001

P108. AGGREGATE FAMILY INCOME IN 1989(1) BY
       FAMILY INCOME IN 1989(2) [2]
    Universe:  Families
    Total:
      Less than \$150,000                    P1080001
      \$150,000 or more                      P1080002

P109. AGGREGATE FAMILY INCOME IN 1989(1) BY FAMILY
       TYPE AND PRESENCE AND AGE OF CHILDREN(6) [6]
    Universe:  Families
    Total:
      Married couple family:
         With own children under 18 years  P1090001
         No own children under 18 years    P1090002
      Other family:
         Male householder, no wife present:
            With own children under 18
             years                         P1090003
            No own children under 18 years P1090004
         Female householder, no husband
          present:
            With own children under 18
             years                         P1090005
            No own children under 18 years P1090006
```

P110. NONFAMILY HOUSEHOLD INCOME IN 1989(25) [25]

Universe: Nonfamily households

| | |
|---|---|
| Less than \$5,000 | P1100001 |
| \$5,000 to \$9,999 | P1100002 |
| \$10,000 to \$12,499 | P1100003 |
| \$12,500 to \$14,999 | P1100004 |
| \$15,000 to \$17,499 | P1100005 |
| \$17,500 to \$19,999 | P1100006 |
| \$20,000 to \$22,499 | P1100007 |
| \$22,500 to \$24,999 | P1100008 |
| \$25,000 to \$27,499 | P1100009 |
| \$27,500 to \$29,999 | P1100010 |
| \$30,000 to \$32,499 | P1100011 |
| \$32,500 to \$34,999 | P1100012 |
| \$35,000 to \$37,499 | P1100013 |
| \$37,500 to \$39,999 | P1100014 |
| \$40,000 to \$42,499 | P1100015 |
| \$42,500 to \$44,999 | P1100016 |
| \$45,000 to \$47,499 | P1100017 |
| \$47,500 to \$49,999 | P1100018 |
| \$50,000 to \$54,999 | P1100019 |
| \$55,000 to \$59,999 | P1100020 |
| \$60,000 to \$74,999 | P1100021 |
| \$75,000 to \$99,999 | P1100022 |
| \$100,000 to \$124,999 | P1100023 |
| \$125,000 to \$149,999 | P1100024 |
| \$150,000 or more | P1100025 |

P110A. MEDIAN NONFAMILY HOUSEHOLD INCOME IN 1989(1) [1]

Universe: Nonfamily households

| | |
|---|---|
| Median nonfamily household income in 1989 | P110A001 |

P111. AGGREGATE NONFAMILY HOUSEHOLD INCOME IN 1989(1) BY NONFAMILY HOUSEHOLD INCOME IN 1989(2) [2]

Universe: Nonfamily households

Total:

| | |
|---|---|
| Less than \$150,000 | P1110001 |
| \$150,000 or more | P1110002 |

```
P112. WORKERS IN FAMILY IN 1989(4) [4]
    Universe:  Families
    No workers                              P1120001
    1 worker                                P1120002
    2 workers                               P1120003
    3 or more workers                       P1120004

P113. AGGREGATE FAMILY INCOME IN 1989(1) BY WORKERS
     IN FAMILY IN 1989(4) [4]
    Universe:  Families
    Total:
      No workers                            P1130001
      1 worker                              P1130002
      2 workers                             P1130003
      3 or more workers                     P1130004

P114. AGGREGATE INCOME IN 1989(1) BY GROUP QUARTERS(3) [3]
    Universe:  Persons 15 years and over
    Total:
      In households                         P1140001
      In group quarters:
         Institutionalized persons          P1140002
         Other persons in group quarters    P1140003
      Filler                                P1140004

P114A. PER CAPITA INCOME IN 1989(1) [1]
    Universe:  Persons
    Per capita income in 1989               P114A001

P114B. PER CAPITA INCOME IN 1989(1) BY GROUP QUARTERS(3) [3]
    Universe:  Persons
    Per capita income in 1989:
      In households                         P114B001
      In group quarters:
         Institutionalized persons          P114B002
         Other persons in group quarters    P114B003
      Filler                                P114B004

P115. AGGREGATE INCOME IN 1989(1) BY RACE(5) [5]
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    Universe:  Persons 15 years and over
    Total:
      White                                P1150001
      Black                                P1150002
      American Indian, Eskimo, or Aleut    P1150003
      Asian or Pacific Islander            P1150004
      Other race                           P1150005

P115A. PER CAPITA INCOME IN 1989(1) BY RACE(5) [5]
    Universe:  Persons
    Per capita income in 1989:
      White                                P115A001
      Black                                P115A002
      American Indian, Eskimo, or Aleut    P115A003
      Asian or Pacific Islander            P115A004
      Other race                           P115A005

P116. AGGREGATE INCOME IN 1989(1) [1]
    Universe:  Persons of Hispanic origin 15 years and over
    Total                                  P1160001

P116A. PER CAPITA INCOME IN 1989(1) [1]
    Universe:  Persons of Hispanic origin
    Per capita income in 1989              P116A001

P117. POVERTY STATUS IN 1989(2) BY AGE(12) [24]
    Universe:  Persons for whom poverty status is determined
    Income in 1989 above poverty level:
      Under 5 years                        P1170001
      5 years                              P1170002
      6 to 11 years                        P1170003
      12 to 17 years                       P1170004
      18 to 24 years                       P1170005
      25 to 34 years                       P1170006
      35 to 44 years                       P1170007
      45 to 54 years                       P1170008
      55 to 59 years                       P1170009
      60 to 64 years                       P1170010
      65 to 74 years                       P1170011
      75 years and over                    P1170012
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    Income in 1989 below poverty level:
      (Repeat AGE)                          P1170013

P118. POVERTY STATUS IN 1989(2) BY SEX(2) BY AGE(7) [28]
    Universe:  Persons for whom poverty status is determined
    Income in 1989 above poverty level:
      Male:
         Under 5 years                      P1180001
         5 years                            P1180002
         6 to 11 years                      P1180003
         12 to 17 years                     P1180004
         18 to 64 years                     P1180005
         65 to 74 years                     P1180006
         75 years and over                  P1180007
      Female:
         (Repeat AGE)                       P1180008
    Income in 1989 below poverty level:
      (Repeat SEX By AGE)                   P1180015

P119. POVERTY STATUS IN 1989(2) BY RACE(5) BY AGE(7) [70]
    Universe:  Persons for whom poverty status is determined
    Income in 1989 above poverty level:
      White:
         Under 5 years                      P1190001
         5 years                            P1190002
         6 to 11 years                      P1190003
         12 to 17 years                     P1190004
         18 to 64 years                     P1190005
         65 to 74 years                     P1190006
         75 years and over                  P1190007
      Black:
         (Repeat AGE)                       P1190008
      American Indian, Eskimo, or Aleut:
         (Repeat AGE)                       P1190015
      Asian or Pacific Islander:
         (Repeat AGE)                       P1190022
      Other race:
         (Repeat AGE)                       P1190029
    Income in 1989 below poverty level:
      (Repeat RACE By AGE)                  P1190036
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P120. POVERTY STATUS IN 1989(2) BY AGE(7) [14]
    Universe:  Persons of Hispanic origin for whom poverty
       status is determined
    Income in 1989 above poverty level:
      Under 5 years                          P1200001
      5 years                                P1200002
      6 to 11 years                          P1200003
      12 to 17 years                         P1200004
      18 to 64 years                         P1200005
      65 to 74 years                         P1200006
      75 years and over                      P1200007
    Income in 1989 below poverty level:
      (Repeat AGE)                           P1200008

P121. RATIO OF INCOME IN 1989 TO POVERTY LEVEL(9) [9]
    Universe:  Persons for whom poverty status is determined
    Under .50                                P1210001
    50 to .74                                P1210002
    75 to .99                                P1210003
    1.00 to 1.24                             P1210004
    1.25 to 1.49                             P1210005
    1.50 to 1.74                             P1210006
    1.75 to 1.84                             P1210007
    1.85 to 1.99                             P1210008
    2.00 and over                            P1210009

P122. POVERTY STATUS IN 1989(2) BY AGE(3) BY HOUSEHOLD
       TYPE AND RELATIONSHIP(9) [54]
    Universe:  Persons for whom poverty status is determined
    Income in 1989 above poverty level:
      Under 65 years:
         In married couple family            P1220001
         In other family:
          Male householder, no wife
           present                           P1220002
          Female householder, no husband
           present                           P1220003
         Unrelated individuals:
            In family households             P1220004
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            In nonfamily households:
              Householder:
                 Living alone              P1220005
                 Not living alone          P1220006
              Nonrelatives                 P1220007
            In group quarters              P1220008
         Filler                            P1220009
      65 to 74 years:
         (Repeat HOUSEHOLD TYPE AND
          RELATIONSHIP)                    P1220010
      75 years and over:
         (Repeat HOUSEHOLD TYPE AND
          RELATIONSHIP)                    P1220019
    Income in 1989 below poverty level:
      (Repeat AGE By HOUSEHOLD TYPE AND
       RELATIONSHIP)                       P1220028

P123. POVERTY STATUS IN 1989(2) BY FAMILY TYPE AND PRESENCE
       AND AGE OF CHILDREN(12) [24]
    Universe:  Families
    Income in 1989 above poverty level:
      Married couple family:
         With related children under 18 years:
            Under 5 years only             P1230001
            5 to 17 years only             P1230002
            Under 5 years and 5 to 17
             years                         P1230003
         No related children under 18
          years                            P1230004
      Other family:
         Male householder, no wife present:
            With related children under 18 years:
              Under 5 years only           P1230005
              5 to 17 years only           P1230006
              Under 5 years and 5 to 17
               years                       P1230007
            No related children under 18
             years                         P1230008
         Female householder, no husband present:
            With related children under 18 years:
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              Under 5 years only           P1230009
              5 to 17 years only           P1230010
              Under 5 years and 5 to 17
               years                       P1230011
            No related children under 18
             years                         P1230012
    Income in 1989 below poverty level:
      (Repeat FAMILY TYPE AND PRESENCE AND
        AGE OF CHILDREN)OF CHILDREN)       P1230013

P124A. POVERTY STATUS IN 1989(1) BY RACE OF HOUSEHOLDER(5) BY
       FAMILY TYPE AND PRESENCE AND AGE OF CHILDREN(12) [60]
    Universe:  Families with income above poverty level
    Income in 1989 above poverty level:
      White:
        Married couple family:
          With related children under 18 years:
            Under 5 years only             P124A001
            5 to 17 years only             P124A002
            Under 5 years and 5 to 17
             years                         P124A003
            No related children under
             18 years                      P124A004
         Other family:
            Male householder, no wife present:
              With related children under 18 years:
                 Under 5 years only        P124A005
                 5 to 17 years only        P124A006
                 Under 5 years and 5 to
                  17 years                 P124A007
              No related children under
               18 years                    P124A008
            Female householder, no husband present:
              With related children under 18 years:
                 Under 5 years only        P124A009
                 5 to 17 years only        P124A010
                 Under 5 years and 5 to
                  17 years                 P124A011
              No related children under
               18 years                    P124A012
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      Black:
         (Repeat FAMILY TYPE AND PRESENCE  P124A013
             AND AGE OF CHILDREN)
      American Indian, Eskimo, or Aleut:
         (Repeat FAMILY TYPE AND PRESENCE  P124A025
            AND AGE OF CHILDREN)
      Asian or Pacific Islander:
         (Repeat FAMILY TYPE AND PRESENCE  P124A037
            AND AGE OF CHILDREN)
      Other race:
         (Repeat FAMILY TYPE AND PRESENCE  P124A049
            AND AGE OF CHILDREN)

P124B. POVERTY STATUS IN 1989(1) BY RACE
        OF HOUSEHOLDER(5) BY
       FAMILY TYPE AND PRESENCE AND AGE
       OF CHILDREN(12) [60]
    Universe:  Families with income above
     poverty level
    Income in 1989 below poverty level:
      (Repeat RACE OF HOUSEHOLDER By FAMILY TYPE
        AND PRESENCE AND AGE OF
        CHILDREN)(2)                       P124B001

P125. POVERTY STATUS IN 1989(2) BY FAMILY
       TYPE AND PRESENCE
       AND AGE OF CHILDREN(12) [24]
    Universe:  Families with householder of Hispanic origin
    Income in 1989 above poverty level:
      Married couple family:
         With related children under 18 years:
            Under 5 years only             P1250001
            5 to 17 years only             P1250002
            Under 5 years and 5 to
             17 years                      P1250003
         No related children under
          18 years                         P1250004
      Other family:
         Male householder, no wife present:
            With related children under 18 years:
```

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              Under 5 years only           P1250005
              5 to 17 years only           P1250006
              Under 5 years and 5 to 17
               years                       P1250007
            No related children under
             18 years                      P1250008
         Female householder, no husband present:
            With related children under 18 years:
              Under 5 years only           P1250009
              5 to 17 years only           P1250010
              Under 5 years and 5 to
               17 years                    P1250011
            No related children under
             18 years                      P1250012
    Income in 1989 below poverty level:
      (Repeat FAMILY TYPE AND PRESENCE AND P1250013
        AGE OF CHILDREN)

P126. POVERTY STATUS IN 1989(2) BY FAMILY TYPE AND AGE(9) [18]
    Universe:  Related children under 18 years
    Income in 1989 above poverty level:
      In married couple family:
         Under 5 years                     P1260001
         5 years                           P1260002
         6 to 17 years                     P1260003
      In other family:
         Male householder, no wife present:
            Under 5 years                  P1260004
            5 years                        P1260005
            6 to 17 years                  P1260006
         Female householder, no husband present:
            Under 5 years                  P1260007
            5 years                        P1260008
            6 to 17 years                  P1260009
    Income in 1989 below poverty level:
      (Repeat FAMILY TYPE AND AGE)         P1260010

P127. POVERTY STATUS IN 1989(2) BY AGE OF HOUSEHOLDER(3)
       BY HOUSEHOLD TYPE(5) [30]
    Universe:  Households
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    Income in 1989 above poverty level:
      Householder 15 to 64 years:
         Married couple family              P1270001
         Other family:
            Male householder, no wife
             present                        P1270002
            Female householder, no
             husband present                P1270003
         Nonfamily households:
            Householder living alone        P1270004
            Householder not living alone    P1270005
      Householder 65 to 74 years:
         (Repeat HOUSEHOLD TYPE)            P1270006
      Householder 75 years and over:
         (Repeat HOUSEHOLD TYPE)            P1270011
    Income in 1989 below poverty level:
      (Repeat AGE OF HOUSEHOLDER By
        HOUSEHOLD TYPE)                     P1270016

P128. IMPUTATION OF POPULATION ITEMS(3) [3]
    Universe:  Persons
    Filler                                  P1280001
      No items allocated                    P1280002
      One or more items allocated           P1280003

P129. IMPUTATION OF RELATIONSHIP(2) [2]
    Universe:  Persons in households
    Allocated                               P1290001
    Not allocated                           P1290002
P130. IMPUTATION OF SEX(3) [3]
    Universe:  Persons
    Filler                                  P1300001
      Allocated                             P1300002
      Not allocated                         P1300003

P131. IMPUTATION OF AGE(3) [3]
    Universe:  Persons
    Filler                                  P1310001
      Allocated                             P1310002
      Not allocated                         P1310003
```

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P132. IMPUTATION OF RACE(3) [3]
    Universe:  Persons
    Filler                                  P1320001
      Allocated                             P1320002
      Not allocated                         P1320003

P133. IMPUTATION OF MARITAL STATUS(3) [3]
    Universe:  Persons 15 years and over
    Filler                                  P1330001
      Allocated                             P1330002
      Not allocated                         P1330003

P134. IMPUTATION OF HISPANIC ORIGIN(3) [3]
    Universe:  Persons
    Filler                                  P1340001
      Allocated                             P1340002
      Not allocated                         P1340003

P135. IMPUTATION OF GROUP QUARTERS(2) [2]
    Universe:  Persons in group quarters
    Allocated                               P1350001
    Not allocated                           P1350002

P136. IMPUTATION OF PLACE OF BIRTH(3) [3]
    Universe:  Persons
    Filler                                  P1360001
      Allocated                             P1360002
      Not allocated                         P1360003

P137. IMPUTATION OF CITIZENSHIP(3) [3]
    Universe:  Persons
    Filler                                  P1370001
      Allocated                             P1370002
      Not allocated                         P1370003

P138. IMPUTATION OF YEAR OF ENTRY(3) [3]
    Universe:  Foreign born persons
    Filler                                  P1380001
      Allocated                             P1380002
```

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      Not allocated                          P1380003

P139. IMPUTATION OF SCHOOL ENROLLMENT(3) [3]
    Universe:  Persons 3 years and over
    Filler                                   P1390001
      Allocated                              P1390002
      Not allocated                          P1390003

P140. IMPUTATION OF EDUCATIONAL ATTAINMENT(3) [3]
    Universe:  Persons 18 years and over
    Filler                                   P1400001
      Allocated                              P1400002
      Not allocated                          P1400003

P141. IMPUTATION OF EDUCATIONAL ATTAINMENT(3) [3]
    Universe:  Persons 25 years and over
    Filler                                   P1410001
      Allocated                              P1410002
      Not allocated                          P1410003

P142. IMPUTATION OF ANCESTRY(3) [3]
    Universe:  Persons
    Filler                                   P1420001
      Allocated                              P1420002
      Not allocated                          P1420003

P143. IMPUTATION OF MOBILITY STATUS(3) [3]
    Universe:  Persons 5 years and over
    Filler                                   P1430001
      Allocated                              P1430002
      Not allocated                          P1430003

P144. IMPUTATION OF RESIDENCE IN 1985(5) [5]
    Universe:  Persons 5 years and over
    Different house in 1985:
      Filler                                 P1440001
        Allocated:
          One or more but not all
           geographic parts allocated        P1440002
            All geographic parts allocated   P1440003
```

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         Not allocated                    P1440004
    Same house in 1985                    P1440005

P145. IMPUTATION OF LANGUAGE STATUS(3) [3]
    Universe:  Persons 5 years and over
    Filler                                P1450001
      Allocated                           P1450002
      Not allocated                       P1450003

P146. IMPUTATION OF LANGUAGE SPOKEN AT HOME(4) [4]
    Universe:  Persons 5 years and over
    Speak only English                    P1460001
    Speak other language:
      Filler                              P1460002
         Allocated                        P1460003
         Not allocated                    P1460004

P147. IMPUTATION OF ABILITY TO SPEAK ENGLISH(4) [4]
    Universe:  Persons 5 years and over
    Speak only English                    P1470001
    Speak other language:
      Filler                              P1470002
         Allocated                        P1470003
         Not allocated                    P1470004

P148. IMPUTATION OF VETERAN STATUS(3) [3]
    Universe:  Persons 16 years and over
    Filler                                P1480001
      Allocated                           P1480002
      Not allocated                       P1480003

P149. IMPUTATION OF PERIOD OF MILITARY SERVICE(3) [3]
    Universe:  Civilian veterans 16 years and over
    Filler                                P1490001
      Allocated                           P1490002
      Not allocated                       P1490003

P150. IMPUTATION OF WORK DISABILITY STATUS(3) [3]
    Universe:  Civilian noninstitutionalized persons 16 years and over
    Filler                                P1500001
```

```
      Allocated                          P1500002
      Not allocated                      P1500003

P151. IMPUTATION OF MOBILITY LIMITATION STATUS(3) [3]
    Universe:  Civilian noninstitutionalized persons 16 years and over
    Filler                               P1510001
      Allocated                          P1510002
      Not allocated                      P1510003

P152. IMPUTATION OF SELF CARE LIMITATION STATUS(3) [3]
    Universe:  Civilian noninstitutionalized persons 16 years and over
    Filler                               P1520001
      Allocated                          P1520002
      Not allocated                      P1520003

P153. IMPUTATION OF CHILDREN EVER BORN(3) [3]
    Universe:  Females 15 years and over
    Filler                               P1530001
      Allocated                          P1530002
      Not allocated                      P1530003

P154. IMPUTATION OF PLACE OF WORK(4) [4]
    Universe:  Workers 16 years and over
    Filler                               P1540001
      Allocated:
        One or more but not all geographic
         parts allocated                 P1540002
        All geographic parts allocated   P1540003
      Not allocated                      P1540004

P155. IMPUTATION OF MEANS OF TRANSPORTATION TO WORK(3) [3]
    Universe:  Workers 16 years and over
    Filler                               P1550001
      Allocated                          P1550002
      Not allocated                      P1550003

P156. IMPUTATION OF PRIVATE VEHICLE OCCUPANCY(4) [4]
    Universe:  Workers 16 years and over
    Car, truck, or van:
      Filler                             P1560001
```

```
         Allocated                          P1560002
         Not allocated                      P1560003
    Other means                             P1560004

P157. IMPUTATION OF TIME LEAVING HOME TO GO TO WORK(4) [4]
    Universe:  Workers 16 years and over
    Did not work at home:
      Filler                                P1570001
         Allocated                          P1570002
         Not allocated                      P1570003
    Worked at home                          P1570004

P158. IMPUTATION OF TRAVEL TIME TO WORK(4) [4]
    Universe:  Workers 16 years and over
    Did not work at home:
      Filler                                P1580001
         Allocated                          P1580002
         Not allocated                      P1580003
    Worked at home                          P1580004

P159. IMPUTATION OF EMPLOYMENT STATUS(3) [3]
    Universe:  Persons 16 years and over
    Filler                                  P1590001
      Allocated                             P1590002
      Not allocated                         P1590003

P160. IMPUTATION OF WORK STATUS IN 1989(3) [3]
    Universe:  Persons 16 years and over
    Filler                                  P1600001
      Allocated                             P1600002
      Not allocated                         P1600003

P161. IMPUTATION OF USUAL HOURS WORKED PER WEEK IN
       1989(4) [4]
    Universe:  Persons 16 years and over
    Worked in 1989:
      Filler                                P1610001
         Allocated                          P1610002
         Not allocated                      P1610003
    Did not work in 1989                    P1610004
```

```
P162. IMPUTATION OF WEEKS WORKED IN 1989(4) [4]
    Universe:  Persons 16 years and over
    Worked in 1989:
      Filler                              P1620001
         Allocated                        P1620002
         Not allocated                    P1620003
    Did not work in 1989                  P1620004

P163. IMPUTATION OF INDUSTRY(3) [3]
    Universe:  Employed persons 16 years and over
    Filler                                P1630001
      Allocated                           P1630002
      Not allocated                       P1630003

P164. IMPUTATION OF OCCUPATION(3) [3]
    Universe:  Employed persons 16 years and over
    Filler                                P1640001
      Allocated                           P1640002
      Not allocated                       P1640003

P165. IMPUTATION OF CLASS OF WORKER(3) [3]
    Universe:  Employed persons 16 years and over
    Filler                                P1650001
      Allocated                           P1650002
      Not allocated                       P1650003

P166. IMPUTATION OF INCOME IN 1989(3) [3]
    Universe:  Persons 15 years and over
    Filler                                P1660001
      Allocated                           P1660002
      Not allocated                       P1660003

P167. IMPUTATION OF HOUSEHOLD INCOME IN 1989(2) [2]
    Universe:  Households
    Allocated                             P1670001
    Not allocated                         P1670002

P168. IMPUTATION OF FAMILY INCOME IN 1989(2) [2]
    Universe:  Families
```

```
    Allocated                                P1680001
    Not allocated                            P1680002

P169. IMPUTATION OF NONFAMILY HOUSEHOLD INCOME IN
       1989(2) [2]
    Universe:  Nonfamily households
    Allocated                                P1690001
    Not allocated                            P1690002

P170. IMPUTATION OF POVERTY STATUS IN 1989(3) [3]
    Universe:  Persons for whom poverty status is determined
    Filler                                   P1700001
      Allocated                              P1700002
      Not allocated                          P1700003

H1. HOUSING UNITS(1) [1]
    Universe:  Housing units
    Total                                    H0010001

H2. UNWEIGHTED SAMPLE COUNT OF HOUSING UNITS(1) [1]
    Universe:  Housing units
    Total                                    H0020001

H3. 100 PERCENT COUNT OF HOUSING UNITS(1) [1]
    Universe:  Housing units
    Total                                    H0030001

H3A. PERCEN
     T OF HOUSING UNITS IN SAMPLE(1) [1]
    1 implied decimal(s)
    Universe:  Housing units
    Total                                    H003A001

H4. OCCUPANCY STATUS(2) [2]
    Universe:  Housing units
    Occupied                                 H0040001
    Vacant                                   H0040002

H5. URBAN AND RURAL(4) [4]
    Universe:  Housing units
```

```
    Urban:
      Inside urbanized area                H0050001
      Outside urbanized area               H0050002
    Rural:
      Farm                                 H0050003
      Nonfarm                              H0050004

H6. CONDOMINIUM STATUS(2) BY VACANCY STATUS(4) [8]
    Universe:  Vacant housing units
    Condominium:
      For rent                             H0060001
      For sale only                        H0060002
      For seasonal, recreational, or
       occasional use                      H0060003
      All other vacants                    H0060004
    Not condominium:
      (Repeat VACANCY STATUS)              H0060005

H7. CONDOMINIUM STATUS(2) BY TENURE AND MORTGAGE
     STATUS(3) [6]
    Universe:  Occupied housing units
    Condominium:
      Owner occupied:
         With a mortgage                   H0070001
         Not mortgaged                     H0070002
      Renter occupied                      H0070003
    Not condominium:
      (Repeat TENURE AND MORTGAGE STATUS)  H0070004

H8. TENURE(2) [2]
    Universe:  Occupied housing units
    Owner occupied                         H0080001
    Renter occupied                        H0080002

H9. RACE OF HOUSEHOLDER(5) [5]
    Universe:  Occupied housing units
    White                                  H0090001
    Black                                  H0090002
    American Indian, Eskimo, or Aleut      H0090003
    Asian or Pacific Islander              H0090004
```

```
    Other race                              H0090005

H10. TENURE
     (2) BY RACE OF HOUSEHOLDER(5) [10]
    Universe:  Occupied housing units
    Owner occupied:
      White                                 H0100001
      Black                                 H0100002
      American Indian, Eskimo, or Aleut     H0100003
      Asian or Pacific Islander             H0100004
      Other race                            H0100005
    Renter occupied:
      (Repeat RACE OF HOUSEHOLDER)          H0100006

H11. HISPANIC ORIGIN OF HOUSEHOLDER(2) BY RACE OF
       HOUSEHOLDER(5) [10]
    Universe:  Occupied housing units
    Not of Hispanic origin:
      White                                 H0110001
      Black                                 H0110002
      American Indian, Eskimo, or Aleut     H0110003
      Asian or Pacific Islander             H0110004
      Other race                            H0110005
    Hispanic origin:
      (Repeat RACE OF HOUSEHOLDER)          H0110006

H12. TENURE (2) BY RACE OF HOUSEHOLDER(5) [10]
    Universe:  Occupied housing units with householder of
      Hispanic origin
    Owner occupied:
      White                                 H0120001
      Black                                 H0120002
      American Indian, Eskimo, or Aleut     H0120003
      Asian or Pacific Islander             H0120004
      Other race                            H0120005
    Renter occupied:
      (Repeat RACE OF HOUSEHOLDER)          H0120006

H13. TENURE (2) BY AGE OF HOUSEHOLDER(7) [14]
    Universe:  Occupied housing units
```

```
    Owner occupied:
      15 to 24 years                        H0130001
      25 to 34 years                        H0130002
      35 to 44 years                        H0130003
      45 to 54 years                        H0130004
      55 to 64 years                        H0130005
      65 to 74 years                        H0130006
      75 years and over                     H0130007
    Renter occupied:
      (Repeat AGE OF HOUSEHOLDER)           H0130008

H14. AGGREGATE PERSONS(1) BY TENURE(2) BY RACE OF
       HOUSEHOLDER(5) [10]
    Universe:  Persons in occupied housing units
    Total:
      Owner occupied:
         White                              H0140001
         Black                              H0140002
         American Indian, Eskimo, or Aleut  H0140003
         Asian or Pacific Islander          H0140004
         Other race                         H0140005
      Renter occupied:
         (Repeat RACE OF HOUSEHOLDER)       H0140006

H15. AGGREGRATE PERSONS(1) BY TENURE(2) [2]
    Universe:  Persons in occupied housing units with
       householder of Hispanic origin
    Total:
      Owner occupied                        H0150001
      Renter occupied                       H0150002

H16. ROOMS(9) [9]
    Universe:  Housing units
    1 room                                  H0160001
    2 rooms                                 H0160002
    3 rooms                                 H0160003
    4 rooms                                 H0160004
    5 rooms                                 H0160005
    6 rooms                                 H0160006
    7 rooms                                 H0160007
```

```
    8 rooms                                 H0160008
    9 or more rooms                         H0160009

H17. AGGREGATE ROOMS(1) [1]
    Universe:  Housing units
    Total                                   H0170001

H18. TENURE
     (2) BY PERSONS IN UNIT(7) [14]
    Universe:  Occupied housing units
    Owner occupied:
      1 person                              H0180001
      2 persons                             H0180002
      3 persons                             H0180003
      4 persons                             H0180004
      5 persons                             H0180005
      6 persons                             H0180006
      7 or more persons                     H0180007
    Renter occupied:
      (Repeat PERSONS IN UNIT)              H0180008

H19. AGGREGATE PERSONS(1) BY TENURE(2) [2]
    Universe:  Persons in occupied housing units
    Total:
      Owner occupied                        H0190001
      Renter occupied                       H0190002

H20. UNITS IN STRUCTURE(10) [10]
    Universe:  Housing units
    1, detached                             H0200001
    1, attached                             H0200002
    2                                       H0200003
    3 or 4                                  H0200004
    5 to 9                                  H0200005
    10 to 19                                H0200006
    20 to 49                                H0200007
    50 or more                              H0200008
    Mobile home or trailer                  H0200009
    Other                                   H0200010
```

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H21. UNITS IN STRUCTURE(10) [10]
    Universe:  Vacant housing units
    1, detached                              H0210001
    1, attached                              H0210002
    2                                        H0210003
    3 or 4                                   H0210004
    5 to 9                                   H0210005
    10 to 19                                 H0210006
    20 to 49                                 H0210007
    50 or more                               H0210008
    Mobile home or trailer                   H0210009
    Other                                    H0210010

H22. TENURE (2) BY UNITS IN STRUCTURE(10) [20]
    Universe:  Occupied housing units
    Owner occupied:
      1, detached                            H0220001
      1, attached                            H0220002
      2                                      H0220003
      3 or 4                                 H0220004
      5 to 9                                 H0220005
      10 to 19                               H0220006
      20 to 49                               H0220007
      50 or more                             H0220008
      Mobile home or trailer                 H0220009
      Other                                  H0220010
    Renter occupied:
      (Repeat UNITS IN STRUCTURE)            H0220011

H23. SOURCE OF WATER(4) [4]
    Universe:  Housing units
    Public system or private company         H0230001
    Individual well:
      Drilled                                H0230002
      Dug                                    H0230003
    Some other source                        H0230004

H24. SEWAGE DISPOSAL(3) [3]
    Universe:  Housing units
    Public sewer                             H0240001
```

```
    Septic tank or cesspool                 H0240002
    Other means                             H0240003

H25. YEAR STRUCTURE BUILT(8) [8]
    Universe:  Housing units
    1989 to March 1990                      H0250001
    1985 to 1988                            H0250002
    1980 to 1984                            H0250003
    1970 to 1979                            H0250004
    1960 to 1969                            H0250005
    1950 to 1959                            H0250006
    1940 to 1949                            H0250007
    1939 or earlier                         H0250008

H25A. MEDIAN YEAR STRUCTURE BUILT(1) [1]
    Universe:  Housing units
    Median year structure built             H025A001

H26. YEAR STRUCTURE BUILT(8) [8]
    Universe:  Vacant housing units
    1989 to March 1990                      H0260001
    1985 to 1988                            H0260002
    1980 to 1984                            H0260003
    1970 to 1979                            H0260004
    1960 to 1969                            H0260005
    1950 to 1959                            H0260006
    1940 to 1949                            H0260007
    1939 or earlier                         H0260008

H27. TENURE (2) BY YEAR STRUCTURE BUILT(8) [16]
    Universe:  Occupied housing units
    Owner occupied:
      1989 to March 1990                    H0270001
      1985 to 1988                          H0270002
      1980 to 1984                          H0270003
      1970 to 1979                          H0270004
      1960 to 1969                          H0270005
      1950 to 1959                          H0270006
      1940 to 1949                          H0270007
      1939 or earlier                       H0270008
```

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    Renter occupied:
      (Repeat YEAR STRUCTURE BUILT)        H0270009

H28. YEAR HOUSEHOLDER MOVED INTO UNIT(6) [6]
    Universe:  Occupied housing units
    1989 to March 1990                     H0280001
    1985 to 1988                           H0280002
    1980 to 1984                           H0280003
    1970 to 1979                           H0280004
    1960 to 1969                           H0280005
    1959 or earlier                        H0280006

H29. TENURE (2) BY YEAR HOUSEHOLDER MOVED INTO UNIT(6) [12]
    Universe:  Occupied housing units
    Owner occupied:
      1989 to March 1990                   H0290001
      1985 to 1988                         H0290002
      1980 to 1984                         H0290003
      1970 to 1979                         H0290004
      1960 to 1969                         H0290005
      1959 or earlier                      H0290006
    Renter occupied:
      (Repeat YEAR HOUSEHOLDER MOVED
        INTO UNIT)                         H0290007

H30. HOUSE HEATING FUEL(9) [9]
    Universe:  Occupied housing units
    Utility gas                            H0300001
    Bottled, tank, or LP gas               H0300002
    Electricity                            H0300003
    Fuel oil, kerosene, etc.               H0300004
    Coal or coke                           H0300005
    Wood                                   H0300006
    Solar energy                           H0300007
    Other fuel                             H0300008
    No fuel used                           H0300009

H31. BEDROOMS(6) [6]
    Universe:  Housing units
    No bedroom                             H0310001
```

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    1 bedroom                                H0310002
    2 bedrooms                               H0310003
    3 bedrooms                               H0310004
    4 bedrooms                               H0310005
    5 or more bedrooms                       H0310006

H32. BEDROOMS(6) [6]
    Universe:  Vacant housing units
    No bedroom                               H0320001
    1 bedroom                                H0320002
    2 bedrooms                               H0320003
    3 bedrooms                               H0320004
    4 bedrooms                               H0320005
    5 or more bedrooms                       H0320006

H33. TENURE (2) BY BEDROOMS(6) [12]
    Universe:  Occupied housing units
    Owner occupied:
      No bedroom                             H0330001
      1 bedroom                              H0330002
      2 bedrooms                             H0330003
      3 bedrooms                             H0330004
      4 bedrooms                             H0330005
      5 or more bedrooms                     H0330006
    Renter occupied:
      (Repeat BEDROOMS)                      H0330007

H34. BEDROOMS(4) BY GROSS RENT(7) [28]
    Universe:  Specified renter occupied housing units
    No bedroom:
      With cash rent:
         Less than \$200                     H0340001
         \$200 to \$299                      H0340002
         \$300 to \$499                      H0340003
         \$500 to \$749                      H0340004
         \$750 to \$999                      H0340005
         \$1,000 or more                     H0340006
      No cash rent                           H0340007
    1 bedroom:
      (Repeat GROSS RENT)                    H0340008
```

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    2 bedrooms:
      (Repeat GROSS RENT)                  H0340015
    3 or more bedrooms:
      (Repeat GROSS RENT)                  H0340022

H35. TENURE (2) BY TELEPHONE IN HOUSING UNIT(2) [4]
    Universe:  Occupied housing units
    Owner occupied:
      With telephone                       H0350001
      No telephone                         H0350002
    Renter occupied:
      (Repeat TELEPHONE IN HOUSING UNIT)   H0350003

H36. AGE OF HOUSEHOLDER(4) BY TELEPHONE IN HOUSING UNIT(2) [8]
    Universe:  Occupied housing units
    15 to 59 years:
      With telephone                       H0360001
      No telephone                         H0360002
    60 to 64 years:
      (Repeat TELEPHONE IN HOUSING UNIT)   H0360003
    65 to 74 years:
      (Repeat TELEPHONE IN HOUSING UNIT)   H0360005
    75 years and over:
      (Repeat TELEPHONE IN HOUSING UNIT)   H0360007

H37. TENURE (2) BY VEHICLES AVAILABLE(6) [12]
    Universe:  Occupied housing units
    Owner occupied:
      None                                 H0370001
      1                                    H0370002
      2                                    H0370003
      3                                    H0370004
      4                                    H0370005
      5 or more                            H0370006
    Renter occupied:
      (Repeat VEHICLES AVAILABLE)          H0370007

H38. AGGREGATE VEHICLES AVAILABLE(1) BY TENURE(2) [2]
    Universe:  Occupied housing units
    Total:
```

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      Owner occupied                          H0380001
      Renter occupied                         H0380002

H39. RACE OF HOUSEHOLDER(5) BY VEHICLES AVAILABLE(2) [10]
    Universe:  Occupied housing units
    White:
      None                                    H0390001
      1 or more                               H0390002
    Black:
      (Repeat VEHICLES AVAILABLE)             H0390003
    American Indian, Eskimo, or Aleut:
      (Repeat VEHICLES AVAILABLE)             H0390005
    Asian or Pacific Islander:
      (Repeat VEHICLES AVAILABLE)             H0390007
    Other race:
      (Repeat VEHICLES AVAILABLE)             H0390009

H40. VEHICLES AVAILABLE(2) [2]
    Universe:  Occupied housing units with householder of
      Hispanic origin
    None                                      H0400001
    1 or more                                 H0400002

H41. AGE OF HOUSEHOLDER(2) BY VEHICLES AVAILABLE(2) [4]
    Universe:  Occupied housing units
    15 to 64 years:
      None                                    H0410001
      1 or more                               H0410002
    65 years and over:
      (Repeat VEHICLES AVAILABLE)             H0410003

H42. KITCHEN FACILITIES(2) [2]
    Universe:  Housing units
    Complete kitchen facilities               H0420001
    Lacking complete kitchen facilities       H0420002

H43. GROSS RENT(17) [17]
    Universe:  Specified renter occupied housing units
    With cash rent:
      Less than \$100                         H0430001
```

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      \$100 to \$149                        H0430002
      \$150 to \$199                        H0430003
      \$200 to \$249                        H0430004
      \$250 to \$299                        H0430005
      \$300 to \$349                        H0430006
      \$350 to \$399                        H0430007
      \$400 to \$449                        H0430008
      \$450 to \$499                        H0430009
      \$500 to \$549                        H0430010
      \$550 to \$599                        H0430011
      \$600 to \$649                        H0430012
      \$650 to \$699                        H0430013
      \$700 to \$749                        H0430014
      \$750 to \$999                        H0430015
      \$1,000 or more                       H0430016
    No cash rent                            H0430017

H43A. MEDIAN GROSS RENT(1) [1]
    Universe:  Specified renter occupied housing units paying
      cash rent
    Median gross rent                       H043A001

H44. AGGREGATE GROSS RENT(1) [1]
    Universe:  Specified renter occupied housing units paying
      cash rent
    Total                                   H0440001

H45. RACE OF HOUSEHOLDER(5) BY GROSS RENT(7) [35]
    Universe:  Specified renter occupied housing units
    White:
      With cash rent:
         Less than \$200                    H0450001
         \$200 to \$299                     H0450002
         \$300 to \$499                     H0450003
         \$500 to \$749                     H0450004
         \$750 to \$999                     H0450005
         \$1,000 or more                    H0450006
      No cash rent                          H0450007
    Black:
      (Repeat GROSS RENT)                   H0450008
```

```
    American Indian, Eskimo, or Aleut:
      (Repeat GROSS RENT)                  H0450015
    Asian or Pacific Islander:
      (Repeat GROSS RENT)                  H0450022
    Other race:
      (Repeat GROSS RENT)                  H0450029

H46. HISPANIC ORIGIN(2) BY GROSS RENT(7) [14]
    Universe:  Specified renter occupied housing units
    Not of Hispanic origin:
      With cash rent:
         Less than \$200                   H0460021
         \$200 to \$299                    H0460022
         \$300 to \$499                    H0460023
         \$500 to \$749                    H0460024
         \$750 to \$999                    H0460025
         \$1,000 or more                   H0460026
      No cash rent                         H0460027
    Hispanic origin:
      (Repeat GROSS RENT)                  H0460028

H47. MEALS INCLUDED IN RENT(2) [2]
    Universe:  Specified renter occupied
     housing units paying cash rent
    Meals included in rent                 H0470001
    No meals included in rent              H0470002

H48. AGGREGATE GROSS RENT(1) BY MEALS
      INCLUDED IN RENT(2) [2]
    Universe:  Specified renter occupied
     housing units paying cash rent
    Total:
      Meals included in rent               H0480001
      No meals included in rent            H0480002

H49. INCLUSION OF UTILITIES IN RENT(2) [2]
    Universe:  Specified renter occupied housing units
    Pay extra for 1 or more utilities      H0490001
    No extra payment for any utilities     H0490002
```

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H50. HOUSEHOLD INCOME IN 1989(5) BY GROSS RENT AS A
       PERCENTAGE OF HOUSEHOLD INCOME IN 1989(6) [30]
    Universe:  Specified renter occupied housing units
    Less than \$10,000:
      Less than 20 percent                 H0500001
      20 to 24 percent                     H0500002
      25 to 29 percent                     H0500003
      30 to 34 percent                     H0500004
      35 percent or more                   H0500005
      Not computed                         H0500006
    \$10,000 to \$19,999:
      (Repeat GROSS RENT AS A PERCENTAGE OF
        HOUSEHOLD INCOME IN 1989)          H0500007
    \$20,000 to \$34,999:
      (Repeat GROSS RENT AS A PERCENTAGE OF
        HOUSEHOLD INCOME IN 1989)          H0500013
    \$35,000 to \$49,999:
      (Repeat GROSS RENT AS A PERCENTAGE OF
        HOUSEHOLD INCOME IN 1989)          H0500019
    \$50,000 or more:
      (Repeat GROSS RENT AS A PERCENTAGE OF
        HOUSEHOLD INCOME IN 1989)          H0500025

H50A. MEDIAN GROSS RENT AS A PERCENTAGE OF HOUSEHOLD
       INCOME IN 1989(1) [1]
    1 implied decimal(s)
    Universe:  Specified renter occupied
     housing units paying cash rent
    Median gross rent as a percentage of
     household income in 1989              H050A001

H51. AGE OF HOUSEHOLDER(2) BY GROSS RENT AS A PERCENTAGE
       OF HOUSEHOLD INCOME IN 1989(6) [12]
    Universe:  Specified renter occupied housing units
    15 to 64 years:
      Less than 20 percent                 H0510001
      20 to 24 percent                     H0510002
      25 to 29 percent                     H0510003
      30 to 34 percent                     H0510004
      35 percent or more                   H0510005
```

```
      Not computed                          H0510006
    65 years and over:
      (Repeat GROSS RENT AS A PERCENTAGE
        OF HOUSEHOLD INCOME IN 1989)        H0510007

H52. MORTGAGE STATUS AND SELECTED MONTHLY OWNER
       COSTS(21) [21]
    Universe:  Specified owner occupied housing units
    With a mortgage:
      Less than \$200                       H0520001
      \$200 to \$299                        H0520002
      \$300 to \$399                        H0520003
      \$400 to \$499                        H0520004
      \$500 to \$599                        H0520005
      \$600 to \$699                        H0520006
      \$700 to \$799                        H0520007
      \$800 to \$899                        H0520008
      \$900 to \$999                        H0520009
      \$1,000 to \$1,249                    H0520010
      \$1,250 to \$1,499                    H0520011
      \$1,500 to \$1,999                    H0520012
      \$2,000 or more                       H0520013
    Not mortgaged:
      Less than \$100                       H0520014
      \$100 to \$149                        H0520015
      \$150 to \$199                        H0520016
      \$200 to \$249                        H0520017
      \$250 to \$299                        H0520018
      \$300 to \$349                        H0520019
      \$350 to \$399                        H0520020
      \$400 or more                         H0520021

H52A. MEDIAN SELECTED MONTHLY OWNER COSTS AND MORTGAGE
       STATUS(2) [2]
    Universe:  Specified owner occupied housing units
    With a mortgage                         H052A001
    Not mortgaged                           H052A002

H53. AGGREGATE SELECTED MONTHLY OWNER COSTS(1) BY
       MORTGAGE STATUS(2) [2]
```

```
    Universe:  Specified owner occupied housing units
    Total:
      With a mortgage                          H0530001
      Not mortgaged                            H0530002

H54. RACE OF HOUSEHOLDER(5) BY MORTGAGE STATUS AND
       SELECTED MONTHLY OWNER COSTS(11) [55]
    Universe:  Specified owner occupied housing units
    White:
      With a mortgage:
         Less than \$300                       H0540001
         \$300 to \$499                        H0540002
         \$500 to \$699                        H0540003
         \$700 to \$999                        H0540004
         \$1,000 to \$1,499                    H0540005
         \$1,500 or more                       H0540006
      Not mortgaged:
         Less than \$100                       H0540007
         \$100 to \$199                        H0540008
         \$200 to \$299                        H0540009
         \$300 to \$399                        H0540010
         \$400 or more                         H0540011
    Black:
      (Repeat MORTGAGE STATUS AND SELECTED
        MONTHLY OWNER COSTS)                   H0540012
    American Indian, Eskimo, or Aleut:
      (Repeat MORTGAGE STATUS AND SELECTED
       MONTHLY  OWNER COSTS)                   H0540023
    Asian or Pacific Islander:
      (Repeat MORTGAGE STATUS AND SELECTED
        MONTHLY OWNER COSTS)                   H0540034
    Other race:
      (Repeat MORTGAGE STATUS AND SELECTED
        MONTHLY OWNER COSTS)                   H0540045

H55. MORTGAGE STATUS AND SELECTED MONTHLY OWNER
       COSTS(11) [11]
    Universe:  Specified owner occupied housing units with
       householder of Hispanic origin
    With a mortgage:
```

```
      Less than \$300                        H0550001
      \$300 to \$499                         H0550002
      \$500 to \$699                         H0550003
      \$700 to \$999                         H0550004
      \$1,000 to \$1,499                     H0550005
      \$1,500 or more                        H0550006
    Not mortgaged:
      Less than \$100                        H0550007
      \$100 to \$199                         H0550008
      \$200 to \$299                         H0550009
      \$300 to \$399                         H0550010
      \$400 or more                          H0550011

H56. AGGREGATE SELECTED MONTHLY OWNER COSTS(1) BY
       MORTGAGE STATUS(2) [2]
    Universe:  Owner occupied mobile homes or trailers
    Total:
      With a mortgage                        H0560001
      Not mortgaged                          H0560002

H57. AGGREGATE SELECTED MONTHLY OWNER COSTS(1) BY
       MORTGAGE STATUS(2) [2]
    Universe:  Owner occupied condominium housing units
    Total:
      With a mortgage                        H0570001
      Not mortgaged                          H0570002

H58. MORTGAGE STATUS(2) BY SELECTED MONTHLY OWNER
       COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN
       1989(6) [12]
    Universe:  Specified owner occupied housing units
    With a mortgage:
      Less than 20 percent                   H0580001
      20 to 24 percent                       H0580002
      25 to 29 percent                       H0580003
      30 to 34 percent                       H0580004
      35 percent or more                     H0580005
      Not computed                           H0580006
    Not mortgaged:
      (Repeat SELECTED MONTHLY OWNER
```

```
        COSTS AS A PERCENTAGE OF HOUSEHOLD
        INCOME IN 1989)                    H0580007

H58A. MEDIAN SELECTED MONTHLY OWNER COSTS AS A
       PERCENTAGE OF HOUSEHOLD INCOME IN 1989 AND
       MORTGAGE STATUS(2) [2]
    1 implied decimal(s)
    Universe:  Specified owner occupied housing units
    With a mortgage                        H058A001
    Not mortgaged                          H058A002

H59. HOUSEHOLD INCOME IN 1989(5) BY SELECTED MONTHLY
       OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD
       INCOME IN 1989(6) [30]
    Universe:  Specified owner occupied housing units
    Less than \$10,000:
      Less than 20 percent                 H0590001
      20 to 24 percent                     H0590002
      25 to 29 percent                     H0590003
      30 to 34 percent                     H0590004
      35 percent or more                   H0590005
      Not computed                         H0590006
    \$10,000 to \$19,999:
      (Repeat SELECTED MONTHLY OWNER COSTS
        AS A PERCENTAGE OF HOUSEHOLD INCOME
        IN 1989)                           H0590007
    \$20,000 to \$34,999:
      (Repeat SELECTED MONTHLY OWNER COSTS
        AS A PERCENTAGE OF HOUSEHOLD INCOME
        IN 1989)                           H0590013
    \$35,000 to \$49,999:
      (Repeat SELECTED MONTHLY OWNER COSTS
        AS A PERCENTAGE OF HOUSEHOLD INCOME
        IN 1989)                           H0590019
    \$50,000 or more:
      (Repeat SELECTED MONTHLY OWNER COSTS
        AS A PERCENTAGE OF HOUSEHOLD INCOME
        IN 1989)                           H0590025

H60. AGE OF HOUSEHOLDER(2) BY SELECTED MONTHLY
```

```
       OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD
       INCOME IN 1989(6) [12]
    Universe:  Specified owner occupied housing units
    15 to 64 years:
      Less than 20 percent                 H0600001
      20 to 24 percent                     H0600002
      25 to 29 percent                     H0600003
      30 to 34 percent                     H0600004
      35 percent or more                   H0600005
      Not computed                         H0600006
    65 years and over:
      (Repeat SELECTED MONTHLY OWNER COSTS
        AS A PERCENTAGE OF HOUSEHOLD INCOME
        IN 1989)                           H0600007

H61. VALUE(20) [20]
    Universe:  Specified owner occupied
     housing units
    Less than \$15,000                     H0610001
    \$15,000 to \$19,999                   H0610002
    \$20,000 to \$24,999                   H0610003
    \$25,000 to \$29,999                   H0610004
    \$30,000 to \$34,999                   H0610005
    \$35,000 to \$39,999                   H0610006
    \$40,000 to \$44,999                   H0610007
    \$45,000 to \$49,999                   H0610008
    \$50,000 to \$59,999                   H0610009
    \$60,000 to \$74,999                   H0610010
    \$75,000 to \$99,999                   H0610011
    \$100,000 to \$124,999                 H0610012
    \$125,000 to \$149,999                 H0610013
    \$150,000 to \$174,999                 H0610014
    \$175,000 to \$199,999                 H0610015
    \$200,000 to \$249,999                 H0610016
    \$250,000 to \$299,999                 H0610017
    \$300,000 to \$399,999                 H0610018
    \$400,000 to \$499,999                 H0610019
    \$500,000 or more                      H0610020

H61A. MEDIAN VALUE(1) [1]
```

```
    Universe:  Specified owner occupied housing units
    Median value                              H061A001

H62. AGGREGATE VALUE(1) BY MORTGAGE STATUS(2) [2]
    Universe:  Specified owner occupied housing units
    Total:
      With a mortgage                         H0620001
      Not mortgaged                           H0620002

H63. AGGREGATE HOUSEHOLD INCOME IN 1989(1) BY TENURE
       AND MORTGAGE STATUS(3) [3]
    Universe:  Occupied housing units
    Total:
      Owner occupied:
         With a mortgage                      H0630001
         Not mortgaged                        H0630002
      Renter occupied                         H0630003

H64. PLUMBING FACILITIES(2) [2]
    Universe:  Housing units
    Complete plumbing facilities              H0640001
    Lacking complete plumbing facilities      H0640002

H65. PLUMBING FACILITIES(2) [2]
    Universe:  Vacant housing units
    Complete plumbing facilities              H0650001
    Lacking complete plumbing facilities      H0650002

H66. RACE OF HOUSEHOLDER(5) BY PLUMBING FACILITIES(2) [10]
    Universe:  Occupied housing units
    White:
      Complete plumbing facilities            H0660001
      Lacking complete plumbing facilities    H0660002
    Black:
      (Repeat PLUMBING FACILITIES)            H0660003
    Asian or Pacific Islander:
      (Repeat PLUMBING FACILITIES)            H0660005
    American Indian, Eskimo, or Aleut:
      (Repeat PLUMBING FACILITIES)            H0660007
    Other race:
```

```
      (Repeat PLUMBING FACILITIES)         H0660009

H67. PLUMBING FACILITIES(2) [2]
    Universe:  Occupied housing units with householder
      of Hispanic origin
    Complete plumbing facilities           H0670001
    Lacking complete plumbing facilities   H0670002

H68. AGE OF HOUSEHOLDER(2) BY PLUMBING FACILITIES(2) [4]
    Universe:  Occupied housing units
    15 to 64 years:
      Complete plumbing facilities         H0680001
      Lacking complete plumbing facilities H0680002
    65 years and over:
      (Repeat PLUMBING FACILITIES)         H0680003

H69. TENURE (2) BY PLUMBING FACILITIES(2) BY PERSONS
     PER ROOM(3) [12]
    Universe:  Occupied housing units
    Owner occupied:
      Complete plumbing facilities:
         1.00 or less                      H0690001
         1.01 to 1.50                      H0690002
         1.51 or more                      H0690003
      Lacking complete plumbing facilities:
         (Repeat PERSONS PER ROOM)         H0690004
    Renter occupied:
      (Repeat PLUMBING FACILITIES By PERSONS
        PER ROOM)                          H0690007

H70. PLUMBING FACILITIES(2) BY UNITS IN STRUCTURE(10) [20]
    Universe:  Housing units
    Complete plumbing facilities:
      1, detached                          H0700001
      1, attached                          H0700002
      2                                    H0700003
      3 or 4                               H0700004
      5 to 9                               H0700005
      10 to 19                             H0700006
      20 to 49                             H0700007
```

```
      50 or more                              H0700008
      Mobile home or trailer                  H0700009
      Other                                   H0700010
    Lacking complete plumbing facilities:
      (Repeat UNITS IN STRUCTURE)             H0700011

H71. PLUMBING FACILITIES(2) BY PERSONS PER ROOM(2)
       BY YEAR STRUCTURE BUILT(2) [8]
    Universe:  Occupied housing units
    Complete plumbing facilities:
      1.00 or less:
         1940 to March 1990                   H0710001
         1939 or earlier                      H0710002
      1.01 or more:
         (Repeat YEAR STRUCTURE BUILT)        H0710003
    Lacking complete plumbing facilities:
      (Repeat PERSONS PER ROOM By YEAR STRUCTURE
        BUILT)                                H0710005

H72. IMPUTATION OF HOUSING ITEMS(2) [2]
    Universe:  Housing units
    No items allocated                        H0720001
    One or more items allocated               H0720002

H73. IMPUTATION OF CONDOMINIUM STATUS(2) [2]
    Universe:  Housing units
    Allocated                                 H0730001
    Not allocated                             H0730002

H74. IMPUTATION OF PLUMBING FACILITIES(2) [2]
    Universe:  Housing units
    Allocated                                 H0740001
    Not allocated                             H0740002

H75. IMPUTATION OF SOURCE OF WATER(2) [2]
    Universe:  Housing units
    Allocated                                 H0750001
    Not allocated                             H0750002

H76. IMPUTATION OF SEWAGE DISPOSAL(2) [2]
```

```
    Universe:  Housing units
    Allocated                              H0760001
    Not allocated                          H0760002

H77. IMPUTATION OF YEAR STRUCTURE BUILT(2) [2]
    Universe:  Housing units
    Allocated                              H0770001
    Not allocated                          H0770002

H78. IMPUTATION OF YEAR HOUSEHOLDER MOVED INTO
      UNIT(2) [2]
    Universe:  Occupied housing units
    Allocated                              H0780001
    Not allocated                          H0780002

H79. IMPUTATION OF HOUSE HEATING FUEL(2) [2]
    Universe:  Occupied housing units
    Allocated                              H0790001
    Not allocated                          H0790002

H80. IMPUTATION OF KITCHEN FACILITIES(2) [2]
    Universe:  Housing units
    Allocated                              H0800001
    Not allocated                          H0800002

H81. IMPUTATION OF BEDROOMS(2) [2]
    Universe:  Housing units
    Allocated                              H0810001
    Not allocated                          H0810002

H82. IMPUTATION OF TELEPHONE IN HOUSING UNIT(2) [2]
    Universe:  Occupied housing units
    Allocated                              H0820001
    Not allocated                          H0820002

H83. IMPUTATION OF VEHICLES AVAILABLE(2) [2]
    Universe:  Occupied housing units
    Allocated                              H0830001
    Not allocated                          H0830002
```

```
H84. IMPUTATION OF MORTGAGE STATUS(2) [2]
    Universe:  Specified owner occupied housing units
    Allocated                              H0840001
    Not allocated                          H0840002

H85. IMPUTATION OF TENURE(2) [2]
    Universe:  Occupied housing units
    Allocated                              H0850001
    Not allocated                          H0850002

H86. IMPUTATION OF VACANCY STATUS(2) [2]
    Universe:  Vacant housing units
    Allocated                              H0860001
    Not allocated                          H0860002

H87. IMPUTATION OF ROOMS(2) [2]
    Universe:  Housing units
    Allocated                              H0870001
    Not allocated                          H0870002

H88. IMPUTATION OF UNITS IN STRUCTURE(2) [2]
    Universe:  Housing units
    Allocated                              H0880001
    Not allocated                          H0880002

H89. IMPUTATION OF VALUE(2) [2]
    Universe:  Specified owner occupied housing units
    Allocated                              H0890001
    Not allocated                          H0890002

H90. IMPUTATION OF MEALS INCLUDED IN RENT(2) [2]
    Universe:  Specified renter occupied housing units paying
      cash rent
    Allocated                              H0900001
    Not allocated                          H0900002

H91. IMPUTATION OF GROSS RENT(2) [2]
    Universe:  Specified renter occupied housing units
    Allocated                              H0910001
    Not allocated                          H0910002
```

```
H92. IMPUTATION OF MORTGAGE STATUS AND SELECTED
       MONTHLY OWNER COSTS(4) [4]
    Universe:  Specified owner occupied housing units
    With a mortgage:
      Allocated                              H0920001
      Not allocated                          H0920002
    Not mortgaged:
      Allocated                              H0920003
      Not allocated                          H0920004
```

## 7.3 Variables in Key Files

The key files contain only essential geocode variables, including the **COUNTY**, **MCDGRP** (MCD Group), **MCD**, and **PREC** (precinct).

# Chapter 8

# Valid Voting Variables in Each State's MCD Group Level File

This section lists, without description, the voting data variables that are filled-in for at least some precincts in a given state. Each state's valid variables are listed in a paragraph linked back to its full description in Section 7.1. (All census variables are available in every state at the MCD-Group level.)

## 8.1 Variables for AK

YREPS MCDGRP CY YDEMS YCANS XREPS XDEMS XCANS G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90YB_TV G90YB_RV G90YB_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90XB_TV G90XB_RV G90XB_O1 G90XB_DV G90XA_TV G90XA_RV G90XA_O1 G90XA_DV G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_O1V G90G_DV G88Y_TV G88Y_RV G88Y_DV G88YA_TV G88YA_RV G88YA_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88XB_TV G88XB_RV G88XB_DV G88XA_TV G88XA_RV G88XA_O1 G88XA_DV G88V G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_DV G86YB_TV G86YB_RV G86YB_O1 G86YB_DV G86X_TV G86X_RV G86X_DV G86XB_TV G86XB_RV G86XB_O1

G86XB_DV G86XA_TV G86XA_RV G86XA_DV G86VORIG G86V G86TAPR
G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV
G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_O1V G86G_DV

## 8.2 Variables for AL

MREPS MCDGRP CY MDEMS MCANS G90Y_TV G90Y_RV G90Y_DV
G90X_TV G90X_RV G90X_DV G90V G90T_TV G90T_RV G90T_DV G90TAPR
G90S_TV G90S_RV G90S_DV G90R G90O_TV G90O_RV G90O_DV G90M_TTU
G90M_RTU G90M_R2U G90M_R1U G90M_DTU G90M_D2U G90M_D1U
G90L_TV G90L_RV G90L_DV G90K_TV G90K_RV G90K_DV G90J_TV
G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_O1V G90H_DV
G90G_TV G90G_RV G90G_DV G90F_TV G90F_RV G90F_DV G90A_TV
G90A_RV G90A_DV G88V G88TAPR G88R G88P_TV G88P_RV G88P_DV
G88M_TV G88M_RV G88M_DV G88H_TV G88H_RV G88H_O1V G88H_DV
G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV
G86V G86T_TV G86T_RV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV
G86R G86O_TV G86O_RV G86O_DV G86M_TTU G86M_RTU G86M_R2U
G86M_DTU G86M_D2U G86M_D1U G86L_TV G86L_RV G86L_DV G86K_TV
G86K_DV G86J_TV G86J_DV G86I_TV G86I_DV G86H_TV G86H_RV G86H_DV
G86G_TV G86G_RV G86G_DV G86F_TV G86F_DV G86A_TV G86A_DV
G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV
G84P_DV G84M_TV G84M_RV G84M_DV G84H_TV G84H_RV G84H_DV

## 8.3 Variables for AR

G90Y_TV MCDGRP CY G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_RV
G90X_O1V G90X_DV G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV
G90S_DV G90R G90L_TV G90L_RV G90L_DV G90K_TV G90K_RV G90K_DV
G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV
G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV
G88X_O1V G88X_DV G88V G88TAPR G88R G88P_TV G88P_RV G88P_DV
G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_O1V G86Y_DV G86X_TV
G86X_RV G86X_O1V G86X_DV G86V G86TAPR G86S_TV G86S_RV G86S_DV
G86R G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_DV
G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV
G84X_TV G84X_RV G84X_O1V G84X_DV G84V G84TAPR G84S_TV G84S_RV
G84S_DV G84R G84P_TV G84P_RV G84P_DV G84L_TV G84L_RV G84L_DV

G84H_TV G84H_RV G84H_O1V G84H_DV G84G_TV G84G_RV G84G_DV

## 8.4 Variables for AZ

G90Y_TV MCDGRP CY G90Y_RV G90Y_O1V G90Y_DV G90X_TTU G90X_RTU G90X_R2U G90X_R1U G90X_OTU G90X_O3U G90X_O2U G90X_O1U G90X_DTU G90X_D2U G90X_D1U G90VORIG G90V G90T_TV G90T_RV G90T_DV G90TAPR G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90O_TV G90O_RV G90O_DV G90K_TV G90K_RV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90B_TV G90B_RV G90B_DV G90A_TV G90A_RV G90A_DV G88Z_TV G88Z_RV G88Z_DV G88Y_TV G88Y_RV G88Y_O2V G88Y_O1V G88Y_DV G88X_TV G88X_TTU G88X_RV G88X_RTU G88X_R2U G88X_R1U G88X_OTU G88X_O2U G88X_O1V G88X_O1U G88X_DV G88X_DTU G88X_D2U G88X_D1U G88V G88TAPR G88S_TV G88S_RV G88S_O1V G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_O1V G88P_DV G88K_TV G88K_RV G88K_O1V G88K_DV G88H_TV G88H_RV G88H_O2V G88H_O1V G88H_DV G86Z_TV G86Z_RV G86Y_TV G86Y_RV G86Y_DV G86X_TTU G86X_RTU G86X_R2U G86X_R1U G86X_OTU G86X_O1U G86X_DTU G86X_D2U G86X_D1U G86V G86T_TV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86O_TV G86O_RV G86O_DV G86K_TV G86K_RV G86K_DV G86J_TV G86J_RV G86J_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_O1V G86G_DV G86B_TV G86B_RV G86B_DV G86A_TV G86A_RV G84Z_TV G84Z_RV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TTU G84X_RTU G84X_R2U G84X_R1U G84X_OTU G84X_O2U G84X_O1U G84X_DTU G84X_D2U G84X_D1U G84V G84TAPR G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_O1V G84P_DV G84O_TV G84O_RV G84O_O1V G84O_DV G84K_TV G84K_RV G84K_O1V G84K_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.5 Variables for CA

TRACTBNA S75 S74 S73 S72 S71 S70 S69 S68 S67 S66 S65 S64 S63 S62 S61 S60 S59 S58 S57 S56 S55 S54 S53 S52 S51 S50 S49 S48 S22 S15 R94 R93 R92 R91 R90 R9 R89 R88 R87 R86 R85 R84 R83 R82 R81 R80 R8 R79 R78 R77 R76 R75 R74 R73 R72 R71 R70 R7 R69 R68 R67 R66 R65 R64 R63 R62 R61 R60 R6 R59 R58 R57 R56 R55 R54 R53 R52 R51 R50 R5 R49 R48 R47

R46 R45 R44 R43 R42 R41 R40 R4 R39 R38 R37 R36 R35 R34 R33 R32 R31
R30 R3 R29 R28 R27 R26 R25 R24 R23 R22 R21 R20 R2 R19 R18 R17 R16
R15 R14 R13 R12 R11 R10 R1 P9 P8 P7 P6 P5 P4 P3 P24 P23 P22 P21 P20
P2 P19 P18 P17 P16 P15 P14 P13 P12 P11 P10 P1 G92Y_TV G92Y_RV
G92Y_DV G92Y_09V G92Y_02V G92Y_01V G92X_TV G92X_RV G92X_DV
G92X_09V G92X_02V G92X_01V G92W_TV G92W_RV G92W_DV G92W_09V
G92W_02V G92W_01V G92V G92TAPR G92S_TV G92S_RV G92S_DV G92S_09V
G92S_02V G92S_01V G92R G92Q_TV G92Q_RV G92Q_DV G92Q_09V G92Q_03V
G92Q_02V G92Q_01V G92P_TV G92P_RV G92P_DV G92P_09V G92P_02V
G92P_01V G92H_TV G92H_RV G92H_DV G92H_09V G92H_02V G92H_01V
BLCKGR

## 8.6 Variables for CO

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV
G90VORIG G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV
G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90J_TV G90J_RV
G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV
G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV
G88X_RV G88X_DV G88V G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V
G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV
G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86V G86T_TV
G86T_RV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV
G86Q_RV G86Q_O1V G86Q_DV G86J_TV G86J_RV G86J_DV G86H_TV
G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86A_TV G86A_RV
G86A_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_DV
G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV
G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV
G84H_DV

## 8.7 Variables for CT

MCDGRP CY G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_RV
G90X_O1V G90X_DV G90VORIG G90V G90T_TV G90T_RV G90T_DV
G90TAPR G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90J_TV G90J_RV
G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_O1V
G90G_DV G90C_TV G90C_RV G90C_DV G90A_TV G90A_RV G90A_DV
G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_DV G88VORIG

G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86VORIG G86V G86T_TV G86T_RV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_DV G86J_TV G86J_RV G86J_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86C_TV G86C_RV G86C_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84VORIG G84V G84TAPR G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

## 8.8 Variables for DC

G90Z_TV MCDGRP CY G90Z_RV G90Z_O2V G90Z_O1V G90Z_DV G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_O9V G90S_O2V G90S_O1V G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90O_TV G90O_RV G90O_O1V G90O_DV G90K_TV G90K_RV G90K_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G88Z_TV G88Z_RV G88Z_O2V G88Z_O1V G88Z_DV G88V G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_O1V G88H_DV G86Z_TV G86Z_RV G86Z_O1V G86Z_DV G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86V G86TAPR G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86K_TV G86K_RV G86K_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_O1V G86G_DV G84Z_TV G84Z_RV G84Z_O2V G84Z_O1V G84Z_DV G84V G84TAPR G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_DV

## 8.9 Variables for DE

MCDGRP CY G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90J_TV G90J_RV G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV G90A_TV G90A_RV G90A_O1V G90A_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_DV G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88L_TV G88L_RV G88L_DV G88K_TV G88K_RV G88K_DV G88H_TV G88H_RV

G88H_DV G88G_TV G88G_RV G88G_DV G86Y_TV G86Y_RV G86Y_DV
G86X_TV G86X_RV G86X_DV G86V G86TAPR G86R G86Q_TV G86Q_RV
G86Q_O1V G86Q_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV
G86H_TV G86H_RV G86H_DV G86A_TV G86A_RV G86A_DV G84Y_TV
G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_DV G84V G84TAPR G84S_TV
G84S_RV G84S_O1V G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV
G84P_TV G84P_RV G84P_DV G84L_TV G84L_RV G84L_DV G84K_TV
G84K_RV G84K_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV
G84G_DV

## 8.10 Variables for FL

MCDGRP CY G90Y_TV G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV
G90V G90T_TV G90T_RV G90T_DV G90TAPR G90R G90Q_TV G90Q_RV
G90Q_O1V G90Q_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV
G90H_DV G90G_TV G90G_RV G90G_DV G90F_TV G90F_RV G90F_DV
G90C_TV G90C_RV G90C_DV G90B_TV G90B_RV G90B_O1V G90B_DV
G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_DV G88VORIG
G88V G88T_TV G88T_RV G88T_DV G88TAPR G88S_TV G88S_RV G88S_DV
G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV
G88J_TV G88J_RV G88J_DV G88H_TV G88H_RV G88H_DV G86Y_TV
G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86T_TV
G86T_RV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV
G86Q_RV G86Q_O1V G86Q_DV G86J_TV G86J_RV G86J_DV G86H_TV
G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86F_TV G86F_RV
G86F_DV G86C_TV G86C_RV G86C_DV G86B_TV G86B_RV G86B_DV
G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV
G84X_RV G84X_DV G84VORIG G84V G84TAPR G84R G84Q_TV G84Q_RV
G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV
G84H_DV

## 8.11 Variables for GA

G90Z_TV MCDGRP CY G90Z_O1V G90Z_DV G90Y_TV G90Y_RV G90Y_DV
G90X_TV G90X_RV G90X_O1V G90X_DV G90XE_TV G90XE_RV G90XE_DV
G90XD_TV G90XD_RV G90XD_DV G90XC_TV G90XC_RV G90XC_DV
G90XB_TV G90XB_RV G90XB_DV G90XA_TV G90XA_RV G90XA_O1
G90XA_DV G90VORIG G90V G90T_TV G90T_DV G90TAPR G90S_TV

G90S_DV G90R G90O_TV G90O_DV G90M_TV G90M_RV G90M_DV G90L_TV G90L_RV G90L_DV G90K_TV G90K_RV G90K_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90F_TV G90F_RV G90F_DV G90B_TV G90B_DV G90A_TV G90A_DV G88Z_TV G88Z_RV G88Z_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_DV G88XC_TV G88XC_RV G88XC_DV G88XB_TV G88XB_RV G88XB_DV G88XA_TV G88XA_RV G88XA_DV G88VORIG G88V G88TAPR G88R G88P_TV G88P_RV G88P_DV G88O_TV G88O_RV G88O_DV G88K_TV G88K_RV G88K_DV G88H_TV G88H_RV G88H_DV G86Z_TV G86Z_RV G86Z_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86XE_TV G86XE_RV G86XE_DV G86XD_TV G86XD_RV G86XD_DV G86XC_TV G86XC_RV G86XC_DV G86XB_TV G86XB_RV G86XB_DV G86XA_TV G86XA_RV G86XA_DV G86V G86T_TV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86O_TV G86O_DV G86M_TV G86M_RV G86M_DV G86L_TV G86L_DV G86K_TV G86K_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86F_TV G86F_DV G86B_TV G86B_DV G86A_TV G86A_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_DV G84XE_TV G84XE_RV G84XE_DV G84XD_TV G84XD_RV G84XD_DV G84XC_TV G84XC_RV G84XC_DV G84XB_TV G84XB_RV G84XB_DV G84XA_TV G84XA_RV G84XA_DV G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_DV G84O_TV G84O_RV G84O_DV G84K_TV G84K_RV G84K_DV G84H_TV G84H_RV G84H_DV

## 8.12 Variables for HI

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_DV G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_O1V G88H_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86VORIG G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_DV G84VORIG G84V G84TAPR G84R G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

## 8.13 Variables for IA

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV
G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV
G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90J_TV G90J_RV G90J_DV
G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV
G90G_DV G90F_TV G90F_RV G90F_DV G90A_TV G90A_RV G90A_DV
G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_DV G88V G88TAPR
G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV
G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV
G86X_RV G86X_DV G86V G86T_TV G86T_RV G86T_DV G86TAPR G86S_TV
G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86L_TV
G86L_RV G86L_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV
G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86F_TV
G86F_RV G86F_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV
G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84V G84TAPR G84S_TV
G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV
G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

## 8.14 Variables for ID

G90Y_TV MCDGRP CY G90Y_RV G90Y_O1V G90Y_DV G90YU_TV G90YU_RV
G90YU_DV G90YC_TV G90YC_RV G90YC_DV G90YB_TV G90YB_RV
G90YB_O1 G90YB_DV G90YA_TV G90YA_RV G90YA_O1 G90YA_DV G90X_TV
G90X_RV G90X_O1V G90X_DV G90XV_TV G90XV_RV G90XV_DV G90XU_TV
G90XU_RV G90XU_DV G90XF_TV G90XF_RV G90XF_DV G90XE_TV
G90XE_RV G90XE_DV G90XD_TV G90XD_RV G90XD_DV G90XC_TV
G90XC_RV G90XC_DV G90XB_TV G90XB_RV G90XB_O1 G90XB_DV G90XA_TV
G90XA_RV G90XA_O1 G90XA_DV G90VORIG G90V G90T_TV G90T_RV
G90TAPR G90S_TV G90S_RV G90S_DV G90R G90L_TV G90L_RV G90J_TV
G90J_RV G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV
G90G_TV G90G_RV G90G_DV G90B_TV G90B_RV G90A_TV G90A_RV
G90A_DV G88YU_TV G88YU_RV G88YU_O1 G88YU_DV G88YC_TV G88YC_RV
G88YC_DV G88YB_TV G88YB_RV G88YB_O1 G88YB_DV G88YA_TV
G88YA_RV G88YA_O1 G88YA_DV G88XV_TV G88XV_RV G88XV_O1 G88XV_DV
G88XU_TV G88XU_RV G88XU_DV G88XF_TV G88XF_RV G88XF_DV
G88XE_TV G88XE_RV G88XE_DV G88XD_TV G88XD_RV G88XD_DV
G88XC_TV G88XC_RV G88XC_O1 G88XC_DV G88XB_TV G88XB_RV G88XB_O1
G88XB_DV G88XA_TV G88XA_RV G88XA_O1 G88XA_DV G88VORIG

G88V G88TAPR G88R G88P_TV G88P_RV G88P_O2V G88P_O1V G88P_DV
G88H_TV G88H_RV G88H_O1V G88H_DV G86YU_TV G86YU_RV G86YU_O1
G86YU_DV G86YC_TV G86YC_RV G86YC_DV G86YB_TV G86YB_RV
G86YB_DV G86YA_TV G86YA_RV G86YA_O1 G86YA_DV G86XV_TV G86XV_RV
G86XV_O1 G86XV_DV G86XU_TV G86XU_RV G86XU_DV G86XF_TV
G86XF_RV G86XF_DV G86XE_TV G86XE_RV G86XE_DV G86XD_TV G86XD_RV
G86XD_DV G86XC_TV G86XC_RV G86XC_DV G86XB_TV G86XB_RV
G86XB_O1 G86XB_DV G86XA_TV G86XA_RV G86XA_DV G86VORIG
G86V G86T_TV G86T_RV G86TAPR G86S_TV G86S_RV G86S_DV G86R
G86L_TV G86L_RV G86L_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV
G86I_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV
G86G_O1V G86G_DV G86B_TV G86B_RV G86A_TV G86A_RV G84YU_TV
G84YU_RV G84YU_O1 G84YU_DV G84YC_TV G84YC_RV G84YC_DV
G84YB_TV G84YB_RV G84YB_DV G84YA_TV G84YA_RV G84YA_DV
G84XV_TV G84XV_RV G84XV_O1 G84XV_DV G84XU_TV G84XU_RV
G84XU_DV G84XF_TV G84XF_RV G84XF_DV G84XE_TV G84XE_RV G84XE_DV
G84XD_TV G84XD_RV G84XD_DV G84XC_TV G84XC_RV G84XC_DV
G84XB_TV G84XB_RV G84XB_O1 G84XB_DV G84XA_TV G84XA_RV
G84XA_O1 G84XA_DV G84VORIG G84V G84TAPR G84S_TV G84S_RV
G84S_O1V G84S_DV G84R G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV
G84H_DV

## 8.15 Variables for IL

G90T_RV MCDGRP CY G90T_DV G90S_RV G90S_DV G90J_RV G90J_DV
G90G_RV G90G_DV G90C_RV G90C_DV G90A_RV G90A_DV G88P_RV
G88P_DV G86T_RV G86T_O1V G86T_DV G86S_RV G86S_DV G86G_RV
G86G_O1V G86G_DV G86A_RV G86A_DV G84S_RV G84S_DV G84P_RV
G84P_DV G84J_RV G84J_DV G84C_RV G84C_DV

## 8.16 Variables for IN

MCDGRP CY G90VORIG G90V G90T_TV G90T_RV G90T_DV G90TAPR
G90S_TV G90S_RV G90S_DV G90R G90K_TV G90K_RV G90K_DV G90J_TV
G90J_RV G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV
G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV
G88P_RV G88P_O1V G88P_DV G88H_TV G88H_RV G88H_DV G88G_TV
G88G_RV G88G_DV G88B_TV G88B_RV G88B_DV G88A_TV G88A_RV

G88A_DV G86V G86T_TV G86T_RV G86T_O1V G86T_DV G86TAPR
G86S_TV G86S_RV G86S_O1V G86S_DV G86R G86J_TV G86J_RV G86J_O1V
G86J_DV G86I_TV G86I_RV G86I_O1V G86I_DV G86H_TV G86H_RV G86H_O1V
G86H_DV G84V G84TAPR G84R G84P_TV G84P_RV G84P_O1V G84P_DV
G84H_TV G84H_RV G84H_O1V G84H_DV G84G_TV G84G_RV G84G_O1V
G84G_DV G84B_TV G84B_RV G84B_O1V G84B_DV G84A_TV G84A_RV
G84A_DV

## 8.17 Variables for KS

G90X_TV MCDGRP CY G90X_RV G90X_O1V G90X_DV G90V G90T_TV
G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_O1V G90S_DV
G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90K_TV G90K_RV G90K_DV
G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV
G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV
G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88R
G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV
G88H_TV G88H_RV G88H_DV G86X_TV G86X_RV G86X_DV G86V G86T_TV
G86T_RV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV
G86Q_RV G86Q_O1V G86Q_DV G86K_TV G86K_RV G86K_DV G86J_TV
G86J_RV G86J_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV
G86G_RV G86G_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV
G84Y_DV G84X_TV G84X_RV G84X_DV G84V G84TAPR G84S_TV G84S_RV
G84S_O1V G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV
G84P_RV G84P_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.18 Variables for KY

MCDGRP CY G90Y_TV G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV
G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV
G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_O1V G90H_DV G88Y_TV
G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR
G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV
G88H_TV G88H_RV G88H_O1V G88H_DV G86Y_TV G86Y_RV G86Y_DV
G86X_TV G86X_RV G86X_DV G86V G86TAPR G86S_TV G86S_RV G86S_DV
G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86H_TV G86H_RV G86H_DV
G84X_TV G84X_RV G84X_DV G84V G84TAPR G84S_TV G84S_RV G84S_DV
G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV

G84H_TV G84H_RV G84H_DV

## 8.19 Variables for LA

G90V MCDGRP CY G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_O1V G90H_DV G88V G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_DV G86H_TV G86H_RV G86H_O2V G86H_O1V G86H_DV G84V G84P_TV G84P_RV G84P_DV

## 8.20 Variables for MA

MCDGRP CY G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90V G90T_TV G90T_RV G90T_O1V G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_DV G90J_TV G90J_RV G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_O1V G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_O1V G88H_DV G86Y_TV G86Y_RV G86Y_O2V G86Y_O1V G86Y_DV G86X_TV G86X_RV G86X_O2V G86X_O1V G86X_DV G86V G86T_TV G86T_RV G86T_DV G86TAPR G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.21 Variables for MD

XREPS MCDGRP CY XOTHS XDEMS XCANS G90Y_TV G90Y_RV G90Y_DV G90X_TV G90X_TTU G90X_RV G90X_RTU G90X_R3U G90X_R2U G90X_R1U G90X_OTU G90X_O1V G90X_O1U G90X_DV G90X_DTU G90X_D3U G90X_D2U G90X_D1U G90VORIG G90V G90TAPR G90R G90Q_TV G90Q_RV G90Q_O1V

G90Q_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV
G90C_TV G90C_RV G90C_DV G90A_TV G90A_RV G90A_O1V G90A_DV
G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV
G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV
G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_TTU
G86X_RV G86X_RTU G86X_R3U G86X_R2U G86X_R1U G86X_OTU G86X_O1V
G86X_O1U G86X_DV G86X_DTU G86X_D3U G86X_D2U G86X_D1U G86VORIG
G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV
G86Q_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV
G86C_TV G86C_DV G86A_TV G86A_DV G84VORIG G84V G84TAPR
G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV
G84H_TV G84H_RV G84H_DV

## 8.22 Variables for ME

MCDGRP CY G90Y_TV G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_O1V
G90X_DV G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV
G90Q_RV G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_DV G90G_TV
G90G_RV G90G_O1V G90G_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV
G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88S_TV G88S_RV
G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV
G88P_DV G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_O1V
G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86TAPR G86R
G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86H_TV G86H_RV G86H_DV
G86G_TV G86G_RV G86G_O2V G86G_O1V G86G_DV G84Y_TV G84Y_RV
G84Y_DV G84X_TV G84X_RV G84X_DV G84V G84TAPR G84S_TV G84S_RV
G84S_O1V G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV
G84P_RV G84P_O1V G84P_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.23 Variables for MI

MCDGRP CY G90Z_TTU G90Z_RTU G90Z_R2U G90Z_R1U G90Z_OTU
G90Z_O2U G90Z_O1U G90Z_DTU G90Z_D2U G90Z_D1U G90Y_TV G90Y_RV
G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90VORIG
G90V G90T_TV G90T_RV G90T_DV G90S_TV G90S_RV G90S_O1V G90S_DV
G90O_TTU G90O_RTU G90O_R2U G90O_R1U G90O_OTU G90O_O2U G90O_O1U
G90O_DTU G90O_D2U G90O_D1U G90K_TTU G90K_RTU G90K_R2U G90K_R1U
G90K_OTU G90K_O2U G90K_O1U G90K_DTU G90K_D2U G90K_D1U G90H_TV

G90H_RV G90H_O1V G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV G88X_TV G88X_RV G88X_O2V G88X_O1V G88X_DV G88V G88S_TV G88S_RV G88S_DV G88P_TV G88P_RV G88P_DV G88O_TTU G88O_RTU G88O_R2U G88O_R1U G88O_OTU G88O_O2U G88O_O1U G88O_DTU G88O_D2U G88O_D1U G88K_TTU G88K_RTU G88K_R2U G88K_R1U G88K_OTU G88K_O2U G88K_O1U G88K_DTU G88K_D2U G88K_D1U G88H_TV G88H_RV G88H_O2V G88H_O1V G88H_DV G86Z_TTU G86Z_RTU G86Z_R2U G86Z_R1U G86Z_DTU G86Z_D2U G86Z_D1U G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86VORIG G86V G86T_TV G86T_RV G86T_O1V G86T_DV G86O_TTU G86O_RTU G86O_R2U G86O_R1U G86O_DTU G86O_D2U G86O_D1U G86K_TTU G86K_RTU G86K_R2U G86K_R1U G86K_OTU G86K_O5U G86K_O4U G86K_O3U G86K_O2U G86K_O1U G86K_DTU G86K_D2U G86K_D1U G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_O1V G86G_DV G86A_TV G86A_RV G86A_O1V G86A_DV G84Z_TTU G84Z_RTU G84Z_R2U G84Z_R1U G84Z_OTU G84Z_O3U G84Z_O2U G84Z_O1U G84Z_DTU G84Z_D2U G84Z_D1U G84X_TV G84X_RV G84X_O1V G84X_DV G84VORIG G84V G84S_TV G84S_RV G84S_O1V G84S_DV G84P_TV G84P_RV G84P_O1V G84P_DV G84O_TTU G84O_RTU G84O_R2U G84O_R1U G84O_OTU G84O_O2U G84O_O1U G84O_DTU G84O_D2U G84O_D1U G84K_TTU G84K_RTU G84K_R2U G84K_R1U G84K_OTU G84K_O5U G84K_O4U G84K_O3U G84K_O2U G84K_O1U G84K_DTU G84K_D2U G84K_D1U G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.24 Variables for MN

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90VORIG G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV G90R G90J_TV G90J_RV G90J_O1V G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86VORIG G86V G86T_TV G86T_RV G86T_DV G86TAPR G86R G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86A_TV G86A_RV G86A_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

## 8.25 Variables for MO

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV G90V G90TAPR G90R G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88T_TV G88T_RV G88T_DV G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88L_TV G88L_RV G88L_DV G88J_TV G88J_RV G88J_DV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G88A_TV G88A_RV G88A_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84V G84T_TV G84T_RV G84T_DV G84TAPR G84R G84P_TV G84P_RV G84P_DV G84L_TV G84L_RV G84L_DV G84J_TV G84J_RV G84J_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_DV G84A_TV G84A_RV G84A_DV

## 8.26 Variables for MS

G90VORIG MCDGRP CY G90V G90TAPR G90S_TV G90S_RV G90R G90H_TV G90H_RV G90H_DV G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86VORIG G86V G86TAPR G86R G86H_TV G86H_RV G86H_DV G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.27 Variables for MT

G90Y_TV MCDGRP CY G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_O1V G90S_DV G90R G90H_TV G90H_RV G90H_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_DV G88V G88T_TV G88T_RV G88T_O1V G88T_DV G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_O2V G88P_O1V G88P_DV G88I_TV G88I_RV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_O1V G88G_DV G88B_TV G88B_RV G88B_DV G88A_TV G88A_RV G88A_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86TAPR G86R G86H_TV G86H_RV G86H_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV

G84X_RV G84X_O1V G84X_DV G84V G84T_TV G84T_RV G84T_DV G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_DV G84I_TV G84I_RV G84I_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_DV G84B_TV G84B_RV G84B_DV G84A_TV G84A_RV G84A_DV

## 8.28 Variables for NC

YREPS MCDGRP CY YDEMS YCANS XREPS XDEMS XCANS G90Y_TV G90Y_TTU G90Y_RV G90Y_RTU G90Y_R3U G90Y_R2U G90Y_R1U G90Y_DV G90Y_DTU G90Y_D3U G90Y_D2U G90Y_D1U G90X_TV G90X_TTU G90X_RV G90X_RTU G90X_R4U G90X_R3U G90X_R2U G90X_R1U G90X_OTU G90X_O1U G90X_DV G90X_DTU G90X_D4U G90X_D3U G90X_D2U G90X_D1U G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_DV G88Y_TV G88Y_TTU G88Y_RV G88Y_RTU G88Y_R3U G88Y_R2U G88Y_R1U G88Y_OTU G88Y_O1V G88Y_O1U G88Y_DV G88Y_DTU G88Y_D3U G88Y_D2U G88Y_D1U G88X_TV G88X_TTU G88X_RV G88X_RTU G88X_R4U G88X_R3U G88X_R2U G88X_R1U G88X_DV G88X_DTU G88X_D4U G88X_D3U G88X_D2U G88X_D1U G88V G88T_TV G88T_RV G88T_DV G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88O_TV G88O_RV G88O_DV G88L_TV G88L_RV G88L_DV G88K_TV G88K_RV G88K_DV G88J_TV G88J_RV G88J_O1V G88J_DV G88I_TV G88I_RV G88I_DV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G88F_TV G88F_RV G88F_DV G88B_TV G88B_RV G88B_DV G88A_TV G88A_RV G88A_DV G86Y_TV G86Y_TTU G86Y_RV G86Y_RTU G86Y_R2U G86Y_R1U G86Y_DV G86Y_DTU G86Y_D3U G86Y_D2U G86Y_D1U G86X_TV G86X_TTU G86X_RV G86X_RTU G86X_R4U G86X_R3U G86X_R2U G86X_R1U G86X_OTU G86X_O1V G86X_O1U G86X_DV G86X_DTU G86X_D4U G86X_D3U G86X_D2U G86X_D1U G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86H_TV G86H_RV G86H_DV G84Y_TV G84Y_TTU G84Y_RV G84Y_RTU G84Y_R3U G84Y_R2U G84Y_R1U G84Y_DV G84Y_DTU G84Y_D3U G84Y_D2U G84Y_D1U G84X_TV G84X_TTU G84X_RV G84X_RTU G84X_R4U G84X_R3U G84X_R2U G84X_R1U G84X_DV G84X_DTU G84X_D4U G84X_D3U G84X_D2U G84X_D1U G84V G84T_TV G84T_RV G84T_DV G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84O_TV G84O_RV G84O_DV G84L_TV G84L_RV G84L_DV G84K_TV G84K_RV G84K_DV G84I_TV G84I_RV G84I_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_DV G84F_TV G84F_RV G84F_DV G84A_TV G84A_RV G84A_DV

## 8.29 Variables for ND

YREPS MCDGRP CY YDEMS YCANS XREPS XOTHS XDEMS XCANS
G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_TTU G90X_RV
G90X_RTU G90X_R4U G90X_R3U G90X_R2U G90X_R1U G90X_DV G90X_DTU
G90X_D4U G90X_D3U G90X_D2U G90X_D1U G90VORIG G90V G90M_TV
G90M_RV G90M_DV G90K_TV G90K_RV G90K_DV G90H_TV G90H_RV
G90H_DV G88Y_TV G88Y_TTU G88Y_RV G88Y_RTU G88Y_R2U G88Y_R1U
G88Y_DV G88Y_DTU G88Y_D2U G88Y_D1U G88X_TV G88X_TTU G88X_RV
G88X_RTU G88X_R4U G88X_R3U G88X_R2U G88X_R1U G88X_DV G88X_DTU
G88X_D4U G88X_D3U G88X_D2U G88X_D1U G88VORIG G88V G88T_TV
G88T_RV G88T_DV G88S_TV G88S_RV G88S_DV G88P_TV G88P_RV G88P_DV
G88O_TV G88O_RV G88O_DV G88M_TV G88M_RV G88M_DV G88K_TV
G88K_RV G88K_DV G88J_TV G88J_RV G88J_DV G88I_TV G88I_RV G88I_DV
G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G88F_TV
G88F_RV G88F_O1V G88F_DV G88B_TV G88B_O1V G88A_TV G88A_RV
G88A_DV G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86X_TV G86X_TTU
G86X_RV G86X_RTU G86X_R4U G86X_R3U G86X_R2U G86X_R1U G86X_OTU
G86X_O1V G86X_O1U G86X_DV G86X_DTU G86X_D4U G86X_D3U G86X_D2U
G86X_D1U G86VORIG G86V G86S_TV G86S_RV G86S_DV G86M_TV
G86M_RV G86M_DV G86K_TV G86K_O2V G86K_O1V G86H_TV G86H_RV
G86H_DV G84Y_TV G84Y_TTU G84Y_RV G84Y_RTU G84Y_R1U G84Y_DV
G84Y_DTU G84Y_D1U G84X_TV G84X_TTU G84X_RV G84X_RTU G84X_R4U
G84X_R3U G84X_R2U G84X_R1U G84X_OTU G84X_O1V G84X_O1U G84X_DV
G84X_DTU G84X_D4U G84X_D3U G84X_D2U G84X_D1U G84VORIG G84V
G84T_TV G84T_RV G84T_O1V G84T_DV G84P_TV G84P_RV G84P_DV
G84O_TV G84O_O2V G84O_O1V G84M_TV G84M_RV G84M_DV G84K_TV
G84K_RV G84K_DV G84J_TV G84J_RV G84J_DV G84I_TV G84I_RV G84I_DV
G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_DV G84F_TV
G84F_RV G84F_DV G84B_TV G84B_O2V G84B_O1V G84A_TV G84A_RV
G84A_DV

## 8.30 Variables for NE

G90Y_TV MCDGRP CY G90Y_O9V G90Y_O2V G90Y_O1V G90VORIG
G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV
G90R G90Q_TV G90Q_RV G90Q_O4V G90Q_O3V G90Q_O1V G90Q_DV
G90J_TV G90J_RV G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV
G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV

G88Y_TV G88Y_O2V G88Y_O1V G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_O2V G86Y_O1V G86VORIG G86V G86T_TV G86T_RV G86T_DV G86TAPR G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_O9V G84Y_O2V G84Y_O1V G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

## 8.31 Variables for NH

MCDGRP CY G90Y_TV G90Y_RV G90Y_DV G90X_TV G90X_TTU G90X_RV G90X_RTU G90X_R10 G90X_R09 G90X_R08 G90X_R07 G90X_R06 G90X_R05 G90X_R04 G90X_R03 G90X_R02 G90X_R01 G90X_OTU G90X_O1V G90X_O02 G90X_O01 G90X_DV G90X_DTU G90X_D08 G90X_D07 G90X_D06 G90X_D05 G90X_D04 G90X_D03 G90X_D02 G90X_D01 G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_TTU G88X_RV G88X_RTU G88X_R10 G88X_R09 G88X_R08 G88X_R07 G88X_R06 G88X_R05 G88X_R04 G88X_R03 G88X_R02 G88X_R01 G88X_OTU G88X_O1V G88X_O01 G88X_DV G88X_DTU G88X_D09 G88X_D08 G88X_D07 G88X_D06 G88X_D05 G88X_D04 G88X_D03 G88X_D02 G88X_D01 G88VORIG G88V G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_TTU G86X_RV G86X_RTU G86X_R10 G86X_R09 G86X_R08 G86X_R07 G86X_R06 G86X_R05 G86X_R04 G86X_R03 G86X_R02 G86X_R01 G86X_OTU G86X_O1V G86X_O02 G86X_O01 G86X_DV G86X_DTU G86X_D07 G86X_D06 G86X_D05 G86X_D04 G86X_D03 G86X_D02 G86X_D01 G86VORIG G86V G86TAPR G86S_TV G86S_RV G86S_O1V G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_TTU G84X_RV G84X_RTU G84X_R10 G84X_R09 G84X_R08 G84X_R07 G84X_R06 G84X_R05 G84X_R04 G84X_R03 G84X_R02 G84X_R01 G84X_OTU G84X_O1V G84X_O04 G84X_O02 G84X_O01 G84X_DV G84X_DTU G84X_D10 G84X_D09 G84X_D08 G84X_D07 G84X_D06 G84X_D05 G84X_D04 G84X_D03 G84X_D02 G84X_D01 G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV

G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_DV

## 8.32 Variables for NJ

MCDGRP CY G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90H_TV G90H_RV G90H_DV G89X_TV G89X_TTU G89X_RV G89X_RTU G89X_R2U G89X_R1U G89X_DV G89X_DTU G89X_D2U G89X_D1U G89VORIG G89V G89TAPR G89R G89G_TV G89G_RV G89G_DV G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_O2V G88H_O1V G88H_DV G87Y_TV G87Y_RV G87Y_DV G87X_TV G87X_TTU G87X_RV G87X_RTU G87X_R2U G87X_R1U G87X_DV G87X_DTU G87X_D2U G87X_D1U G87VORIG G87V G87TAPR G87R G86V G86TAPR G86R G86H_TV G86H_RV G86H_DV G85X_TV G85X_TTU G85X_RV G85X_RTU G85X_R2U G85X_R1U G85X_OTU G85X_O1V G85X_O1U G85X_DV G85X_DTU G85X_D2U G85X_D1U G85VORIG G85V G85TAPR G85R G85G_TV G85G_RV G85G_DV G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

## 8.33 Variables for NM

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90O_TV G90O_RV G90O_DV G90K_TV G90K_RV G90K_DV G90J_TV G90J_RV G90J_DV G90I_TV G90I_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88K_TV G88K_RV G88K_DV G88H_TV G88H_RV G88H_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86T_TV G86T_RV G86T_DV G86TAPR G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86O_TV G86O_RV G86O_DV G86K_TV G86K_RV G86K_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84V

G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84K_TV G84K_RV G84K_DV G84H_TV G84H_RV G84H_DV

## 8.34 Variables for NV

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90YA_TV G90YA_RV G90YA_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90VORIG G90V G90T_TV G90T_RV G90T_DV G90TAPR G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90L_TV G90L_RV G90L_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90C_TV G90C_RV G90C_O1V G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88YB_TV G88YB_RV G88YB_O1 G88YB_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86YA_TV G86YA_RV G86YA_O1 G86YA_DV G86X_TV G86X_RV G86X_O2V G86X_O1V G86X_DV G86VORIG G86V G86T_TV G86T_RV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86L_TV G86L_RV G86L_DV G86J_TV G86J_RV G86J_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86C_TV G86C_RV G86C_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O2V G84Y_O1V G84Y_DV G84YB_TV G84YB_RV G84YB_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84VORIG G84V G84TAPR G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

## 8.35 Variables for NY

MCDGRP CY G90Y_TV G90Y_RV G90Y_O9V G90Y_O2V G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O9V G90X_O2V G90X_O1V G90X_DV G90V G90TAPR G90R G90Q_TV G90Q_RV G90Q_O9V G90Q_O3V G90Q_O2V G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_O9V G90H_O2V G90H_O1V G90H_DV G90G_TV G90G_RV G90G_O9V G90G_O2V G90G_O1V G90G_DV G90C_TV G90C_RV G90C_O9V G90C_O2V G90C_O1V G90C_DV G90A_TV G90A_RV G90A_O9V G90A_O2V G90A_O1V G90A_DV G88Y_TV G88Y_RV G88Y_O9V G88Y_O2V G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_O9V G88X_O2V G88X_O1V G88X_DV G88V G88TAPR G88S_TV G88S_RV G88S_O9V

G88S_O2V G88S_O1V G88S_DV G88R G88Q_TV G88Q_RV G88Q_O9V G88Q_O2V G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_O9V G88P_O2V G88P_O1V G88P_DV G88H_TV G88H_RV G88H_O9V G88H_O2V G88H_O1V G88H_DV G86Y_TV G86Y_RV G86Y_O9V G86Y_O2V G86Y_O1V G86Y_DV G86X_TV G86X_RV G86X_O9V G86X_O2V G86X_O1V G86X_DV G86V G86TAPR G86S_TV G86S_RV G86S_O9V G86S_O2V G86S_O1V G86S_DV G86R G86Q_TV G86Q_RV G86Q_O9V G86Q_O3V G86Q_O2V G86Q_O1V G86Q_DV G86H_TV G86H_RV G86H_O9V G86H_O2V G86H_O1V G86H_DV G86G_TV G86G_RV G86G_O9V G86G_O2V G86G_O1V G86G_DV G86C_TV G86C_RV G86C_O9V G86C_O2V G86C_O1V G86C_DV G86A_TV G86A_RV G86A_O9V G86A_O2V G86A_O1V G86A_DV G84Y_TV G84Y_RV G84Y_O9V G84Y_O2V G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O9V G84X_O2V G84X_O1V G84X_DV G84VORIG G84V G84TAPR G84R G84Q_TV G84Q_RV G84Q_O9V G84Q_O3V G84Q_O2V G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_O2V G84P_O1V G84P_DV G84H_TV G84H_RV G84H_O9V G84H_O2V G84H_O1V G84H_DV

## 8.36 Variables for OH

G94T_RV MCDGRP CY G94T_DV G94S_RV G94S_O1V G94S_DV G94O_RV G94K_RV G94K_DV G94J_RV G94J_DV G94I_RV G94I_DV G94G_RV G94G_DV G94A_RV G94A_DV G94O_DV G92Z_RV G92Z_O1V G92Z_DV G92S_RV G92S_O1V G92S_DV G92P_RV G92P_O1V G92P_DV G92O_RV G92O_DV G92K_RV G92K_DV G90T_RV G90T_DV G90J_RV G90J_DV G90I_RV G90I_DV G90G_RV G90G_DV G90A_RV G90A_DV G88S_RV G88S_DV G88P_RV G88P_DV G86T_RV G86T_DV G86J_RV G86J_DV G86I_RV G86I_DV G86G_RV G86G_DV G86A_RV G86A_DV G84S_RV G84S_DV G84P_RV G84P_DV

## 8.37 Variables for OK

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90O_TV G90O_RV G90O_DV G90L_TV G90L_RV G90L_DV G90K_TV G90K_RV G90K_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90B_TV G90B_RV G90B_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_DV G88V G88TAPR G88R G88Q_TV G88Q_RV G88Q_DV G88P_TV G88P_RV G88P_DV G88K_TV G88K_RV G88K_DV G88H_TV G88H_RV

G88H_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86O_TV G86O_RV G86O_DV G86L_TV G86L_RV G86L_DV G86K_TV G86K_RV G86K_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86B_TV G86B_RV G86B_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_DV G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84K_TV G84K_RV G84K_O1V G84K_DV G84H_TV G84H_RV G84H_DV

## 8.38 Variables for OR

MCDGRP CY G90Y_TV G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90K_TV G90K_O1V G90K_DV G90H_TV G90H_RV G90H_O1V G90H_DV G90G_TV G90G_RV G90G_O1V G90G_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88VORIG G88V G88T_TV G88T_RV G88T_DV G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88J_TV G88J_RV G88J_DV G88H_TV G88H_RV G88H_DV G88A_TV G88A_RV G88A_O1V G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86VORIG G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86K_TV G86K_RV G86K_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84V G84T_TV G84T_RV G84T_O1V G84T_DV G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84J_TV G84J_RV G84J_DV G84H_TV G84H_RV G84H_DV G84A_TV G84A_RV G84A_DV

## 8.39 Variables for PA

MCDGRP CY G90Y_TV G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90V G90TAPR G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_DV G88P_TV

G88P_RV G88P_DV G88J_TV G88J_RV G88J_DV G88I_TV G88I_RV G88I_DV G88H_TV G88H_RV G88H_DV G88A_TV G88A_RV G88A_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_DV G86V G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_DV G84V G84TAPR G84R G84Q_TV G84Q_RV G84Q_DV G84P_TV G84P_RV G84P_DV G84J_TV G84J_RV G84J_DV G84I_TV G84I_RV G84I_DV G84H_TV G84H_RV G84H_DV G84A_TV G84A_RV G84A_DV

## 8.40 Variables for RI

MCDGRP CY G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90VORIG G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV G90R G90L_TV G90L_RV G90L_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88VORIG G88V G88T_TV G88T_RV G88T_DV G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88L_TV G88L_RV G88L_DV G88J_TV G88J_RV G88J_DV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G88A_TV G88A_RV G88A_DV G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86VORIG G86V G86T_TV G86T_RV G86T_DV G86TAPR G86R G86L_TV G86L_RV G86L_DV G86J_TV G86J_RV G86J_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84VORIG G84V G84T_TV G84T_RV G84T_DV G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_DV G84L_TV G84L_RV G84L_DV G84J_TV G84J_RV G84J_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_DV G84A_TV G84A_RV G84A_DV

## 8.41 Variables for SC, 1986-1990

G90X_TV MCDGRP CY G90X_RV G90X_O1V G90X_DV G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_O1V G90S_DV G90R G90L_TV G90L_RV G90L_DV G90K_TV G90K_RV G90K_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90F_TV G90F_RV G90F_DV G90C_TV G90C_O1V G90C_DV

G90B_TV G90B_RV G90B_O1V G90B_DV G90A_TV G90A_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88R G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_O1V G88H_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86T_TV G86T_RV G86T_O1V G86T_DV G86TAPR G86S_TV G86S_RV G86S_O1V G86S_DV G86R G86L_TV G86L_RV G86L_O1V G86L_DV G86K_TV G86K_O1V G86K_DV G86J_TV G86J_O1V G86J_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_O1V G86G_DV G86F_TV G86F_DV G86C_TV G86C_O1V G86C_DV G86B_TV G86B_O1V G86B_DV G86A_TV G86A_DV

## 8.42 Variables for SC, 1984

G84Y_TV MCDGRP CY G84Y_RV G84Y_O2V G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O9V G84X_O2V G84X_O1V G84X_DV G84V G84TAPR G84S_TV G84S_RV G84S_O1V G84S_DV G84R G84P_TV G84P_RV G84P_O1V G84P_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.43 Variables for SD

XREPS MCDGRP CY XOTHS XDEMS XCANS G90Y_TV G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_TTU G90X_RV G90X_RTU G90X_R2U G90X_R1U G90X_OTU G90X_O2U G90X_O1U G90X_DV G90X_DTU G90X_D2U G90X_D1U G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90M_TV G90M_RV G90M_DV G90J_TV G90J_RV G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90B_TV G90B_RV G90B_DV G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TTU G88X_RTU G88X_R2U G88X_R1U G88X_OTU G88X_O1U G88X_DTU G88X_D2U G88X_D1U G88V G88TAPR G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88M_TV G88M_RV G88M_DV G88H_TV G88H_RV G88H_DV G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86X_TTU G86X_RTU G86X_R2U G86X_R1U G86X_OTU G86X_O1U G86X_DTU G86X_D2U G86X_D1U G86V G86T_TV G86T_RV G86T_DV G86TAPR G86S_TV G86S_RV G86S_DV G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86M_TV G86M_RV G86M_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86B_TV G86B_RV G86B_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TTU G84X_RTU G84X_R2U G84X_R1U

G84X_OTU G84X_O1U G84X_DTU G84X_D2U G84X_D1U G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84M_TV G84M_RV G84M_DV G84H_TV G84H_RV G84H_DV

## 8.44 Variables for TN

G90Y_TV MCDGRP CY G90Y_RV G90Y_O9V G90Y_O2V G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90M_TV G90M_RV G90M_DV G90H_TV G90H_RV G90H_O9V G90H_O2V G90H_O1V G90H_DV G90G_TV G90G_RV G90G_DV G88Y_TV G88Y_RV G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88M_TV G88M_O1V G88M_DV G88H_TV G88H_RV G88H_O1V G88H_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86TAPR G86R G86M_TV G86M_RV G86M_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_DV G84M_TV G84M_RV G84M_DV G84H_TV G84H_RV G84H_DV

## 8.45 Variables for TX

G90Y_TV MCDGRP CY G90Y_RV G90Y_DV G90X_TV G90X_RV G90X_DV G90VORIG G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90O_TV G90O_RV G90O_DV G90L_TV G90L_RV G90L_DV G90K_TV G90K_RV G90K_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90F_TV G90F_RV G90F_DV G90C_TV G90C_RV G90C_DV G90A_TV G90A_RV G90A_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_O1V G88X_DV G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88K_TV G88K_RV G88K_DV G88H_TV G88H_RV G88H_O1V G88H_DV G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86VORIG G86V G86TAPR G86R G86O_TV G86O_RV G86O_DV G86L_TV G86L_RV G86L_DV G86K_TV G86K_RV G86K_DV G86J_TV G86J_O1V G86J_DV G86H_TV G86H_RV G86H_O1V G86H_DV G86G_TV G86G_RV G86G_DV G86F_TV G86F_RV G86F_DV G86C_TV G86C_O1V G86C_DV G86A_TV G86A_RV G86A_DV G84Y_TV G84Y_RV

G84Y_DV G84X_TV G84X_RV G84X_DV G84VORIG G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_DV G84K_TV G84K_RV G84K_DV G84H_TV G84H_RV G84H_DV

## 8.46 Variables for UT

G90Y_TV MCDGRP CY G90Y_RV G90Y_O2V G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O2V G90X_O1V G90X_DV G90VORIG G90V G90TAPR G90R G90H_TV G90H_RV G90H_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_DV G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_DV G88J_TV G88J_RV G88J_DV G88I_TV G88I_RV G88I_DV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G88A_TV G88A_RV G88A_DV G86Y_TV G86Y_RV G86Y_O1V G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86V G86TAPR G86S_TV G86S_RV G86S_O1V G86S_DV G86R G86H_TV G86H_RV G86H_DV G84Y_TV G84Y_RV G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84V G84TAPR G84R G84P_TV G84P_RV G84P_DV G84J_TV G84J_RV G84J_DV G84I_TV G84I_RV G84I_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_O1V G84G_DV G84A_TV G84A_RV G84A_DV

## 8.47 Variables for VA

G90VORIG MCDGRP CY G90V G90TAPR G90S_TV G90S_RV G90S_O9V G90S_O1V G90R G90H_TV G90H_RV G90H_O9V G90H_O2V G90H_O1V G90H_DV G89X_TV G89X_RV G89X_O9V G89X_O2V G89X_O1V G89X_DV G89V G89TAPR G89R G89L_TV G89L_RV G89L_O1V G89L_DV G89G_TV G89G_RV G89G_O1V G89G_DV G89A_TV G89A_RV G89A_O1V G89A_DV G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_O2V G88P_O1V G88P_DV G88H_TV G88H_RV G88H_O2V G88H_O1V G88H_DV G87Y_TV G87Y_RV G87Y_O1V G87Y_DV G87X_TV G87X_RV G87X_O2V G87X_O1V G87X_DV G87VORIG G87V G87TAPR G87R G86VORIG G86V G86TAPR G86R G86H_TV G86H_RV G86H_O1V G86H_DV G85X_TV G85X_RV G85X_O1V G85X_DV G85VORIG G85V G85TAPR G85R G85L_TV G85L_RV G85L_O1V G85L_DV G85G_TV G85G_RV G85G_O1V G85G_DV G85A_TV G85A_RV G85A_O1V G85A_DV G84V G84TAPR G84S_TV G84S_RV G84S_DV G84R G84P_TV G84P_RV G84P_O1V G84P_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.48 Variables for VT

MCDGRP CY G90Y_TV G90Y_TTU G90Y_RV G90Y_RTU G90Y_R6U G90Y_R5U G90Y_R4U G90Y_R3U G90Y_R2U G90Y_R1U G90Y_OTU G90Y_O3U G90Y_O2U G90Y_O1V G90Y_O1U G90Y_DV G90Y_DTU G90Y_D6U G90Y_D5U G90Y_D4U G90Y_D3U G90Y_D2U G90Y_D1U G90X_TV G90X_TTU G90X_RV G90X_RTU G90X_R2U G90X_R1U G90X_OTU G90X_O2U G90X_O1V G90X_O1U G90X_DV G90X_DTU G90X_D2U G90X_D1U G90VORIG G90V G90T_TV G90T_RV G90T_O2V G90T_O1V G90TAPR G90R G90L_TV G90L_RV G90L_O2V G90L_O1V G90L_DV G90J_TV G90J_RV G90J_O2V G90J_O1V G90J_DV G90I_TV G90I_RV G90I_O2V G90I_O1V G90I_DV G90H_TV G90H_RV G90H_O9V G90H_O1V G90H_DV G90G_TV G90G_RV G90G_O2V G90G_O1V G90G_DV G90A_TV G90A_RV G90A_O2V G90A_O1V G88Y_TV G88Y_TTU G88Y_RV G88Y_RTU G88Y_R6U G88Y_R5U G88Y_R4U G88Y_R3U G88Y_R2U G88Y_R1U G88Y_OTU G88Y_O2U G88Y_O1V G88Y_O1U G88Y_DV G88Y_DTU G88Y_D6U G88Y_D5U G88Y_D4U G88Y_D3U G88Y_D2U G88Y_D1U G88X_TV G88X_TTU G88X_RV G88X_RTU G88X_R2U G88X_R1U G88X_OTU G88X_O2U G88X_O1V G88X_O1U G88X_DV G88X_DTU G88X_D2U G88X_D1U G88VORIG G88V G88T_TV G88T_RV G88T_O2V G88T_O1V G88TAPR G88S_TV G88S_RV G88S_O9V G88S_O1V G88S_DV G88R G88P_TV G88P_RV G88P_O2V G88P_O1V G88P_DV G88L_TV G88L_RV G88L_O1V G88L_DV G88J_TV G88J_RV G88J_O2V G88J_O1V G88J_DV G88I_TV G88I_RV G88I_O2V G88I_O1V G88I_DV G88H_TV G88H_RV G88H_O9V G88H_O2V G88H_O1V G88H_DV G88G_TV G88G_RV G88G_O1V G88G_DV G88A_TV G88A_RV G88A_O1V G88A_DV G86Y_TTU G86Y_RTU G86Y_R6U G86Y_R5U G86Y_R4U G86Y_R3U G86Y_R2U G86Y_R1U G86Y_OTU G86Y_O2U G86Y_O1U G86Y_DTU G86Y_D6U G86Y_D5U G86Y_D4U G86Y_D3U G86Y_D2U G86Y_D1U G86X_TTU G86X_RTU G86X_R2U G86X_R1U G86X_OTU G86X_O2U G86X_O1U G86X_DTU G86X_D2U G86X_D1U G86VORIG G86V G86T_TV G86T_RV G86T_O2V G86T_O1V G86T_DV G86TAPR G86S_TV G86S_RV G86S_O2V G86S_O1V G86S_DV G86R G86L_TV G86L_RV G86L_O2V G86L_O1V G86L_DV G86J_TV G86J_RV G86J_O2V G86J_O1V G86I_TV G86I_RV G86I_O2V G86I_O1V G86H_TV G86H_RV G86H_O9V G86H_O2V G86H_O1V G86G_TV G86G_RV G86G_O2V G86G_O1V G86G_DV G86A_TV G86A_RV G86A_O2V G86A_O1V G84Y_TV G84Y_TTU G84Y_RV G84Y_RTU G84Y_R6U G84Y_R5U G84Y_R4U G84Y_R3U G84Y_R2U G84Y_R1U G84Y_OTU G84Y_O3U G84Y_O2U G84Y_O1V G84Y_O1U G84Y_DV G84Y_DTU G84Y_D6U G84Y_D5U G84Y_D4U G84Y_D3U G84Y_D2U G84Y_D1U G84X_TV G84X_TTU G84X_RV G84X_RTU G84X_R2U G84X_R1U G84X_OTU G84X_O2U G84X_O1V G84X_O1U G84X_DV G84X_DTU G84X_D2U

G84X_D1U G84V G84T_TV G84T_RV G84T_O9V G84T_O1V G84T_DV G84TAPR G84R G84P_TV G84P_RV G84P_O9V G84P_O2V G84P_O1V G84P_DV G84L_TV G84L_RV G84L_O9V G84L_O2V G84L_O1V G84L_DV G84J_TV G84J_RV G84J_O2V G84I_TV G84I_RV G84I_O9V G84I_O1V G84H_TV G84H_RV G84H_O9V G84H_O1V G84H_DV G84G_TV G84G_RV G84G_O9V G84G_O2V G84G_O1V G84G_DV G84A_TV G84A_RV G84A_O1V G84A_DV

## 8.49 Variables for WA

G90Y_TV MCDGRP CY G90Y_RV G90Y_O1V G90Y_DV G90X_TV G90X_RV G90X_O1V G90X_DV G90XB_TV G90XB_RV G90XB_O1 G90XB_DV G90XA_TV G90XA_RV G90XA_O1 G90XA_DV G90VORIG G90V G90TAPR G90R G90H_TV G90H_RV G90H_O1V G90H_DV G88Y_TV G88Y_RV G88Y_O1V G88Y_DV G88X_TV G88X_RV G88X_DV G88XB_TV G88XB_RV G88XB_O1 G88XB_DV G88XA_TV G88XA_RV G88XA_O1 G88XA_DV G88VORIG G88V G88T_TV G88T_RV G88T_DV G88TAPR G88S_TV G88S_RV G88S_DV G88R G88P_TV G88P_RV G88P_O1V G88P_DV G88O_TV G88O_RV G88O_DV G88L_TV G88L_RV G88L_DV G88K_TV G88K_RV G88K_O1V G88K_DV G88J_TV G88J_RV G88J_DV G88I_TV G88I_RV G88I_DV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G88A_TV G88A_RV G88A_DV G86Y_TV G86Y_RV G86Y_DV G86X_TV G86X_RV G86X_O1V G86X_DV G86XB_TV G86XB_RV G86XB_DV G86XA_TV G86XA_RV G86XA_O1 G86XA_DV G86V G86TAPR G86S_TV G86S_RV G86S_O1V G86S_DV G86R G86H_TV G86H_RV G86H_DV G84Y_TV G84Y_RV G84Y_O1V G84Y_DV G84X_TV G84X_RV G84X_O1V G84X_DV G84XB_TV G84XB_RV G84XB_DV G84XA_TV G84XA_RV G84XA_O1 G84XA_DV G84VORIG G84V G84T_TV G84T_RV G84T_DV G84TAPR G84R G84P_TV G84P_RV G84P_DV G84O_TV G84O_RV G84O_DV G84L_TV G84L_RV G84L_DV G84K_TV G84K_RV G84K_O1V G84K_DV G84J_TV G84J_RV G84J_O1V G84J_DV G84I_TV G84I_RV G84I_DV G84H_TV G84H_RV G84H_O1V G84H_DV G84G_TV G84G_RV G84G_DV G84A_TV G84A_RV G84A_DV

## 8.50 Variables for WI

MCDGRP CY G90V G90T_TV G90T_RV G90T_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90A_TV G90A_RV G90A_DV G88V G88S_TV G88S_RV G88S_DV G88P_TV

G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86V G86T_TV G86T_RV G86T_DV G86S_TV G86S_RV G86S_DV G86J_TV G86J_RV G86J_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV G86G_DV G86A_TV G86A_RV G86A_DV G84VORIG G84V G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_O1V G84H_DV

## 8.51 Variables for WV, 1986-1990

XREPS MCDGRP CY XDEMS XCANS G90Y_TV G90Y_RV G90Y_DV G90YB_TV G90YB_RV G90YB_DV G90YA_TV G90YA_RV G90YA_DV G90X_TTU G90X_RTU G90X_R12 G90X_R11 G90X_R10 G90X_R09 G90X_R08 G90X_R07 G90X_R06 G90X_R05 G90X_R04 G90X_R03 G90X_R02 G90X_R01 G90X_OTU G90X_O01 G90X_DTU G90X_D12 G90X_D11 G90X_D10 G90X_D09 G90X_D08 G90X_D07 G90X_D06 G90X_D05 G90X_D04 G90X_D03 G90X_D02 G90X_D01 G90V G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90J_TV G90J_RV G90J_DV G90H_TV G90H_RV G90H_DV G90A_TV G90A_DV G88Y_TV G88Y_RV G88Y_DV G88YB_TV G88YB_RV G88YB_DV G88YA_TV G88YA_RV G88YA_DV G88X_TV G88X_TTU G88X_RV G88X_RTU G88X_R12 G88X_R11 G88X_R10 G88X_R09 G88X_R08 G88X_R07 G88X_R06 G88X_R05 G88X_R04 G88X_R03 G88X_R02 G88X_R01 G88X_DV G88X_DTU G88X_D12 G88X_D11 G88X_D10 G88X_D09 G88X_D08 G88X_D07 G88X_D06 G88X_D05 G88X_D04 G88X_D03 G88X_D02 G88X_D01 G88V G88T_TV G88T_DV G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88J_TV G88J_DV G88I_TV G88I_RV G88I_DV G88H_TV G88H_RV G88H_DV G88G_TV G88G_RV G88G_DV G88F_TV G88F_RV G88F_DV G88A_TV G88A_DV G86Y_TV G86Y_RV G86Y_DV G86YB_TV G86YB_RV G86YB_DV G86YA_TV G86YA_RV G86YA_DV G86X_TV G86X_TTU G86X_RV G86X_RTU G86X_R12 G86X_R11 G86X_R10 G86X_R09 G86X_R08 G86X_R07 G86X_R06 G86X_R05 G86X_R04 G86X_R03 G86X_R02 G86X_R01 G86X_DV G86X_DTU G86X_D12 G86X_D11 G86X_D10 G86X_D09 G86X_D08 G86X_D07 G86X_D06 G86X_D05 G86X_D04 G86X_D03 G86X_D02 G86X_D01 G86V G86TAPR G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86H_TV G86H_RV G86H_DV

## 8.52 Variables for WV, 1984

XREPS MCDGRP CY XDEMS XCANS G84Y_TV G84Y_RV G84Y_DV G84YB_TV G84YB_RV G84YB_DV G84YA_TV G84YA_RV G84YA_DV G84X_TV G84X_TTU G84X_RV G84X_RTU G84X_R06 G84X_R05 G84X_R04 G84X_R03 G84X_R02 G84X_R01 G84X_DV G84X_DTU G84X_D06 G84X_D05 G84X_D04 G84X_D03 G84X_D02 G84X_D01 G84V G84T_TV G84T_RV G84T_DV G84TAPR G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV G84P_TV G84P_RV G84P_DV G84J_TV G84J_RV G84J_DV G84I_TV G84I_RV G84I_DV G84H_TV G84H_RV G84H_DV G84G_TV G84G_RV G84G_DV G84F_TV G84F_RV G84F_DV G84A_TV G84A_RV G84A_DV

## 8.53 Variables for WY

YREPS MCDGRP CY YOTHS YDEMS YCANS XREPS XOTHS XDEMS XCANS G90Y_TV G90Y_TTU G90Y_RV G90Y_RTU G90Y_R2U G90Y_R1U G90Y_DV G90Y_DTU G90Y_D2U G90Y_D1U G90X_TV G90X_TTU G90X_RV G90X_RTU G90X_R09 G90X_R08 G90X_R07 G90X_R06 G90X_R05 G90X_R04 G90X_R03 G90X_R02 G90X_R01 G90X_OTU G90X_O1V G90X_O01 G90X_DV G90X_DTU G90X_D09 G90X_D08 G90X_D07 G90X_D06 G90X_D05 G90X_D04 G90X_D03 G90X_D02 G90X_D01 G90VORIG G90V G90T_TV G90T_RV G90T_DV G90TAPR G90S_TV G90S_RV G90S_DV G90R G90Q_TV G90Q_RV G90Q_O1V G90Q_DV G90J_TV G90J_RV G90J_DV G90I_TV G90I_RV G90I_DV G90H_TV G90H_RV G90H_DV G90G_TV G90G_RV G90G_DV G90B_TV G90B_RV G90B_DV G88Y_TTU G88Y_RTU G88Y_R2U G88Y_R1U G88Y_DTU G88Y_D2U G88Y_D1U G88X_TTU G88X_RTU G88X_R9U G88X_R8U G88X_R7U G88X_R6U G88X_R5U G88X_R4U G88X_R3U G88X_R2U G88X_R1U G88X_DTU G88X_D9U G88X_D8U G88X_D7U G88X_D6U G88X_D5U G88X_D4U G88X_D3U G88X_D2U G88X_D1U G88VORIG G88V G88TAPR G88S_TV G88S_RV G88S_DV G88R G88Q_TV G88Q_RV G88Q_O1V G88Q_DV G88P_TV G88P_RV G88P_DV G88H_TV G88H_RV G88H_DV G86Y_TTU G86Y_RTU G86Y_R2U G86Y_R1U G86Y_OTU G86Y_O1U G86Y_DTU G86Y_D2U G86Y_D1U G86X_TTU G86X_RTU G86X_R9U G86X_R8U G86X_R7U G86X_R6U G86X_R5U G86X_R4U G86X_R3U G86X_R2U G86X_R1U G86X_OTU G86X_O1U G86X_DTU G86X_D9U G86X_D8U G86X_D7U G86X_D6U G86X_D5U G86X_D4U G86X_D3U G86X_D2U G86X_D1U G86VORIG G86V G86T_TV G86T_RV G86T_DV G86TAPR G86R G86Q_TV G86Q_RV G86Q_O1V G86Q_DV G86J_TV G86J_RV G86J_DV G86I_TV G86I_RV G86I_DV G86H_TV G86H_RV G86H_DV G86G_TV G86G_RV

G86G_DV G86B_TV G86B_RV G86B_DV G84Y_TTU G84Y_RTU G84Y_R3U
G84Y_R2U G84Y_R1U G84Y_OTU G84Y_O1U G84Y_DTU G84Y_D3U G84Y_D2U
G84Y_D1U G84X_TTU G84X_RTU G84X_R9U G84X_R8U G84X_R7U G84X_R6U
G84X_R5U G84X_R4U G84X_R3U G84X_R2U G84X_R1U G84X_OTU G84X_O2U
G84X_O1U G84X_DTU G84X_D9U G84X_D8U G84X_D7U G84X_D6U G84X_D5U
G84X_D4U G84X_D3U G84X_D2U G84X_D1U G84VORIG G84V G84TAPR
G84S_TV G84S_RV G84S_DV G84R G84Q_TV G84Q_RV G84Q_O1V G84Q_DV
G84P_TV G84P_RV G84P_DV G84H_TV G84H_RV G84H_DV

# Chapter 9

# Valid Voting Variables in Each State's Precinct-Level Files

This section lists, without description, the valid voting data variables for each state and year, in separate paragraphs. Each variable name in these lists is linked back to its full description in Section7.1. (Census variables are only available at the MCD-group level.)

## 9.1 Variables for AK

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86XA_DV G86XA_O1 G86XA_RV G86XA_TV G86XB_DV G86XB_O1 G86XB_RV G86XB_TV G86XC_DV G86XC_O1 G86XC_RV G86XC_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86YA_DV G86YA_O1 G86YA_RV G86YA_TV G86YB_DV G86YB_O1 G86YB_RV G86YB_TV G86YC_DV G86YC_O1 G86YC_RV G86YC_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88XA_DV G88XA_O1 G88XA_RV G88XA_TV G88XB_DV G88XB_O1 G88XB_RV G88XB_TV G88XC_DV G88XC_O1 G88XC_RV G88XC_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV G88YA_DV G88YA_O1 G88YA_RV G88YA_TV G88YB_DV G88YB_O1 G88YB_RV G88YB_TV G88YC_DV G88YC_O1 G88YC_RV G88YC_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90XA_DV G90XA_O1 G90XA_RV G90XA_TV G90XB_DV G90XB_O1 G90XB_RV G90XB_TV G90XC_DV G90XC_O1 G90XC_RV G90XC_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV G90YA_DV G90YA_O1 G90YA_RV G90YA_TV G90YB_DV G90YB_O1 G90YB_RV G90YB_TV G90YC_DV G90YC_O1 G90YC_RV G90YC_TV

## 9.2 Variables for AL

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84M_DV G84M_O1V G84M_O2V G84M_O9V G84M_RV G84M_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86F_DV G86F_O1V G86F_O2V G86F_O9V G86F_RV G86F_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86M_D1U G86M_D2U G86M_D3U G86M_DTU G86M_O1U G86M_O2U G86M_O3U G86M_O4U G86M_O5U G86M_O9U G86M_OTU G86M_R1U G86M_R2U G86M_R3U G86M_RTU G86M_TTU G86O_DV G86O_O1V G86O_O2V G86O_O9V G86O_RV G86O_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88M_DV G88M_O1V G88M_O2V G88M_O9V G88M_RV G88M_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90F_DV G90F_O1V G90F_O2V G90F_O9V G90F_RV G90F_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90M_D1U G90M_D2U G90M_D3U G90M_DTU G90M_O1U G90M_O2U G90M_O3U G90M_OTU G90M_R1U G90M_R2U G90M_R3U G90M_RTU G90M_TTU G90O_DV G90O_O1V G90O_O2V G90O_O9V G90O_RV G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV

G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.3 Variables for AR

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84L_DV G84L_O1V G84L_O2V G84L_O9V G84L_RV G84L_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV

G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.4 Variables for AZ

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84O_DV G84O_O1V G84O_O2V G84O_O9V G84O_RV G84O_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_D1U G84X_D2U G84X_D3U G84X_DTU G84X_DV G84X_O1U G84X_O1V G84X_O2U G84X_O2V G84X_O3U G84X_O4U G84X_O5U G84X_O9V G84X_OTU G84X_R1U G84X_R2U G84X_R3U G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV G84Z_DV G84Z_O1V G84Z_O2V G84Z_O9V G84Z_RV G84Z_TV XCANS XDEMS XOTHS XREPS

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86O_DV G86O_O1V G86O_O2V G86O_O9V G86O_RV G86O_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_D3U G86X_DTU G86X_DV G86X_O1U G86X_O1V G86X_O2U G86X_O2V G86X_O3U G86X_O4U G86X_O5U

G86X_O9V G86X_OTU G86X_R1U G86X_R2U G86X_R3U G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86Z_DV G86Z_O1V G86Z_O2V G86Z_O9V G86Z_RV G86Z_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_D1U G88X_D2U G88X_D3U G88X_DTU G88X_DV G88X_O1U G88X_O1V G88X_O2U G88X_O2V G88X_O3U G88X_O4U G88X_O5U G88X_O9V G88X_OTU G88X_R1U G88X_R2U G88X_R3U G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV G88Z_DV G88Z_O1V G88Z_O2V G88Z_O9V G88Z_RV G88Z_TV XCANS XDEMS XOTHS XREPS

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90O_DV G90O_O1V G90O_O2V G90O_O9V G90O_RV G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_D1U G90X_D2U G90X_D3U G90X_DTU G90X_DV G90X_O1U G90X_O1V G90X_O2U G90X_O2V G90X_O3U G90X_O4U G90X_O5U G90X_O9V G90X_OTU G90X_R1U G90X_R2U G90X_R3U G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV XCANS XDEMS XOTHS XREPS

## 9.5 Variables for CO

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME

G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.6 Variables for CT

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_RV G84H_TV G84P_DV G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_RV G84Y_TV

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_RV G86A_TV G86C_DV G86C_RV G86C_TV G86G_DV G86G_RV G86G_TV G86H_DV G86H_RV G86H_TV G86J_DV G86J_RV G86J_TV G86Q_DV G86Q_RV G86Q_TV G86R G86S_DV G86S_RV G86S_TV G86T_DV G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_RV G86X_TV G86Y_DV G86Y_RV G86Y_TV

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_RV G88H_TV G88P_DV G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_RV G88Q_TV G88R G88S_DV G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_RV G88X_TV G88Y_DV G88Y_RV G88Y_TV

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_RV G90A_TV G90C_DV G90C_RV G90C_TV G90G_DV G90G_O1V G90G_RV G90G_TV G90H_DV G90H_RV G90H_TV G90J_DV G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_RV G90Q_TV G90R G90T_DV G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_RV G90Y_TV

## 9.7 Variables for DC

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV G84Z_DV G84Z_O1V G84Z_O2V G84Z_O9V G84Z_RV G84Z_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86Z_DV G86Z_O1V G86Z_O2V G86Z_O9V G86Z_RV G86Z_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV G88Z_DV G88Z_O1V G88Z_O2V G88Z_O9V G88Z_RV G88Z_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90O_DV G90O_O1V G90O_O2V G90O_O9V G90O_RV G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV G90Z_DV G90Z_O1V G90Z_O2V G90Z_O9V G90Z_RV G90Z_TV

## 9.8 Variables for DE

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84L_DV G84L_O1V G84L_O2V G84L_O9V G84L_RV G84L_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V

G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88L_DV G88L_O1V G88L_O2V G88L_O9V G88L_RV G88L_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90P_DV G90P_O1V G90P_O2V G90P_O9V G90P_RV G90P_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.9 Variables for FL

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_BL G84Q_HP G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86C_DV G86C_O1V G86C_O2V G86C_O9V G86C_RV G86C_TV G86F_DV G86F_O1V G86F_O2V G86F_O9V G86F_RV G86F_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_BL G88Q_DV G88Q_HP G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90C_DV G90C_O1V G90C_O2V G90C_O9V G90C_RV G90C_TV G90F_DV G90F_O1V G90F_O2V G90F_O9V G90F_RV G90F_TV G90G_DV G90G_O1V G90G_O2V

G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.10 Variables for GA

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84O_DV G84O_O1V G84O_O2V G84O_O9V G84O_RV G84O_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84XA_DV G84XA_O1 G84XA_RV G84XA_TV G84XB_DV G84XB_O1 G84XB_RV G84XB_TV G84XC_DV G84XC_O1 G84XC_RV G84XC_TV G84XD_DV G84XD_O1 G84XD_RV G84XD_TV G84XE_DV G84XE_O1 G84XE_RV G84XE_TV G84XF_DV G84XF_O1 G84XF_RV G84XF_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86F_DV G86F_O1V G86F_O2V G86F_O9V G86F_RV G86F_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86M_DV G86M_O1V G86M_O2V G86M_O9V G86M_RV G86M_TV G86O_DV G86O_O1V G86O_O2V G86O_O9V G86O_RV G86O_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV

G86XA_DV G86XA_O1 G86XA_RV G86XA_TV G86XB_DV G86XB_O1 G86XB_RV G86XB_TV G86XC_DV G86XC_O1 G86XC_RV G86XC_TV G86XD_DV G86XD_O1 G86XD_RV G86XD_TV G86XE_DV G86XE_O1 G86XE_RV G86XE_TV G86XF_DV G86XF_O1 G86XF_RV G86XF_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86Z_DV G86Z_O1V G86Z_O2V G86Z_O9V G86Z_RV G86Z_TV

**1988** ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88O_DV G88O_O1V G88O_O2V G88O_O9V G88O_RV G88O_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88XA_DV G88XA_O1 G88XA_RV G88XA_TV G88XB_DV G88XB_O1 G88XB_RV G88XB_TV G88XC_DV G88XC_O1 G88XC_RV G88XC_TV G88XD_DV G88XD_O1 G88XD_RV G88XD_TV G88XE_DV G88XE_O1 G88XE_RV G88XE_TV G88XF_DV G88XF_O1 G88XF_RV G88XF_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV G88Z_DV G88Z_O1V G88Z_O2V G88Z_O9V G88Z_RV G88Z_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90F_DV G90F_O1V G90F_O2V G90F_O9V G90F_RV G90F_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90M_DV G90M_O1V G90M_O2V G90M_O9V G90M_RV G90M_TV G90O_DV G90O_O1V G90O_O2V G90O_O9V G90O_RV G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90XA_DV G90XA_O1 G90XA_RV G90XA_TV G90XB_DV G90XB_O1 G90XB_RV G90XB_TV G90XC_DV G90XC_O1 G90XC_RV G90XC_TV G90XD_DV G90XD_O1 G90XD_RV G90XD_TV G90XE_DV G90XE_O1 G90XE_RV G90XE_TV G90XF_DV G90XF_O1 G90XF_RV G90XF_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV G90Z_DV G90Z_O1V G90Z_O2V G90Z_O9V G90Z_RV G90Z_TV XCANS XDEMS XOTHS XREPS

## 9.11 Variables for HI

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986** ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.12 Variables for IA

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86F_DV G86F_O1V G86F_O2V G86F_O9V G86F_RV G86F_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90F_DV G90F_O1V G90F_O2V G90F_O9V G90F_RV G90F_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV

G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.13 Variables for ID

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84XA_DV G84XA_O1 G84XA_RV G84XA_TV G84XB_DV G84XB_O1 G84XB_RV G84XB_TV G84XC_DV G84XC_O1 G84XC_RV G84XC_TV G84XD_DV G84XD_O1 G84XD_RV G84XD_TV G84XE_DV G84XE_O1 G84XE_RV G84XE_TV G84XF_DV G84XF_O1 G84XF_RV G84XF_TV G84XU_DV G84XU_O1 G84XU_RV G84XU_TV G84XV_DV G84XV_O1 G84XV_RV G84XV_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV G84YA_DV G84YA_O1 G84YA_RV G84YA_TV G84YB_DV G84YB_O1 G84YB_RV G84YB_TV G84YC_DV G84YC_O1 G84YC_RV G84YC_TV G84YU_DV G84YU_O1 G84YU_RV G84YU_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86XA_DV G86XA_O1 G86XA_RV G86XA_TV G86XB_DV G86XB_O1 G86XB_RV G86XB_TV G86XC_DV G86XC_O1 G86XC_RV G86XC_TV G86XD_DV G86XD_O1 G86XD_RV G86XD_TV G86XE_DV G86XE_O1 G86XE_RV G86XE_TV G86XF_DV G86XF_O1 G86XF_RV G86XF_TV G86XU_DV G86XU_O1 G86XU_RV G86XU_TV G86XV_DV G86XV_O1 G86XV_RV G86XV_TV G86Y_DV G86Y_O1V

G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86YA_DV G86YA_O1 G86YA_RV G86YA_TV G86YB_DV G86YB_O1 G86YB_RV G86YB_TV G86YC_DV G86YC_O1 G86YC_RV G86YC_TV G86YU_DV G86YU_O1 G86YU_RV G86YU_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88XA_DV G88XA_O1 G88XA_RV G88XA_TV G88XB_DV G88XB_O1 G88XB_RV G88XB_TV G88XC_DV G88XC_O1 G88XC_RV G88XC_TV G88XD_DV G88XD_O1 G88XD_RV G88XD_TV G88XE_DV G88XE_O1 G88XE_RV G88XE_TV G88XF_DV G88XF_O1 G88XF_RV G88XF_TV G88XU_DV G88XU_O1 G88XU_RV G88XU_TV G88XV_DV G88XV_O1 G88XV_RV G88XV_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV G88YA_DV G88YA_O1 G88YA_RV G88YA_TV G88YB_DV G88YB_O1 G88YB_RV G88YB_TV G88YC_DV G88YC_O1 G88YC_RV G88YC_TV G88YU_DV G88YU_O1 G88YU_RV G88YU_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90XA_DV G90XA_O1 G90XA_RV G90XA_TV G90XB_DV G90XB_O1 G90XB_RV G90XB_TV G90XC_DV G90XC_O1 G90XC_RV G90XC_TV G90XD_DV G90XD_O1 G90XD_RV G90XD_TV G90XE_DV G90XE_O1 G90XE_RV G90XE_TV G90XF_DV G90XF_O1 G90XF_RV G90XF_TV G90XU_DV G90XU_O1 G90XU_RV G90XU_TV G90XV_DV G90XV_O1 G90XV_RV G90XV_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV G90YA_DV G90YA_O1 G90YA_RV G90YA_TV G90YB_DV G90YB_O1 G90YB_RV G90YB_TV G90YC_DV G90YC_O1 G90YC_RV G90YC_TV G90YD_DV G90YD_O1 G90YD_RV G90YD_TV

G90YE_DV G90YE_O1 G90YE_RV G90YE_TV G90YU_DV G90YU_O1 G90YU_RV G90YU_TV

## 9.14 Variables for IL

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_D1U G84K_D2U G84K_D3U G84K_DTU G84K_DV G84K_O1U G84K_O1V G84K_O2U G84K_O2V G84K_O3U G84K_O4U G84K_O5U G84K_O9V G84K_OTU G84K_R1U G84K_R2U G84K_R3U G84K_RTU G84K_RV G84K_TTU G84K_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86C_DV G86C_O1V G86C_O2V G86C_O9V G86C_RV G86C_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_D1U G86K_D2U G86K_D3U G86K_DTU G86K_DV G86K_O1U G86K_O1V G86K_O2U G86K_O2V G86K_O3U G86K_O4U G86K_O5U G86K_O9V G86K_OTU G86K_R1U G86K_R2U G86K_R3U G86K_RTU G86K_RV G86K_TTU G86K_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV KCANS KDEMS KOTHS KREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_D1U G88K_D2U G88K_D3U G88K_DTU G88K_DV G88K_O1U G88K_O1V G88K_O2U G88K_O2V G88K_O3U G88K_O4U G88K_O5U G88K_O9V G88K_OTU G88K_R1U G88K_R2U G88K_R3U G88K_RTU G88K_RV G88K_TTU G88K_TV G88O_DV G88O_O1V G88O_O2V G88O_O9V G88O_RV G88O_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V

G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV KCANS KDEMS KOTHS KREPS

**1990** ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90C_DV G90C_O1V G90C_O2V G90C_O9V G90C_RV G90C_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_D1U G90K_D2U G90K_D3U G90K_DTU G90K_DV G90K_O1U G90K_O1V G90K_O2U G90K_O2V G90K_O3U G90K_O4U G90K_O5U G90K_O9V G90K_OTU G90K_R1U G90K_R2U G90K_R3U G90K_RTU G90K_RV G90K_TTU G90K_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV KCANS KDEMS KOTHS KREPS

## 9.15 Variables for IN

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84B_DV G84B_O1V G84B_O2V G84B_O9V G84B_RV G84B_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_D1U G84X_D2U G84X_D3U G84X_DTU G84X_DV G84X_O1U G84X_O1V G84X_O2U G84X_O2V G84X_O3U G84X_O4U G84X_O5U G84X_O9V G84X_OTU G84X_R1U G84X_R2U G84X_R3U G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV XCANS XDEMS XOTHS XREPS

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V

G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_D3U G86X_DTU G86X_DV G86X_O1U G86X_O1V G86X_O2U G86X_O2V G86X_O3U G86X_O4U G86X_O5U G86X_O9V G86X_OTU G86X_R1U G86X_R2U G86X_R3U G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88B_DV G88B_O1V G88B_O2V G88B_O9V G88B_RV G88B_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_D1U G88X_D2U G88X_D3U G88X_DTU G88X_DV G88X_O1U G88X_O1V G88X_O2U G88X_O2V G88X_O3U G88X_O4U G88X_O5U G88X_O9V G88X_OTU G88X_R1U G88X_R2U G88X_R3U G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV XCANS XDEMS XOTHS XREPS

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_D1U G90X_D2U G90X_D3U G90X_DTU G90X_DV G90X_O1U G90X_O1V G90X_O2U G90X_O2V G90X_O3U G90X_O4U G90X_O5U G90X_O9V G90X_OTU G90X_R1U G90X_R2U G90X_R3U G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV XCANS XDEMS XOTHS XREPS

## 9.16 Variables for KS

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V

G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.17 Variables for KY

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.18 Variables for LA

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.19 Variables for MA

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS

PNAME G84H_DV G84H_O1V G84H_RV G84H_TV G84P_DV G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_RV G84Q_TV G84R G84S_DV G84S_RV G84S_TV G84TAPR G84V G84X_DV G84X_O1V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_RV G84Y_TV

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_RV G86A_TV G86G_DV G86G_RV G86G_TV G86H_DV G86H_O1V G86H_RV G86H_TV G86I_DV G86I_RV G86I_TV G86J_DV G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_RV G86Q_TV G86R G86T_DV G86T_RV G86T_TV G86TAPR G86V G86X_DV G86X_O1V G86X_O2V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_RV G86Y_TV

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_RV G88H_TV G88P_DV G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_RV G88Q_TV G88R G88S_DV G88S_RV G88S_TV G88TAPR G88V G88X_DV G88X_O1V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_RV G88Y_TV

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_RV G90A_TV G90G_DV G90G_RV G90G_TV G90H_DV G90H_O1V G90H_RV G90H_TV G90I_DV G90I_RV G90I_TV G90J_DV G90J_RV G90J_TV G90Q_DV G90Q_RV G90Q_TV G90R G90S_DV G90S_RV G90S_TV G90T_DV G90T_O1V G90T_RV G90T_TV G90TAPR G90V G90X_DV G90X_O1V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_RV G90Y_TV

## 9.20 Variables for MD

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86C_DV G86C_O1V G86C_O2V G86C_O9V G86C_RV G86C_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_D3U G86X_DTU G86X_DV G86X_O1U G86X_O1V G86X_O2U G86X_O2V G86X_O3U G86X_O4U G86X_O5U G86X_O9V G86X_OTU G86X_R1U G86X_R2U G86X_R3U G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90C_DV G90C_O1V G90C_O2V G90C_O9V G90C_RV G90C_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90TAPR G90V G90VORIG G90X_D1U G90X_D2U G90X_D3U G90X_DTU G90X_DV G90X_O1U G90X_O1V G90X_O2U G90X_O2V G90X_O3U G90X_O4U G90X_O5U G90X_O9V G90X_OTU G90X_R1U G90X_R2U G90X_R3U G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV XCANS XDEMS XOTHS XREPS

## 9.21 Variables for ME

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_RV G84S_TV G84TAPR G84V G84X_DV G84X_RV G84X_TV G84Y_DV G84Y_RV G84Y_TV

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_O1V G86G_O2V G86G_RV G86G_TV G86H_DV G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_RV G86Q_TV G86R G86TAPR G86V G86X_DV G86X_O1V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_RV G86Y_TV

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_RV G88H_TV G88P_DV G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_RV G88Q_TV G88R G88S_DV G88S_RV G88S_TV G88TAPR G88V G88X_DV G88X_O1V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_RV G88Y_TV

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90G_DV G90G_O1V G90G_RV G90G_TV G90H_DV G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_RV G90Q_TV G90R G90S_DV G90S_RV G90S_TV G90TAPR G90V G90X_DV G90X_O1V G90X_RV G90X_TV G90Y_DV G90Y_RV G90Y_TV

## 9.22 Variables for MI

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_D1U G84K_D2U G84K_D3U G84K_DTU G84K_DV G84K_O1U G84K_O1V G84K_O2U G84K_O2V G84K_O3U G84K_O4U G84K_O5U G84K_O9V G84K_OTU G84K_R1U G84K_R2U G84K_R3U G84K_RTU G84K_RV G84K_TTU G84K_TV G84O_D1U G84O_D2U G84O_D3U G84O_DTU G84O_DV G84O_O1U G84O_O1V G84O_O2U G84O_O2V G84O_O3U G84O_O4U G84O_O5U G84O_O9V G84O_OTU G84O_R1U G84O_R2U G84O_R3U G84O_RTU G84O_RV G84O_TTU G84O_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV

G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Z_D1U G84Z_D2U G84Z_D3U G84Z_DTU G84Z_DV G84Z_O1U G84Z_O1V G84Z_O2U G84Z_O2V G84Z_O3U G84Z_O4U G84Z_O5U G84Z_O9V G84Z_OTU G84Z_R1U G84Z_R2U G84Z_R3U G84Z_RTU G84Z_RV G84Z_TTU G84Z_TV KCANS KDEMS KOTHS KREPS OCANS ODEMS OOTHS OREPS ZCANS ZDEMS ZOTHS ZREPS

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86K_D1U G86K_D2U G86K_D3U G86K_DTU G86K_DV G86K_O1U G86K_O1V G86K_O2U G86K_O2V G86K_O3U G86K_O4U G86K_O5U G86K_O9V G86K_OTU G86K_R1U G86K_R2U G86K_R3U G86K_RTU G86K_RV G86K_TTU G86K_TV G86O_D1U G86O_D2U G86O_D3U G86O_DTU G86O_DV G86O_O1U G86O_O1V G86O_O2U G86O_O2V G86O_O3U G86O_O4U G86O_O5U G86O_O9V G86O_OTU G86O_R1U G86O_R2U G86O_R3U G86O_RTU G86O_RV G86O_TTU G86O_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86Z_D1U G86Z_D2U G86Z_D3U G86Z_DTU G86Z_DV G86Z_O1U G86Z_O1V G86Z_O2U G86Z_O2V G86Z_O3U G86Z_O4U G86Z_O5U G86Z_O9V G86Z_OTU G86Z_R1U G86Z_R2U G86Z_R3U G86Z_RTU G86Z_RV G86Z_TTU G86Z_TV KCANS KDEMS KOTHS KREPS OCANS ODEMS OOTHS OREPS ZCANS ZDEMS ZOTHS ZREPS

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_D1U G88K_D2U G88K_D3U G88K_DTU G88K_DV G88K_O1U G88K_O1V G88K_O2U G88K_O2V G88K_O3U G88K_O4U G88K_O5U G88K_O9V G88K_OTU G88K_R1U G88K_R2U G88K_R3U G88K_RTU G88K_RV G88K_TTU G88K_TV G88O_D1U G88O_D2U G88O_D3U G88O_DTU G88O_DV G88O_O1U G88O_O1V G88O_O2U G88O_O2V G88O_O3U G88O_O4U G88O_O5U G88O_O9V G88O_OTU G88O_R1U G88O_R2U G88O_R3U G88O_RTU G88O_RV G88O_TTU G88O_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV

G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Z_D1U G88Z_D2U G88Z_D3U G88Z_DTU G88Z_DV G88Z_O1U G88Z_O1V G88Z_O2U G88Z_O2V G88Z_O3U G88Z_O4U G88Z_O5U G88Z_O9V G88Z_OTU G88Z_R1U G88Z_R2U G88Z_R3U G88Z_RTU G88Z_RV G88Z_TTU G88Z_TV KCANS KDEMS KOTHS KREPS OCANS ODEMS OOTHS OREPS ZCANS ZDEMS ZOTHS ZREPS

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90K_D1U G90K_D2U G90K_D3U G90K_DTU G90K_DV G90K_O1U G90K_O1V G90K_O2U G90K_O2V G90K_O3U G90K_O4U G90K_O5U G90K_O9V G90K_OTU G90K_R1U G90K_R2U G90K_R3U G90K_RTU G90K_RV G90K_TTU G90K_TV G90O_D1U G90O_D2U G90O_D3U G90O_DTU G90O_DV G90O_O1U G90O_O1V G90O_O2U G90O_O2V G90O_O3U G90O_O4U G90O_O5U G90O_O9V G90O_OTU G90O_R1U G90O_R2U G90O_R3U G90O_RTU G90O_RV G90O_TTU G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV G90Z_D1U G90Z_D2U G90Z_D3U G90Z_DTU G90Z_DV G90Z_O1U G90Z_O1V G90Z_O2U G90Z_O2V G90Z_O3U G90Z_O4U G90Z_O5U G90Z_O9V G90Z_OTU G90Z_R1U G90Z_R2U G90Z_R3U G90Z_RTU G90Z_RV G90Z_TTU G90Z_TV KCANS KDEMS KOTHS KREPS OCANS ODEMS OOTHS OREPS ZCANS ZDEMS ZOTHS ZREPS

## 9.23 Variables for MN

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV

G84X_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.24 Variables for MO

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84J_DV G84J_O1V G84J_O2V G84J_O9V G84J_RV G84J_TV G84L_DV G84L_O1V G84L_O2V G84L_O9V G84L_RV G84L_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84T_DV G84T_O1V G84T_O2V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88L_DV G88L_O1V G88L_O2V G88L_O9V G88L_RV G88L_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV

G90Y_TV

## 9.25 Variables for MS

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.26 Variables for MT

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84B_DV G84B_O1V G84B_O2V G84B_O9V G84B_RV G84B_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84I_DV G84I_O1V G84I_O2V G84I_O9V G84I_RV G84I_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84T_DV G84T_O1V G84T_O2V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88B_DV G88B_O1V G88B_O2V G88B_O9V G88B_RV G88B_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_O9V G88I_RV G88I_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV

G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.27 Variables for NC

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84F_DV G84F_O1V G84F_O2V G84F_O9V G84F_RV G84F_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84I_DV G84I_O1V G84I_O2V G84I_O9V G84I_RV G84I_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84L_DV G84L_O1V G84L_O2V G84L_O9V G84L_RV G84L_TV G84O_DV G84O_O1V G84O_O2V G84O_O9V G84O_RV G84O_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84T_DV G84T_O1V G84T_O2V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84VORIG G84X_D1U G84X_D2U G84X_D3U G84X_D4U G84X_DTU G84X_DV G84X_O1U G84X_O1V G84X_O2U G84X_O2V G84X_O3U G84X_O4U G84X_O5U G84X_O6U G84X_O9V G84X_OTU G84X_R1U G84X_R2U G84X_R3U G84X_R4U G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_D1U G84Y_D2U G84Y_D3U G84Y_D4U G84Y_DTU G84Y_DV G84Y_O1U G84Y_O1V G84Y_O2U G84Y_O2V G84Y_O3U G84Y_O4U G84Y_O5U G84Y_O6U G84Y_O9V G84Y_OTU G84Y_R1U G84Y_R2U G84Y_R3U G84Y_R4U G84Y_RTU G84Y_RV G84Y_TTU G84Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_D3U G86X_D4U G86X_D5U G86X_D6U G86X_DTU G86X_DV G86X_O1U G86X_O1V G86X_O2U G86X_O2V G86X_O3U G86X_O4U G86X_O5U G86X_O6U G86X_O9V G86X_OTU G86X_R1U G86X_R2U G86X_R3U G86X_R4U G86X_R5U G86X_R6U G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_D1U G86Y_D2U G86Y_D3U G86Y_DTU G86Y_DV G86Y_O1U G86Y_O1V G86Y_O2U G86Y_O2V G86Y_O3U G86Y_O4U G86Y_O5U G86Y_O9V G86Y_OTU G86Y_R1U G86Y_R2U G86Y_R3U G86Y_RTU G86Y_RV G86Y_TTU G86Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS

YOTHS YREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88B_DV G88B_O1V G88B_O2V G88B_O9V G88B_RV G88B_TV G88F_DV G88F_O1V G88F_O2V G88F_O9V G88F_RV G88F_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_O9V G88I_RV G88I_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88L_DV G88L_O1V G88L_O2V G88L_O9V G88L_RV G88L_TV G88O_DV G88O_O1V G88O_O2V G88O_O9V G88O_RV G88O_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_D1U G88X_D2U G88X_D3U G88X_D4U G88X_D5U G88X_D6U G88X_DTU G88X_DV G88X_O1U G88X_O1V G88X_O2U G88X_O2V G88X_O3U G88X_O4U G88X_O5U G88X_O6U G88X_O7U G88X_O8U G88X_O9U G88X_O9V G88X_OTU G88X_R1U G88X_R2U G88X_R3U G88X_R4U G88X_R5U G88X_R6U G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_D1U G88Y_D2U G88Y_D3U G88Y_DTU G88Y_DV G88Y_O1U G88Y_O1V G88Y_O2U G88Y_O2V G88Y_O3U G88Y_O4U G88Y_O5U G88Y_O9V G88Y_OTU G88Y_R1U G88Y_R2U G88Y_R3U G88Y_RTU G88Y_RV G88Y_TTU G88Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_D1U G90X_D2U G90X_D3U G90X_D4U G90X_D5U G90X_D6U G90X_DTU G90X_DV G90X_O1U G90X_O1V G90X_O2U G90X_O2V G90X_O3U G90X_O4U G90X_O5U G90X_O6U G90X_O7U G90X_O8U G90X_O9U G90X_O9V G90X_OTU G90X_R1U G90X_R2U G90X_R3U G90X_R4U G90X_R5U G90X_R6U G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_D1U G90Y_D2U G90Y_D3U G90Y_DTU G90Y_DV G90Y_O1U G90Y_O1V G90Y_O2U G90Y_O2V G90Y_O3U G90Y_O4U G90Y_O5U G90Y_O9V G90Y_OTU G90Y_R1U G90Y_R2U G90Y_R3U G90Y_RTU G90Y_RV G90Y_TTU G90Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

## 9.28 Variables for ND

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84B_DV G84B_O1V G84B_O2V G84B_O9V G84B_RV G84B_TV G84F_DV G84F_O1V G84F_O2V G84F_O9V G84F_RV G84F_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84I_DV G84I_O1V G84I_O2V G84I_O9V G84I_RV G84I_TV G84J_DV G84J_O1V G84J_O2V G84J_O9V G84J_RV G84J_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84M_DV G84M_O1V G84M_O2V G84M_O9V G84M_RV G84M_TV G84O_DV G84O_O1V G84O_O2V G84O_O9V G84O_RV G84O_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84T_DV G84T_O1V G84T_O2V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84VORIG G84X_D1U G84X_D2U G84X_D3U G84X_D4U G84X_D5U G84X_D6U G84X_DTU G84X_DV G84X_O1U G84X_O1V G84X_O2U G84X_O2V G84X_O3U G84X_O4U G84X_O5U G84X_O6U G84X_O7U G84X_O8U G84X_O9U G84X_O9V G84X_OTU G84X_R1U G84X_R2U G84X_R3U G84X_R4U G84X_R5U G84X_R6U G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_D1U G84Y_D2U G84Y_D3U G84Y_DTU G84Y_DV G84Y_O1U G84Y_O1V G84Y_O2U G84Y_O2V G84Y_O3U G84Y_O9V G84Y_OTU G84Y_R1U G84Y_R2U G84Y_R3U G84Y_RTU G84Y_RV G84Y_TTU G84Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86M_DV G86M_O1V G86M_O2V G86M_O9V G86M_RV G86M_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_D3U G86X_D4U G86X_D5U G86X_D6U G86X_DTU G86X_DV G86X_O1U G86X_O1V G86X_O2U G86X_O2V G86X_O3U G86X_O4U G86X_O5U G86X_O6U G86X_O7U G86X_O8U G86X_O9U G86X_O9V G86X_OTU G86X_R1U G86X_R2U G86X_R3U G86X_R4U G86X_R5U G86X_R6U G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88B_DV G88B_O1V G88B_O2V G88B_O9V G88B_RV G88B_TV G88F_DV G88F_O1V G88F_O2V G88F_O9V G88F_RV G88F_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_O9V G88I_RV G88I_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88M_DV G88M_O1V G88M_O2V G88M_O9V G88M_RV G88M_TV G88O_DV G88O_O1V G88O_O2V G88O_O9V G88O_RV G88O_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_D1U G88X_D2U G88X_D3U G88X_D4U G88X_D5U G88X_D6U G88X_DTU G88X_DV G88X_O1U G88X_O1V G88X_O2U G88X_O2V G88X_O3U G88X_O4U G88X_O5U G88X_O6U G88X_O7U G88X_O8U G88X_O9U G88X_O9V G88X_OTU G88X_R1U G88X_R2U G88X_R3U G88X_R4U G88X_R5U G88X_R6U G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_D1U G88Y_D2U G88Y_D3U G88Y_D4U G88Y_D5U G88Y_D6U G88Y_DTU G88Y_DV G88Y_O1U G88Y_O1V G88Y_O2U G88Y_O2V G88Y_O3U G88Y_O4U G88Y_O5U G88Y_O6U G88Y_O7U G88Y_O8U G88Y_O9U G88Y_O9V G88Y_OTU G88Y_R1U G88Y_R2U G88Y_R3U G88Y_R4U G88Y_R5U G88Y_R6U G88Y_RTU G88Y_RV G88Y_TTU G88Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90M_DV G90M_O1V G90M_O2V G90M_O9V G90M_RV G90M_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90TAPR G90V G90VORIG G90X_D1U G90X_D2U G90X_D3U G90X_D4U G90X_D5U G90X_D6U G90X_DTU G90X_DV G90X_O1U G90X_O1V G90X_O2U G90X_O2V G90X_O3U G90X_O4U G90X_O5U G90X_O6U G90X_O7U G90X_O8U G90X_O9U G90X_O9V G90X_OTU G90X_R1U G90X_R2U G90X_R3U G90X_R4U G90X_R5U G90X_R6U G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV XCANS XDEMS XOTHS XREPS

## 9.29 Variables for NE

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990** ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV

G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.30 Variables for NH

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84G_DV G84G_RV G84G_TV G84H_DV G84H_RV G84H_TV G84P_DV G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_RV G84Q_TV G84R G84S_DV G84S_RV G84S_TV G84TAPR G84V G84X_D01 G84X_D02 G84X_D03 G84X_D04 G84X_D05 G84X_D06 G84X_D07 G84X_D08 G84X_D09 G84X_D10 G84X_DTU G84X_DV G84X_O01 G84X_O02 G84X_O04 G84X_O1V G84X_OTU G84X_R01 G84X_R02 G84X_R03 G84X_R04 G84X_R05 G84X_R06 G84X_R07 G84X_R08 G84X_R09 G84X_R10 G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_DV G84Y_RV G84Y_TV XCANS XDEMS XOTHS XREPS

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_RV G86G_TV G86H_DV G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_D01 G86X_D02 G86X_D03 G86X_D04 G86X_D05 G86X_D06 G86X_D07 G86X_DTU G86X_DV G86X_O01 G86X_O02 G86X_O1V G86X_OTU G86X_R01 G86X_R02 G86X_R03 G86X_R04 G86X_R05 G86X_R06 G86X_R07 G86X_R08 G86X_R09 G86X_R10 G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_DV G86Y_RV G86Y_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88G_DV G88G_RV G88G_TV G88H_DV G88H_RV G88H_TV G88P_DV G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_D01 G88X_D02 G88X_D03 G88X_D04 G88X_D05 G88X_D06 G88X_D07 G88X_D08 G88X_D09 G88X_DTU G88X_DV G88X_O01 G88X_O1V G88X_OTU G88X_R01 G88X_R02 G88X_R03 G88X_R04 G88X_R05 G88X_R06 G88X_R07 G88X_R08 G88X_R09 G88X_R10 G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_DV G88Y_RV G88Y_TV XCANS XDEMS XOTHS XREPS

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS

PNAME G90G_DV G90G_RV G90G_TV G90H_DV G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_RV G90Q_TV G90R G90S_DV G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_D01 G90X_D02 G90X_D03 G90X_D04 G90X_D05 G90X_D06 G90X_D07 G90X_D08 G90X_DTU G90X_DV G90X_O01 G90X_O02 G90X_O1V G90X_OTU G90X_R01 G90X_R02 G90X_R03 G90X_R04 G90X_R05 G90X_R06 G90X_R07 G90X_R08 G90X_R09 G90X_R10 G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_DV G90Y_RV G90Y_TV XCANS XDEMS XOTHS XREPS

## 9.31 Variables for NJ

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG

**1985**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G85G_DV G85G_O1V G85G_O2V G85G_O9V G85G_RV G85G_TV G85Q_DV G85Q_O1V G85Q_O2V G85Q_O3V G85Q_O4V G85Q_O9V G85Q_RV G85Q_TV G85R G85TAPR G85V G85VORIG G85X_D1U G85X_D2U G85X_D3U G85X_DTU G85X_DV G85X_O1U G85X_O1V G85X_O2U G85X_O2V G85X_O3U G85X_O4U G85X_O5U G85X_O9V G85X_OTU G85X_R1U G85X_R2U G85X_R3U G85X_RTU G85X_RV G85X_TTU G85X_TV XCANS XDEMS XOTHS XREPS

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG

**1987**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G87Q_DV G87Q_O1V G87Q_O2V G87Q_O3V G87Q_O4V G87Q_O9V G87Q_RV G87Q_TV G87R G87TAPR G87V G87VORIG G87X_D1U G87X_D2U G87X_D3U G87X_DTU G87X_DV G87X_O1U G87X_O1V G87X_O2U G87X_O2V G87X_O3U G87X_O4U G87X_O5U G87X_O9V G87X_OTU G87X_R1U G87X_R2U

G87X_R3U G87X_RTU G87X_RV G87X_TTU G87X_TV G87Y_DV G87Y_O1V G87Y_O2V G87Y_O9V G87Y_RV G87Y_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG

**1989**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G89G_DV G89G_O1V G89G_O2V G89G_O9V G89G_RV G89G_TV G89Q_DV G89Q_O1V G89Q_O2V G89Q_O3V G89Q_O4V G89Q_O9V G89Q_RV G89Q_TV G89R G89TAPR G89V G89VORIG G89X_D1U G89X_D2U G89X_D3U G89X_DTU G89X_DV G89X_O1U G89X_O1V G89X_O2U G89X_O2V G89X_O3U G89X_O4U G89X_O5U G89X_O9V G89X_OTU G89X_R1U G89X_R2U G89X_R3U G89X_RTU G89X_RV G89X_TTU G89X_TV G89Y_DV G89Y_O1V G89Y_O2V G89Y_O9V G89Y_RV G89Y_TV XCANS XDEMS XOTHS XREPS

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.32 Variables for NM

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V

G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86O_DV G86O_O1V G86O_O2V G86O_O9V G86O_RV G86O_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90O_DV G90O_O1V G90O_O2V G90O_O9V G90O_RV G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.33 Variables for NV

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV G84YA_DV G84YA_O1 G84YA_RV G84YA_TV G84YB_DV G84YB_O1 G84YB_RV G84YB_TV G84YC_DV G84YC_O1 G84YC_RV G84YC_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86C_DV G86C_O1V G86C_O2V G86C_O9V G86C_RV G86C_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86YA_DV G86YA_O1 G86YA_RV G86YA_TV G86YB_DV G86YB_O1 G86YB_RV G86YB_TV G86YC_DV G86YC_O1 G86YC_RV G86YC_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV G88YA_DV G88YA_O1 G88YA_RV G88YA_TV G88YB_DV G88YB_O1 G88YB_RV G88YB_TV G88YC_DV G88YC_O1 G88YC_RV G88YC_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90C_DV

G90C_O1V G90C_O2V G90C_O9V G90C_RV G90C_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV G90YA_DV G90YA_O1 G90YA_O2 G90YA_O9 G90YA_RV G90YA_TV G90YB_DV G90YB_O1 G90YB_O2 G90YB_O9 G90YB_RV G90YB_TV

## 9.34 Variables for NY

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86C_DV G86C_O1V G86C_O2V G86C_O9V G86C_RV G86C_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV

G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90C_DV G90C_O1V G90C_O2V G90C_O9V G90C_RV G90C_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.35 Variables for OH

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME

G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.36 Variables for OK

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV

G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86O_DV G86O_O1V G86O_O2V G86O_O9V G86O_RV G86O_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90O_DV G90O_O1V G90O_O2V G90O_O9V G90O_RV G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.37 Variables for OR

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84J_DV G84J_O1V G84J_O2V G84J_O9V G84J_RV G84J_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V

G84S_O2V G84S_O9V G84S_RV G84S_TV G84T_DV G84T_O1V G84T_O2V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.38 Variables for PA

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS

PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84I_DV G84I_O1V G84I_O2V G84I_O9V G84I_RV G84I_TV G84J_DV G84J_O1V G84J_O2V G84J_O9V G84J_RV G84J_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_O9V G88I_RV G88I_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.39 Variables for RI

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_RV G84A_TV G84G_DV G84G_RV G84G_TV G84H_DV G84H_RV G84H_TV G84J_DV G84J_RV G84J_TV G84L_DV G84L_RV G84L_TV G84P_DV G84P_RV G84P_TV G84R G84S_DV G84S_RV G84S_TV G84T_DV G84T_RV G84T_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_RV G84Y_TV

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_RV G86A_TV G86G_DV G86G_RV G86G_TV G86H_DV G86H_RV G86H_TV G86J_DV G86J_RV G86J_TV G86L_DV G86L_RV G86L_TV G86R G86T_DV G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_RV G86Y_TV

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_RV G88A_TV G88G_DV G88G_RV G88G_TV G88H_DV G88H_RV G88H_TV G88J_DV G88J_RV G88J_TV G88L_DV G88L_RV G88L_TV G88P_DV G88P_RV G88P_TV G88R G88S_DV G88S_RV G88S_TV G88T_DV G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_RV G88X_TV G88Y_DV G88Y_RV G88Y_TV

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_RV G90A_TV G90G_DV G90G_RV G90G_TV G90H_DV G90H_RV G90H_TV G90J_DV G90J_RV G90J_TV G90L_DV G90L_RV G90L_TV G90R G90S_DV G90S_RV G90S_TV G90T_DV G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_RV G90Y_TV

## 9.40 Variables for SC

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V

G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86C_DV G86C_O1V G86C_O2V G86C_O9V G86C_RV G86C_TV G86F_DV G86F_O1V G86F_O2V G86F_O9V G86F_RV G86F_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90C_DV G90C_O1V G90C_O2V G90C_O9V G90C_RV G90C_TV G90F_DV G90F_O1V G90F_O2V G90F_O9V G90F_RV G90F_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V

G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.41 Variables for SD

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84M_DV G84M_O1V G84M_O2V G84M_O9V G84M_RV G84M_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_D1U G84X_D2U G84X_D3U G84X_DTU G84X_DV G84X_O1U G84X_O1V G84X_O2U G84X_O2V G84X_O3U G84X_O4U G84X_O5U G84X_O9V G84X_OTU G84X_R1U G84X_R2U G84X_R3U G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV XCANS XDEMS XOTHS XREPS

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86M_DV G86M_O1V G86M_O2V G86M_O9V G86M_RV G86M_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_D3U G86X_DTU G86X_DV G86X_O1U G86X_O1V G86X_O2U G86X_O2V G86X_O3U G86X_O4U G86X_O5U G86X_O9V G86X_OTU G86X_R1U G86X_R2U G86X_R3U G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88M_DV G88M_O1V G88M_O2V G88M_O9V G88M_RV G88M_TV G88P_DV G88P_O1V

G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88TAPR G88V G88VORIG G88X_D1U G88X_D2U G88X_D3U G88X_DTU G88X_DV G88X_O1U G88X_O1V G88X_O2U G88X_O2V G88X_O3U G88X_O4U G88X_O5U G88X_O9V G88X_OTU G88X_R1U G88X_R2U G88X_R3U G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV XCANS XDEMS XOTHS XREPS

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90M_DV G90M_O1V G90M_O2V G90M_O9V G90M_RV G90M_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_D1U G90X_D2U G90X_D3U G90X_D4U G90X_D5U G90X_D6U G90X_DTU G90X_DV G90X_O1U G90X_O1V G90X_O2U G90X_O2V G90X_O3U G90X_O4U G90X_O5U G90X_O6U G90X_O7U G90X_O8U G90X_O9U G90X_O9V G90X_OTU G90X_R1U G90X_R2U G90X_R3U G90X_R4U G90X_R5U G90X_R6U G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV XCANS XDEMS XOTHS XREPS

## 9.42 Variables for TN

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84M_DV G84M_O1V G84M_O2V G84M_O9V G84M_RV G84M_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86M_DV G86M_O1V G86M_O2V G86M_O9V G86M_RV G86M_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88M_DV G88M_O1V G88M_O2V G88M_O9V G88M_RV G88M_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90M_DV G90M_O1V G90M_O2V G90M_O9V G90M_RV G90M_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.43 Variables for TX

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86C_DV G86C_O1V G86C_O2V G86C_O9V G86C_RV G86C_TV G86F_DV G86F_O1V G86F_O2V G86F_O9V G86F_RV G86F_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86K_DV G86K_O1V G86K_O2V G86K_O9V G86K_RV G86K_TV G86L_DV G86L_O1V G86L_O2V G86L_O9V G86L_RV G86L_TV G86O_DV G86O_O1V G86O_O2V G86O_O9V G86O_RV G86O_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90C_DV G90C_O1V G90C_O2V G90C_O9V G90C_RV G90C_TV G90F_DV G90F_O1V G90F_O2V G90F_O9V G90F_RV G90F_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90K_DV G90K_O1V G90K_O2V G90K_O9V G90K_RV G90K_TV G90L_DV G90L_O1V G90L_O2V G90L_O9V G90L_RV G90L_TV G90O_DV G90O_O1V G90O_O2V G90O_O9V G90O_RV G90O_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.44 Variables for UT

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84I_DV G84I_O1V G84I_O2V G84I_O9V G84I_RV G84I_TV G84J_DV G84J_O1V G84J_O2V G84J_O9V G84J_RV G84J_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_O9V G88I_RV G88I_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV

G90Y_TV

## 9.45 Variables for VA

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V

**1985**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G85A_DV G85A_O1V G85A_O2V G85A_O9V G85A_RV G85A_TV G85G_DV G85G_O1V G85G_O2V G85G_O9V G85G_RV G85G_TV G85L_DV G85L_O1V G85L_O2V G85L_O9V G85L_RV G85L_TV G85Q_DV G85Q_O1V G85Q_O2V G85Q_O3V G85Q_O4V G85Q_O9V G85Q_RV G85Q_TV G85R G85TAPR G85V G85VORIG G85X_DV G85X_O1V G85X_O2V G85X_O9V G85X_RV G85X_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG

**1987**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G87Q_DV G87Q_O1V G87Q_O2V G87Q_O3V G87Q_O4V G87Q_O9V G87Q_RV G87Q_TV G87R G87TAPR G87V G87VORIG G87X_DV G87X_O1V G87X_O2V G87X_O9V G87X_RV G87X_TV G87Y_DV G87Y_O1V G87Y_O2V G87Y_O9V G87Y_RV G87Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR

G88V G88VORIG

**1989**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G89A_DV G89A_O1V G89A_O2V G89A_O9V G89A_RV G89A_TV G89G_DV G89G_O1V G89G_O2V G89G_O9V G89G_RV G89G_TV G89L_DV G89L_O1V G89L_O2V G89L_O9V G89L_RV G89L_TV G89Q_DV G89Q_O1V G89Q_O2V G89Q_O3V G89Q_O4V G89Q_O9V G89Q_RV G89Q_TV G89R G89TAPR G89V G89VORIG G89X_DV G89X_O1V G89X_O2V G89X_O9V G89X_RV G89X_TV G89Y_DV G89Y_O1V G89Y_O2V G89Y_O9V G89Y_RV G89Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.46 Variables for VT

**1984**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_RV G84A_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O9V G84H_RV G84H_TV G84I_O1V G84I_O9V G84I_RV G84I_TV G84J_O2V G84J_RV G84J_TV G84L_DV G84L_O1V G84L_O2V G84L_O9V G84L_RV G84L_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84R G84T_DV G84T_O1V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84X_D1U G84X_D2U G84X_DTU G84X_DV G84X_O1U G84X_O1V G84X_O2U G84X_OTU G84X_R1U G84X_R2U G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_D1U G84Y_D2U G84Y_D3U G84Y_D4U G84Y_D5U G84Y_D6U G84Y_DTU G84Y_DV G84Y_O1U G84Y_O1V G84Y_O2U G84Y_O3U G84Y_OTU G84Y_R1U G84Y_R2U G84Y_R3U G84Y_R4U G84Y_R5U G84Y_R6U G84Y_RTU G84Y_RV G84Y_TTU G84Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_O1V G86A_O2V G86A_RV G86A_TV G86G_DV G86G_O1V

G86G_O2V G86G_RV G86G_TV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_O1V G86I_O2V G86I_RV G86I_TV G86J_O1V G86J_O2V G86J_RV G86J_TV G86L_DV G86L_O1V G86L_O2V G86L_RV G86L_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_DTU G86X_O1U G86X_O2U G86X_OTU G86X_R1U G86X_R2U G86X_RTU G86X_TTU G86Y_D1U G86Y_D2U G86Y_D3U G86Y_D4U G86Y_D5U G86Y_D6U G86Y_DTU G86Y_O1U G86Y_O2U G86Y_OTU G86Y_R1U G86Y_R2U G86Y_R3U G86Y_R4U G86Y_R5U G86Y_R6U G86Y_RTU G86Y_TTU XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_RV G88A_TV G88G_DV G88G_O1V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_RV G88I_TV G88J_DV G88J_O1V G88J_O2V G88J_RV G88J_TV G88L_DV G88L_O1V G88L_RV G88L_TV G88P_DV G88P_O1V G88P_O2V G88P_RV G88P_TV G88R G88S_DV G88S_O1V G88S_O9V G88S_RV G88S_TV G88T_O1V G88T_O2V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_D1U G88X_D2U G88X_DTU G88X_DV G88X_O1U G88X_O1V G88X_O2U G88X_OTU G88X_R1U G88X_R2U G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_D1U G88Y_D2U G88Y_D3U G88Y_D4U G88Y_D5U G88Y_D6U G88Y_DTU G88Y_DV G88Y_O1U G88Y_O1V G88Y_O2U G88Y_OTU G88Y_R1U G88Y_R2U G88Y_R3U G88Y_R4U G88Y_R5U G88Y_R6U G88Y_RTU G88Y_RV G88Y_TTU G88Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_O1V G90A_O2V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_RV G90J_TV G90L_DV G90L_O1V G90L_O2V G90L_RV G90L_TV G90R G90T_O1V G90T_O2V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_D1U G90X_D2U G90X_DTU G90X_DV G90X_O1U G90X_O1V G90X_O2U G90X_OTU G90X_R1U G90X_R2U G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_D1U G90Y_D2U G90Y_D3U G90Y_D4U G90Y_D5U G90Y_D6U G90Y_DTU G90Y_DV G90Y_O1U G90Y_O1V G90Y_O2U G90Y_O3U G90Y_OTU G90Y_R1U G90Y_R2U G90Y_R3U G90Y_R4U G90Y_R5U G90Y_R6U G90Y_RTU G90Y_RV G90Y_TTU G90Y_TV XCANS XDEMS XOTHS XREPS

YCANS YDEMS YOTHS YREPS

## 9.47 Variables for WA

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84I_DV G84I_O1V G84I_O2V G84I_O9V G84I_RV G84I_TV G84J_DV G84J_O1V G84J_O2V G84J_O9V G84J_RV G84J_TV G84K_DV G84K_O1V G84K_O2V G84K_O9V G84K_RV G84K_TV G84L_DV G84L_O1V G84L_O2V G84L_O9V G84L_RV G84L_TV G84O_DV G84O_O1V G84O_O2V G84O_O9V G84O_RV G84O_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84T_DV G84T_O1V G84T_O2V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84XA_DV G84XA_O1 G84XA_RV G84XA_TV G84XB_DV G84XB_O1 G84XB_RV G84XB_TV G84XC_DV G84XC_O1 G84XC_RV G84XC_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86XA_DV G86XA_O1 G86XA_RV G86XA_TV G86XB_DV G86XB_O1 G86XB_RV G86XB_TV G86XC_DV G86XC_O1 G86XC_RV G86XC_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_O9V G88I_RV G88I_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88K_DV G88K_O1V G88K_O2V G88K_O9V G88K_RV G88K_TV G88L_DV G88L_O1V G88L_O2V G88L_O9V G88L_RV G88L_TV

G88O_DV G88O_O1V G88O_O2V G88O_O9V G88O_RV G88O_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88XA_DV G88XA_O1 G88XA_RV G88XA_TV G88XB_DV G88XB_O1 G88XB_RV G88XB_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90XA_DV G90XA_O1 G90XA_RV G90XA_TV G90XB_DV G90XB_O1 G90XB_RV G90XB_TV G90XC_DV G90XC_O1 G90XC_RV G90XC_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.48 Variables for WI

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84TAPR G84V G84VORIG G84X_DV G84X_O1V G84X_O2V G84X_O9V G84X_RV G84X_TV G84Y_DV G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV

**1986**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86A_DV G86A_O1V G86A_O2V G86A_O9V G86A_RV G86A_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86S_DV G86S_O1V G86S_O2V G86S_O9V G86S_RV G86S_TV G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_DV G86X_O1V G86X_O2V G86X_O9V G86X_RV G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV

**1988**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_DV G88X_O1V G88X_O2V G88X_O9V G88X_RV G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV

**1990**

ST CY MCD MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_DV G90X_O1V G90X_O2V G90X_O9V G90X_RV G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV

## 9.49 Variables for WV

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84A_DV G84A_O1V G84A_O2V G84A_O9V G84A_RV G84A_TV G84F_DV G84F_O1V G84F_O2V G84F_O9V G84F_RV G84F_TV G84G_DV G84G_O1V G84G_O2V G84G_O9V G84G_RV G84G_TV G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84I_DV G84I_O1V G84I_O2V G84I_O9V G84I_RV G84I_TV G84J_DV G84J_O1V G84J_O2V G84J_O9V G84J_RV G84J_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84T_DV G84T_O1V G84T_O2V G84T_O9V G84T_RV G84T_TV G84TAPR G84V G84VORIG G84X_D01 G84X_D02 G84X_D03 G84X_D04 G84X_D05 G84X_D06 G84X_D07 G84X_D08 G84X_D09 G84X_D10 G84X_D11 G84X_D12 G84X_DTU G84X_DV G84X_O01 G84X_O02 G84X_O03 G84X_O04 G84X_O05 G84X_O1V G84X_O2V G84X_O9V G84X_OTU G84X_R01 G84X_R02 G84X_R03 G84X_R04 G84X_R05 G84X_R06 G84X_R07 G84X_R08 G84X_R09 G84X_R10 G84X_R11 G84X_R12 G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_DV

G84Y_O1V G84Y_O2V G84Y_O9V G84Y_RV G84Y_TV G84YA_DV G84YA_O1 G84YA_RV G84YA_TV G84YB_DV G84YB_O1 G84YB_RV G84YB_TV XCANS XDEMS XOTHS XREPS

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86H_DV G86H_O1V G86H_O2V G86H_O9V G86H_RV G86H_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86TAPR G86V G86VORIG G86X_D01 G86X_D02 G86X_D03 G86X_D04 G86X_D05 G86X_D06 G86X_D07 G86X_D08 G86X_D09 G86X_D10 G86X_D11 G86X_D12 G86X_DTU G86X_DV G86X_O01 G86X_O02 G86X_O03 G86X_O04 G86X_O05 G86X_O1V G86X_O2V G86X_O9V G86X_OTU G86X_R01 G86X_R02 G86X_R03 G86X_R04 G86X_R05 G86X_R06 G86X_R07 G86X_R08 G86X_R09 G86X_R10 G86X_R11 G86X_R12 G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_DV G86Y_O1V G86Y_O2V G86Y_O9V G86Y_RV G86Y_TV G86YA_DV G86YA_O1 G86YA_RV G86YA_TV G86YB_DV G86YB_O1 G86YB_RV G86YB_TV XCANS XDEMS XOTHS XREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88A_DV G88A_O1V G88A_O2V G88A_O9V G88A_RV G88A_TV G88F_DV G88F_O1V G88F_O2V G88F_O9V G88F_RV G88F_TV G88G_DV G88G_O1V G88G_O2V G88G_O9V G88G_RV G88G_TV G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88I_DV G88I_O1V G88I_O2V G88I_O9V G88I_RV G88I_TV G88J_DV G88J_O1V G88J_O2V G88J_O9V G88J_RV G88J_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88T_DV G88T_O1V G88T_O2V G88T_O9V G88T_RV G88T_TV G88TAPR G88V G88VORIG G88X_D01 G88X_D02 G88X_D03 G88X_D04 G88X_D05 G88X_D06 G88X_D07 G88X_D08 G88X_D09 G88X_D10 G88X_D11 G88X_D12 G88X_DTU G88X_DV G88X_O01 G88X_O02 G88X_O03 G88X_O04 G88X_O05 G88X_O1V G88X_O2V G88X_O9V G88X_OTU G88X_R01 G88X_R02 G88X_R03 G88X_R04 G88X_R05 G88X_R06 G88X_R07 G88X_R08 G88X_R09 G88X_R10 G88X_R11 G88X_R12 G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_DV G88Y_O1V G88Y_O2V G88Y_O9V G88Y_RV G88Y_TV G88YA_DV G88YA_O1 G88YA_O2 G88YA_O9 G88YA_RV G88YA_TV G88YB_DV G88YB_O1 G88YB_O2 G88YB_O9 G88YB_RV G88YB_TV XCANS XDEMS XOTHS XREPS

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME

G90A_DV G90A_O1V G90A_O2V G90A_O9V G90A_RV G90A_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V G90S_O9V G90S_RV G90S_TV G90TAPR G90V G90VORIG G90X_D01 G90X_D02 G90X_D03 G90X_D04 G90X_D05 G90X_D06 G90X_D07 G90X_D08 G90X_D09 G90X_D10 G90X_D11 G90X_D12 G90X_DTU G90X_DV G90X_O01 G90X_O02 G90X_O03 G90X_O04 G90X_O05 G90X_O1V G90X_O2V G90X_O9V G90X_OTU G90X_R01 G90X_R02 G90X_R03 G90X_R04 G90X_R05 G90X_R06 G90X_R07 G90X_R08 G90X_R09 G90X_R10 G90X_R11 G90X_R12 G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_DV G90Y_O1V G90Y_O2V G90Y_O9V G90Y_RV G90Y_TV G90YA_DV G90YA_O1 G90YA_O2 G90YA_O9 G90YA_RV G90YA_TV G90YB_DV G90YB_O1 G90YB_O2 G90YB_O9 G90YB_RV G90YB_TV G90YC_DV G90YC_O1 G90YC_O2 G90YC_O9 G90YC_RV G90YC_TV XCANS XDEMS XOTHS XREPS

## 9.50 Variables for WY

**1984**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G84H_DV G84H_O1V G84H_O2V G84H_O9V G84H_RV G84H_TV G84P_DV G84P_O1V G84P_O2V G84P_O9V G84P_RV G84P_TV G84Q_DV G84Q_O1V G84Q_O2V G84Q_O3V G84Q_O4V G84Q_O9V G84Q_RV G84Q_TV G84R G84S_DV G84S_O1V G84S_O2V G84S_O9V G84S_RV G84S_TV G84TAPR G84V G84VORIG G84X_D1U G84X_D2U G84X_D3U G84X_D4U G84X_D5U G84X_D6U G84X_D7U G84X_D8U G84X_D9U G84X_DTU G84X_DV G84X_O1U G84X_O1V G84X_O2U G84X_O2V G84X_O3U G84X_O4U G84X_O5U G84X_O9V G84X_OTU G84X_R1U G84X_R2U G84X_R3U G84X_R4U G84X_R5U G84X_R6U G84X_R7U G84X_R8U G84X_R9U G84X_RTU G84X_RV G84X_TTU G84X_TV G84Y_D1U G84Y_D2U G84Y_D3U G84Y_D4U G84Y_DTU G84Y_DV G84Y_O1U G84Y_O1V G84Y_O2U G84Y_O2V G84Y_O3U G84Y_O4U G84Y_O5U G84Y_O6U G84Y_O9V G84Y_OTU G84Y_R1U G84Y_R2U G84Y_R3U G84Y_R4U G84Y_RTU G84Y_RV G84Y_TTU G84Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1986**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G86B_DV G86B_O1V G86B_O2V G86B_O9V G86B_RV G86B_TV G86G_DV G86G_O1V G86G_O2V G86G_O9V G86G_RV G86G_TV G86H_DV G86H_O1V

G86H_O2V G86H_O9V G86H_RV G86H_TV G86I_DV G86I_O1V G86I_O2V G86I_O9V G86I_RV G86I_TV G86J_DV G86J_O1V G86J_O2V G86J_O9V G86J_RV G86J_TV G86Q_DV G86Q_O1V G86Q_O2V G86Q_O3V G86Q_O4V G86Q_O9V G86Q_RV G86Q_TV G86R G86T_DV G86T_O1V G86T_O2V G86T_O9V G86T_RV G86T_TV G86TAPR G86V G86VORIG G86X_D1U G86X_D2U G86X_D3U G86X_D4U G86X_D5U G86X_D6U G86X_D7U G86X_D8U G86X_D9U G86X_DTU G86X_DV G86X_O1U G86X_O1V G86X_O2U G86X_O2V G86X_O3U G86X_O4U G86X_O5U G86X_O9V G86X_OTU G86X_R1U G86X_R2U G86X_R3U G86X_R4U G86X_R5U G86X_R6U G86X_R7U G86X_R8U G86X_R9U G86X_RTU G86X_RV G86X_TTU G86X_TV G86Y_D1U G86Y_D2U G86Y_D3U G86Y_D4U G86Y_DTU G86Y_DV G86Y_O1U G86Y_O1V G86Y_O2U G86Y_O2V G86Y_O3U G86Y_O4U G86Y_O5U G86Y_O6U G86Y_O9V G86Y_OTU G86Y_R1U G86Y_R2U G86Y_R3U G86Y_R4U G86Y_RTU G86Y_RV G86Y_TTU G86Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1988**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G88H_DV G88H_O1V G88H_O2V G88H_O9V G88H_RV G88H_TV G88P_DV G88P_O1V G88P_O2V G88P_O9V G88P_RV G88P_TV G88Q_DV G88Q_O1V G88Q_O2V G88Q_O3V G88Q_O4V G88Q_O9V G88Q_RV G88Q_TV G88R G88S_DV G88S_O1V G88S_O2V G88S_O9V G88S_RV G88S_TV G88TAPR G88V G88VORIG G88X_D1U G88X_D2U G88X_D3U G88X_D4U G88X_D5U G88X_D6U G88X_D7U G88X_D8U G88X_D9U G88X_DTU G88X_DV G88X_O1U G88X_O1V G88X_O2U G88X_O2V G88X_O3U G88X_O4U G88X_O5U G88X_O9V G88X_OTU G88X_R1U G88X_R2U G88X_R3U G88X_R4U G88X_R5U G88X_R6U G88X_R7U G88X_R8U G88X_R9U G88X_RTU G88X_RV G88X_TTU G88X_TV G88Y_D1U G88Y_D2U G88Y_D3U G88Y_D4U G88Y_DTU G88Y_DV G88Y_O1U G88Y_O1V G88Y_O2U G88Y_O2V G88Y_O3U G88Y_O4U G88Y_O5U G88Y_O6U G88Y_O9V G88Y_OTU G88Y_R1U G88Y_R2U G88Y_R3U G88Y_R4U G88Y_RTU G88Y_RV G88Y_TTU G88Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

**1990**

ST CY MCDGRP WD PR PRS AF SF BB CD SD LD LDS PNAME G90B_DV G90B_O1V G90B_O2V G90B_O9V G90B_RV G90B_TV G90G_DV G90G_O1V G90G_O2V G90G_O9V G90G_RV G90G_TV G90H_DV G90H_O1V G90H_O2V G90H_O9V G90H_RV G90H_TV G90I_DV G90I_O1V G90I_O2V G90I_O9V G90I_RV G90I_TV G90J_DV G90J_O1V G90J_O2V G90J_O9V G90J_RV G90J_TV G90Q_DV G90Q_O1V G90Q_O2V G90Q_O3V G90Q_O4V G90Q_O9V G90Q_RV G90Q_TV G90R G90S_DV G90S_O1V G90S_O2V

G90S_O9V G90S_RV G90S_TV G90T_DV G90T_O1V G90T_O2V G90T_O9V G90T_RV G90T_TV G90TAPR G90V G90VORIG G90X_D01 G90X_D02 G90X_D03 G90X_D04 G90X_D05 G90X_D06 G90X_D07 G90X_D08 G90X_D09 G90X_D10 G90X_D11 G90X_D12 G90X_DTU G90X_DV G90X_O01 G90X_O02 G90X_O03 G90X_O04 G90X_O05 G90X_O06 G90X_O1V G90X_O2V G90X_O9V G90X_OTU G90X_R01 G90X_R02 G90X_R03 G90X_R04 G90X_R05 G90X_R06 G90X_R07 G90X_R08 G90X_R09 G90X_R10 G90X_R11 G90X_R12 G90X_RTU G90X_RV G90X_TTU G90X_TV G90Y_D1U G90Y_D2U G90Y_D3U G90Y_D4U G90Y_DTU G90Y_DV G90Y_O1U G90Y_O1V G90Y_O2U G90Y_O2V G90Y_O3U G90Y_O4U G90Y_O5U G90Y_O9V G90Y_OTU G90Y_R1U G90Y_R2U G90Y_R3U G90Y_R4U G90Y_RTU G90Y_RV G90Y_TTU G90Y_TV XCANS XDEMS XOTHS XREPS YCANS YDEMS YOTHS YREPS

# Chapter 10

# District Codes for the Electoral Data Variables

This section provides district codes used in the voting variables for State Senate districts (SD) and and for State House/Assembly/Legislative districts (LD). The names of these districts differ by state and legislative house, and we provide the names here.

The columns of the individual table for each state that follows have these labels, with corresponding meanings:

**ST** State postal code abbreviation.

**CH** Chamber, Y for upper chamber, X for lower chamber.

**ED-S** Election district number and suffix. Each number and suffix uniquely identifies either an upper chamber or lower chamber district depending on the chamber [CH] code.

**YR1** Beginning year for which codes are applicable.

**YR2** Ending year for which codes are applicable.

**SEATS** Number of seats at stake in a district.

**LEN** Length of term.

**NAME** Local name assigned to district.

Here are the individual state tables:

# Chapter 11

# How to Draw Maps with ROAD Data

## 11.1 ROAD Geographic Boundary Files Descriptions

The ROAD project provides MCD-group map files in Arcview 2.0 format. (Boundry files do not exist for all electoral precincts in the U.S.) These files can be read into Arcview version 2.0 or later (or converted into other formats) and merged with the MCD-group level data allowing political and demographic variables to be easily mapped. Arcview requires three types of files to create these maps (`.shp`, `.shx`, and `.dbf`). The ROAD project provides these three types of files at the MCD-group level for each state. The files follow the naming convention `sum`*`XX`*`.shp`, `sum`*`XX`*`.shx`, and `sum`*`XX`*`.dbf`, where *`XX`* is a two letter state abbreviation. Instructions for merging these map files with MCD-group level data in Arcview 2.0 follow.

## 11.2 Merging Map Files with MCD Group Level Data in Arcview

1. **Prepare the Data** The MCD-group level data files are in SPSS portable format following the naming convention `mg_`*`XX`*`.por`, where *`XX`* is a a two letter state abbreviation. Arcview cannot read SPSS portable files, so you will have to convert them to `.dbf` (DBASE version 3 or 4) files with SPSS or DBMSCOPY. (`.dbf` files are limited to 255 variables;

you can use instead tab-delimited ASCII, but ArcView can only read and not write these files.) Name these files `mg_XX.dbf`.

**2. Load the Data** 1. Start Arcview.

2. Create a new view for your project by double-clicking on the VIEWS icon, in the project window.
3. Select the new VIEW window. Add the geodata (i.e., map data), by choosing ADD THEME from the VIEW menu, which will bring up a file-dialog box.
4. Then add the `sumXX.shp` file by double-clicking on it.
5. To see the map you just loaded, click on the selection box next to the theme title in the view window.

**3. Join the Map Information and the MCD-Group Data** The MCD-group level data only exists in table form to begin with.

1. Select the project window. Add a table by choosing ADD TABLE from the project menu. Locate and select the MCD-group file (`mg_XX.dbf`).
2. Select the Mcdgrp field in this table by clicking on the column title. It is this Mcdgrp variable we will use to join the data in this table to the map files.
3. Return to the VIEW that shows the map and from the THEME menu choose TABLE. This brings up and highlights a table containing attributes of the view. One of the columns in this table will also be labled Mcdgrp. Select the Mcdgrp column. Choose JOIN from the TABLE menu.

**4. Work with the Data in Arcview** You can now map any of the political or demographic variables contained in the MCDgroup level data in Arcview. Be sure to save this project when you exit, so that the data and maps remain joined.

# Part III

# *Technical Details*

# Chapter 12

# `plvdkey.exe`: Creating MCD-groups and a Common Index

## 12.1 Introduction

`plvdkey.exe` is a program, written for the project by ROAD Team Member Kenneth Benoit, that takes a list of precincts and their corresponding MCDs, and assigns a new number to each: that of the MCD Group. The basic objective of `plvdkey.exe`, therefore is to find the smallest common units of precincts and MCDs below the level of county. Because MCDs are generally larger than precincts, an MCD Group sometimes contains a single MCD and several precincts—a relatively common pattern of sub-county organization. Many counties, then, have some coincidence of MCD and precinct boundaries. Other counties, however, have MCDs which correspond in no way to precinct boundaries. In these cases, the smallest common unit boundary simply becomes the the county.

## 12.2 Usage

The usage for plvdkey is simple: type `plvdkey` *filename* `.mcd <ENTER>` at the DOS command prompt. The program then processes the input file(s) and produces the MCD Group output list and several log files.

## 12.3 Inputs to plvdkey.exe

The raw material for creating MCD Groups are lists of MCDs and precincts (by precinct). These come from the PL94-171 94 dataset which has numeric census codes for both units. Because sometimes MCDs and precincts in different counties have the same numbers, they are concatenated to the three-letter county code before being input to plvdkey.exe. The input is a text with one precinct per row, in the following format:

```
<county#><MCD#> <county#><precinct#>
```

As an example, here are the first five lines of ia.mcd, the mcd and precinct plvdkey.exe input file for Iowa:

```
001085 0010101
001040 0010102
001095 0010103
001015 0010104
001020 0010105
```

In this example, the "001" at the start of each column represents county number one, and the remaining three and four digits are MCD and precinct codes, respectively. Because the parsing routines in plvdkey.exe input each column as text strings, they must be rectangular—hence the leading zeros to fill the column. The columns may be delimited by spaces or tabs.

An additional input file may be necessary if it is desired that some counties never be split into multiple MCD Groups. By default, multiple MCD Groups are created in all counties where possible. If an exception list file is provided, with the name *filename*.mge (in the same directory as *filename*.mcd), plvdkey.exe keeps the excepted counties as single MCD Groups. This might be required when hand-matching of precincts to corresponding precinct-level electoral data units in a county is discovered to be impossible by a hand-matcher. The solution to this kind of problem in practice is to enter all of the unmatchable counties into an exception (.mge) file and create new MCD Groups.

The format of the .mge file is to place the census county number one to a line, ended with a semi-colon. Comments may be added to the remainder of the line. For example, we find the following exception in Oklahoma's ok.mge file:

```
71; Kay County
```

This file is automatically read, if present, when `plvdkey.exe` is run on the input file `ok.mcd`.

## 12.4 Output Files

Execution of `plvdkey.exe` produces three output files. These are:

| | |
|---|---|
| *filename*`.mg` | The MCD-group output list |
| *filename*`.mgl` | A log file detailing the results of the run. |
| *filename*`.mgs` | A one-line file containing statistics from the aggregation process. |

### 12.4.1 The `.mg` File

The main output file, entitled *filename*`.mg`, contains four columns. The first is the MCD Group number assigned by `plvdkey.exe`; the second and third are the original MCD and precinct codes (preserving the county prefix); and the fourth column is an indicator, by precinct, of how many MCD Groups were created in that county. So, when output in the `.mg` file, which is sorted by MCD Group, no two rows in the same county have different numbers in the fourth column. These columns are delimited by tabs.

Using Indiana once again as an example, the `.mg` file looks like this:

```
001     001085  0010119 16
001     001085  0010101 16
002     001040  0010110 16
002     001040  0010102 16
003     001095  0010121 16
003     001095  0010103 16
004     001015  0010104 16
005     001020  0010105 16
006     001050  0010106 16
006     001050  0010112 16
006     001025  0010106 16
006     001025  0010107 16
```

### 12.4.2 The .mgl File

This file is also produced when `plvdkey.exe` is run, and records such summary information as the date and time of the run, the number of lines read, the number of MCD Groups created for each county, and the total units of each kind that were read or created for that state.

```
--------------------------------------------------
PLVDKEY.EXE -- Version Date: 31-May-1995
Run at Wed Jun 12 15:29:06 1996
Created by Kenneth Benoit
--------------------------------------------------
Input file:  fl.mcd.  Read 5233 lines.
Output file: fl.mg

County IDs and the number of MCDgroups in each:
................................................
   county ID   1: 1 MCDgroup.
   county ID   3: 1 MCDgroup.
   county ID   5: 2 MCDgroups.
   county ID   7: 1 MCDgroup.
   county ID   9: 3 MCDgroups.
             ....
   county ID 127: 2 MCDgroups.
   county ID 129: 1 MCDgroup.
   county ID 131: 1 MCDgroup.
   county ID 133: 1 MCDgroup.

SUMMARY:
========
  Number of MCDs      = 294
  Number of precincts = 4689

  Number of Counties  = 67
  Number of MCDgroups = 82

Gained 15 more cases than with counties alone.
```

### 12.4.3 The `.mgs` File

This automatically created output file consists of a single line containing five columns. The purpose of creating these tiny files is to permit their concatenation to form a 50-line dataset of final production results from the application of `plvdkey.exe`.

For Michigan's `mi.mgs` file, for example, the file contained:

```
fl        67      82      294     4689
```

The first column is the two-letter state abbreviation. The second through fifth columns, respectively, are the numbers of counties, MCD Groups, MCDs, and precincts.

## 12.5 MCD Group-Creation Algorithm

The problem of finding geographic correspondence between MCDs and precincts to create the MCD Groups is several-fold, owing to the numerous possibilities hampering the boundary correspondence of these units.

1. An MCD could contain numerous precincts.
2. A precinct could contain more than one MCD (although this is rare).
3. A single precinct could overlap one or more MCDs.
4. A single MCD could overlap one or more precincts.

Both of the last two types of non-correspondence are common. For example, an MCD Group might contain three precincts which exhaustively and exclusively "tile" the area of the MCD Group. This should result in the creation of a single MCD Group containing one MCD and three precincts. However, let us suppose one of the three precincts overlapped the border of an adjacent MCD, so that they no longer filled the first MCD exclusively. Then this second MCD would have to be added to the MCD Group, as well as all of the precincts it contained. Furthermore, if any of the second MCDs precincts overlapped into another adjacent MCD, then it would be added to the MCD Group, as well as its precincts, which would have to be checked, and so on. When precinct and MCD boundaries do not correspond at all, the MCD Group grows to the county size, encompassing all of its county's

MCDs and precincts. In practice, however, nearly every state had some counties that contained multiple MCD Groups.

The algorithm for mapping MCD Groups from the existing geography proceeds much along the lines of the above discussion. After the exception counties have been assigned an MCD Group number, the procedure searches the geography using the following recursive procedure:

0. Get the list of MCDs and precincts sorted by precinct. Add a field of all zeros for MCD Group.

1. Cycle through the list looking for series of the same precinct numbers. (This happens when a precinct overlaps multiple MCDs).

2. When a precinct series (2 or more) is found, check the values of the MCD Group-number field.

   2a. Are all of the MCD Group-numbers for the series already assigned (non-zero)?

   YES: Skip the whole series, since it was previously assigned by recursion.

   NO: Go to step 2b.

   2b. Are all of MCD Group-numbers for the series UNassigned?

   YES: Exit, since something must be broken. Series of precincts should always be dealt with together.

   NO: Good, proceed to step 3.

3. Increment the MCD Group-number counter (which keeps track of the next value to assign to an MCD Group), since we are now dealing with a new MCD Group.

4. For each item in the series:

   4a. Assign its MCD Group field the current MCD Group-number.

   4b. Send its MCD number to the MCD-recursive search process (see below).

5. Continue cycling through the list as we began in step 1 until finished.

The key to this procedure is Step 4b. The MCD-recursive procedure takes the list, with the current state of its MCD Group-number assignments, and a single MCD number. It starts at the top of this list, and cycles

through it looking for precincts that *both* a) have the same MCD-number *and* b) have not yet been assigned an MCD Group-number. When such a precinct is found, the procedure assigns the current MCD Group-number to the precinct, and then calls the precinct analog of the precinct-recursive procedure. This works in just the same way as the MCD-recursive procedure, taking the current state of the entire list, and a single precinct number. It cycles through the list looking for unassigned precincts that match its precinct-number argument, assigning them the current MCD Group-number.

Whenever the precinct-recursive function makes an assignment, however, it calls the MCD-recursive procedure using that precinct's MCD-number as the argument. (Recall that the MCD-recursive procedure called the now calling precinct function in the first place). This procedure of searching for overlapping MCDs and then precincts goes back and forth until no unassigned MCD Group-numbers can be found that match the MCD- or precinct- numbers sent to the recursive functions. In other words, the recursive calls end when the MCD Group fields become filled through previous assignment, and the recursive checking for overlaps ends because no more matching MCDs or precincts are found that have not already been assigned. When this happens the recursive series terminates and the algorithm continues, having completed Step 4b.

More detailed documentation may be found in the source code itself, which is included with the data.

# Chapter 13

# Merging Census and Electoral Data

This chapter constitutes a checklist that we used to guide the creation of a state's MCD Group-level dataset from beginning to end, from the loading of the raw datasets to the production of the merged political and demographic final datasets. It is a data preparation recipe as well as a record of what was done to produce the final MCD Grouplevel merged files. Some of the wording and advice obviously refer to the specifics of our ROADteam's situation, but these notes can be used with few changes as a model for how to extend or redo the data preparation. The steps we created and followed were necessarily complicated, but we hope the information provided here goes some way toward meeting the replication standard (See Gary King, "Replication, Replication," *PS: Political Science and Politics*, with comments from nineteen authors and a response, Vol. XXVIII, No. 3 (September, 1995): 443–499.) Those who use our data will not normally need to read this chapter, except perhaps to track down possible outliers or errors.

## 13.1 A Formal Checklist

In general the steps must be followed consecutively. In some cases, where bullets enumerate a step rather than numbers, then these steps may be taken in any order.

The references to filenames use the following convention: ***xx*** refers to the two-letter postal abbreviation of the state while ***yy*** is the two-digit year.

After each section we provide an example of the files which that step should yield, using Oklahoma (`ok`) as an example.

### 13.1.1 Prepare the state directory

This crucial first step consists of making a directory for the state, and initiating a `readme.`*`xx`* file (where *`xx`* is replaced by the two-letter postal abbreviation for that state). This text file should be copied from our general template containing a checklist matching this one to be filled with dates and names of team members in as the steps are completed.

### 13.1.2 Load the datasets

This step consists of transferring this project's three constituent data files, `PL94-171` precinct-level electoral data and `STF3a` from their original sources (CD-ROMS, tape archives, etc.) onto the project server's hard disk, converting them to the project format (SAS), and preparing them to be worked upon. All files for each state are copied into the state directory.

While loading and converting these three datasets may be performed in any order, keep in mind that the `STF3a` datasets in particular take up a large amount of disk space (100–150 MB) and their loading may need to be coordinated with the demands of other tasks and users.

- `PL94-171`

  1. Copy the `PL94-171` file into the state directory. The original `PL94-171` file will have a filename such as `PL9417`*`xx`*, where *`xx`* is the two-digit state abbreviation code. There is only a single file for each state. The original format is `.dbf`; codebooks are standard for all states.
  2. Use *DBMSCopy* to convert the `PL94-171` file from its native `.dbf` format to SAS format. (*DBMSCopy* is a commercial software program.)
  3. Move the original `PL94-171` files into a single `.zip` archive with the name `pl94`*`xx`*`.zip`.

  What should be left over:

  `PL94170K.sd2`. SAS file containing all `PL94-171` data.

`PL940K.zip`. `zip` archive of original `PL94-171` files.

- precinct-level electoral data

  Because the precinct-level electoral data dataset is split according to year, it comes in several files. Each file must be dealt with separately (but equally!).

  1. Copy the precinct-level electoral data files into the state directory. These files use the following naming convention: ***xxyy*`mp20.dbf` where ***xx*** is the two-digit state abbreviation, and ***yy*** is the year.
  2. Convert the copied files from their original `.dbf` into SAS format (`.sd2` or `.ssd`) using *DBMSCopy*.
  3. Delete the original ***xxyy*`MP20.dbf` and related original *dbase* files to conserve disk space.

  What should be left over:

  `ok84MP20.sd2`. SAS file containing precinct-level electoral data data for 1984. Other years will be identical in format. Note that the extensions may actually be `.ssd` depending on the versions of SAS and *DBMSCopy* used.

  `ok86MP20.sd2`.

  `ok88MP20.sd2`.

  `ok88MP20.sd2`.

- `STF3a`

  The `STF3a` files are split into 35 files in their original form from the Census Bureau. They are located on CD-ROM, and come in `.dbf` format. Since they are so large, our basic strategy is to load them all onto the server, convert them to SAS format, delete the `.dbf` originals, merge them to produce a single file based only on MCDs, and then delete the 35 SAS-converted originals.

  1. Copy the files onto the server from the CD-ROMs. [Note: There is an MS-DOS batch file for this purpose named `stfcp-xx.bat` which you should copy into the state directory, rename it replacing `xx` with the state abbreviation, and edit the file to get the state codes right.] These 35 files be named `STF00`***xx*`.dbf` through

`STF34xx.dbf`. Put these files into a subdirectory of the state directory called `stf3a`. All of the `STF3a` steps below assume that this data is in the `stf3a` subdirectory.

2. Translate the 35 files into SAS format using *DBMSCopy*. [Note: There is an MS-DOS batch file for this purpose named `stfcv-xx.bat`. Copy it into the state directory and rename and edit it just as you did with `stfcp-xx.bat`. Executing this program will invoke *DBMSCopy* and convert the `.dbf` files into `.ssd` files.]
3. Merge the `STF3a` files into a single, MCD-level file. The template for doing this is a SAS program named `stfmg-xx.sas`. Copy it, rename it, and edit it as appropriate before submitting it in SAS. Processing this file in SAS will produce a dataset named `stfMCDxx.sd2`, which will combine data from the 35 input files—a total of over 3,000 variables—at the MCD level.
4. Move the original 35 `.dbf` and `.ssd` files to conserve disk space. There is a standard MS-DOS batch file to do this called `stfcl-xx.bat`.

What should be left over:

`stfMCDok.sd2`. The SAS dataset containing census data from `STF3a` at the MCD level.

`stfmg-ok.sas`. The SAS program file modified from the `stfmg-xx.sas` template, adapted for Oklahoma. Merges the 35 separate files to create an MCD-level `STF3a` dataset.

`stfcl-ok.bat`. The MS-DOS batch file modified from the `stfcl-xx.bat` template, adapted for Oklahoma. Removes and zips files that are no longer needed.

**[Optional: ]**

`stfcp-ok.bat`. The MS-DOS batch file modified from the `stfcp-xx.bat` template, adapted for Oklahoma. Copies original `STF3a` files from CD-ROM to the working state directory.

`stfcv-ok.bat`. The MS-DOS batch file modified from the `stfcv-xx.bat` template, adapted for Oklahoma. Automates the conversion of original files to SAS format using *DBMSCopy*.

### 13.1.3 Create the MCD-group Units

1. Generate a common list of precincts and MCDs from `PL94-171`.

This information comes from the `PL94-171` dataset and is extracted using a small SAS program. The template for this file is named `mcdpr-xx.sas`. Copy, rename, and edit this file before executing in SAS. This program takes precinct-level data from the `PL9417`*`xx`*`.ssd` file and outputs a text file named *`xx`*`.mcd`. *`xx`*`.mcd` contains two columns: MCD i.d. and precinct i.d. Both columns have the county ID concatenated onto the mcd or precinct code. This step also generates a SAS version of precinct-level `PL94-171` information named `mcdpr-ok.sd2`.

2. Scan the *`xx`*`.mcd` file for problems.

   View the text file list just produced and check for any problems. This includes alphabetical characters, blanks, or non-standard record lengths. Note any problems in `README.`*`xx`* and adjust subsequent procedures accordingly.

3. Generate MCD-groups using `plvdkey.exe`.

   Run the MS-DOS executable `plvdkey.exe` with the file *`xx`*`.mcd` as an argument. (This is an original C++ program we wrote and is included in our distribution.) This will result in two additional files: an MCD-group list text file named *`xx`*`.mg`, a log file from the run named *`xx`*`.mgl`, and a one-line statistical result file named *`xx`*`.mgs`.

4. Inspect the *`xx`*`.mgl` file.

   This file provides valuable information about the formation of the MCD-groups, and if something went wrong it is likely to show up here. Document any anomalies in `README.`*`xx`*, and contact `plvdkey.exe` author Kenneth Benoit if something seriously wrong occurred.

5. Delete the unzipped copy of `pl94170K.sd2`.

   We are finished with this large data file. Since we have a zipped copy from step 3 of the `PL94-171`steps in Section 13.1.2, we may delete it (after making sure the zipped version exists).

6. **[Optional]** Create a `plvdkey.exe` list of MCD Group exceptions.

   If you were stalled at the handmatch of Section 13.1.4 step 3, because of an inability to match precincts in a county that `plvdkey.exe` split into more than one MCD-group, then you must complete this step.

   An exceptions file `.mge` may be created as an additional input to `plvdkey.exe` to override the computer calculated assignment of multiple MCD-groups in a county. When `plvdkey.exe` is run, it automat-

ically looks for an exceptions list file of county codes that should never be split into more than one MCD-group. The format for these files is simply a single line per county, where the line contains the county's census number. The name of this file should always have the same root filename as the input `.mcd` file, and a `.mge` extension.

What should be left over:

`mcdpr-ok.sas`. SAS program to extract precinct-level records from `pl94170K.sd2` and write them to text file `ok.mcd`.

`mcdpr-ok.sd2`. SAS version of the precinct-level records extracted from `PL94-171`; contains precinct and MCD codes (no data).

`ok.mcd`. List of MCD and precinct codes.

[`ok.mge`] List of counties to never split up.

`ok.mg`. List of MCD-groups.

`ok.mgl`. Log file from `plvdkey.exe`.

`ok.mgs`. Statistics from MCD-group creation.

**REMOVED:** `PL94171OK.sd2`.

### 13.1.4 Assign MCD-group IDs to the Precinct-Level Electoral Data

This step takes the just-created MCD-group index (*xx*`.mg`) and assigns the precinct-level electoral data MCD-group codes based on the index. The result will be that the data will have several new columns, most notably one identifying which MCD-group each precinct resides in.

The assignment of precinct-level electoral data codes involves two stages. The first is an MCD-group assignment which the computer performs, and the second is carried out by precinct-matching from first a computer pattern-matching algorithm, and second by a human "hand-matcher."

In the first stage we assign MCD-group codes *without needing precinct code matches*. The shortcut is possible only for counties which are not disaggregated into more than one MCD-group. In other words, for some counties the MCD-group is equivalent to the county. In these cases it is not necessary to assign census precinct codes in the precinct-level electoral data dataset because we will not need to divide the county. So we use a

computer program to fill in these numbers automatically: if MCD-group 23 is equivalent to precinct-level electoral data county 17 then all precincts in county 17 are assigned an MCD-group code of 23. Note that this step first assumes we assign the census county codes to precincts, but this is a trivial step.

The second stage requires that we give precincts a census code, which comes from the `PL94-171` data now in the `mcdpr-ok.sd2` file. In this case, unlike the first stage cases, more than one MCD-group will exist in the county. We assign precinct codes by matching the precinct name field in the precinct-level electoral data files (the only identifier we are given in the original form of this dataset) with the precinct name fields in `PL94-171` (which also contains standard numerical census precinct codes). First a computer program generates as many suggested matches as possible, and then the data is turned over to a human matcher to complete the un-paired precincts by hand. Since precinct codes have been associated with an MCD-group code in the group generating step (# 3 of Section 13.1.3), assigning a precinct code is equivalent to assigning an MCD-group code.

When this step is finished, all precinct-based rows of precinct-level electoral data will have an MCD-group code.

1. Assign census county codes to the precinct-level electoral data,

   Assign census standard county codes from `PL94-171` to precincts, based on a county-name field merge. Since this information comes from the precinct-level *xx*`.mg`, MCD-group codes for non-disaggregated counties are also assigned at this step. The program is named `matcty`*xx*`.sas`. This program will have to be tweaked to get all of the county names to match correctly since they may differ slightly. Our precinct-level electoral data uses five-letter abbreviations of county names while `PL94-171` uses full names. Note that the single file `matcty`*xx*`.sas` performs county code assignment to every precinct-level electoral data file (every year). The original files are modified, creating no new files but adding information to the existing ones (*xxyy*`MP20.sd2`).

   Note that this step creates an exception to the general principle that programs should clean up after themselves, by deleting their intermediate or working files. Three such files are created in this step and are preserved for use by subsequent steps and for diagnostics. These are `key.sd2`, `key1.sd2`, and `key2.sd2`.

   What should be left over:

`matctyok.sas`. SAS program to assign county (and many MCD-group) codes to precinct-level electoral data.

`key.sd2` (intermediate file) SAS version of `ok.mg`

`key1.sd2` (intermediate file) SAS version of unique precincts by MCD-group.

`key2.sd2` (intermediate file) SAS version of unique MCDs by MCD-group.

**Modifies:** precinct-level electoral data files `OK84MP20.sd2`, `OK86MP20.sd2`, `OK88MP20.sd2`, `OK90MP20.sd2`,

2. Computer-match as many MCD-groups as possible.

   This step involves the heaviest SAS programming yet. For each precinct-level electoral data year file, a computer program named `matc`*yyxx*`.sas` is adapted to match as many MCD-groups as it can, and outputs the results to a Microsoft Excel (`.xls`) file for a human hand-matcher to check and complete. (*DBMSCopy* is called as an intermediate step for converting from SAS to Excel format.) It also produces a log file of the computer matching with information on how much work was saved.

   What should be left over:

   `matc84ok.sas`.

   `matc86ok.sas`.

   `matc88ok.sas`.

   `matc90ok.sas`. These SAS programs perform computer matching on each precinct-level electoral data year file and prepare the results for the human hand-matcher.

   `matc__ok.log`. Interesting information on the efficiency of the computer matches, generated by the SAS programs.

   `matc84ok.xls`.

   `matc86ok.xls`.

   `matc88ok.xls`.

   `matc90ok.xls`. Microsoft Excel files which are sent to the hand-matcher. These contain all of the matches that previous computer steps were able to find.

3. Hand-match the remaining precincts.

   Give the partially-matched `.csv` files to a human. The human should assign precinct and MCD-group codes to the unmatched precinct-level

electoral data precincts and verify those already matched. A record of all anomalies and decisions should be recorded in `math_xx.log`, grouping comments for all different precinct-level electoral data year files. The hand-matcher should write her or his changes to new `.xls` files named `mathyyxx.csv` and resubmit these to the person in charge of the computer work for this step.

What should be left over:

`math_ok.log`. A record of all anomalies and decision calls which the hand-matcher had to make on this state in the process of finishing the precinct matches.

`math84ok.xls`.

`math86ok.xls`.

`math88ok.xls`.

`math90ok.xls`. Microsoft Excel format files which are sent to the hand-matcher. These contain all of the matches that previous computer steps were able to find.

4. Inspect the hand-matcher's work.

   The person performing the computer work on this step should inspect the returns from the hand-matcher and scan for any problems or visible errors. He or she should also read the hand-matcher's notes in `math_xx.log`.

5. Assign updated MCD-group codes to the precinct-level electoral data files.

   Since this is the "final" precinct-level electoral data match we will call the program file for this step `matfyyxx.sas`. There will be as many of these are there are years, and each will simply modify the existing file (filling in the MCD-group field for values that were previously missing). In cases where no assignment could be made the MCD-group field value will be zero.

   What should be left over:

   `matf_ok.log`. Statistics on the success of final precinct-to-PLVD matching process.

   `matf84ok.sas`.

   `matf86ok.sas`.

`matf88ok.sas`.

`matf90ok.sas`. These four program files reintegrate the MCD-group information in the `.xls` format files from the hand-matcher into the corresponding precinct-level electoral data dataset.

**Modifies:** precinct-level electoral data files `OK84MP20.sd2`, `OK86MP20.sd2`, `OK88MP20.sd2`, `OK90MP20.sd2`,

### 13.1.5 Add MCD-group codes to the `STF3a` data.

This is essentially the same thing as what we did for precinct-level electoral data data in the census county code step 1 of Section 13.1.4 above. Based on the information returned by `plvdkey.exe` in the file *xx*`.mg`, we assign MCD-group codes to the *MCD-level* observations in our working version of the `STF3a` dataset.

The SAS code file to perform this step is called `matstf`*xx*`.sas`. It will modify the `STF3a` file `stfMCD`*xx*`.sd2` by adding to it a column for MCD-group.

What should be left over:

`matstfok.sas`. These four program files reintegrate the MCD-group information in the `.csv` format files from the hand-matcher into the corresponding precinct-level electoral data dataset.

**Modifies:** `STF3a` file `STFMCDOK.sd2`.,

### 13.1.6 Aggregate and Merge Electoral Data and Census `STF3a` data.

This is the final step where we aggregate each dataset on the basis of the MCD-group columns we gave them in earlier stages, and then merge the precinct-level electoral data with the `STF3a` census dataset. The datasets on both sides are aggregated at the MCD-group level. For precinct-level electoral data, this means aggregating the precincts into MCD-groups; for `STF3a`, it means the MCD units will become MCD-groups. At the end of this step both precinct-level electoral data and `STF3a` should have identical numbers of rows: as many as the number of MCD-groups. The only tricky part is that some variables must be dealt with differently for aggregation: while most are simply summed, those that are originally percentage-based must be dealt with differently.

Although the precinct-level electoral data are split into four years for each state, we decided to integrate them all into the final merged dataset for matching with `STF3a`, so that only one MCD-group-level dataset would result for each state. This was possible because the precinct-level electoral data variable names contain a code for the two-digit year and are thus each variable is unique among a state's four precinct-level electoral data year datasets. There were numerous identifier variables which were not unique. These were unimportant or nonsensical when aggregated to the MCD-group level, so we simply removed these before aggregating and merging.

1. Aggregate the MCD-level `STF3a` into MCD-groups.

   This step involves dealing with aggregation issues for variables that cannot be simply summed in the `STF3a` dataset

   (a) Identify which variables must be aggregated in an non-summation way, deal with these as special cases. It turns out that this is not a major problem in the `STF3a` dataset.

   (b) Use SAS commands to collapse the dataset into a one-line per MCD-group level dataset. The program file should be named `mgstf`*`xx`*`.sas`. Save the new dataset as `mgstf`*`xx`*`.sd2`.

   What should be left over:

   `mgstfok.sas`. Program to aggregate all four precinct-level electoral data year datasets into MCD-group level datasets.

   `mgstfok.sd2`. MCD-group-level dataset of `STF3a` data.

2. Aggregate the precinct-level precinct-level electoral data into MCD-groups.

   (a) Identify which variables must be aggregated in an non-summation way, deal with these as special cases.

   (b) Eliminate the non-year-specific and identifying variables which are unnecessary for the aggregated dataset.

   (c) Use SAS commands to collapse the dataset into a one-line per MCD-group level dataset. The program files should be named `mgpv`*`xxyy`*`.sas`. Save the new datasets as `mgpv`*`xxyy`*`.sd2`. Do this step for each year of the precinct-level electoral data files.

   What should be left over:

`mgpvok.sas`. Program to aggregate all four precinct-level electoral data year datasets into MCD-group level datasets.

`mgpvok.sd2`. SAS dataset of four years merged together, with irrelevant variables eliminated.

`mgpvok84.sd2`.

`mgpvok86.sd2`.

`mgpvok88.sd2`.

`mgpvok90.sd2`. Four MCD-group-level datasets of precinct-level electoral data data.

3. Merge the MCD-group level precinct-level electoral data and `STF3a` datasets.

   Use the program `mg_xx.sas` to produce the final dataset `mg_xx.sd2`.

   What should be left over:

   `mg_ok.sas`. SAS program to join the MCD-group-level datasets `mgstfok.sd2` and `mgpvok.sd2`.

   `mg_ok.sd2`. The final, MCD-group-level dataset containing both voting and census data.

## 13.2 Filenames Used

```
Merge Program Sequence

* XX is state abbreviation wildcard
* YY is year wildcard

PROGRAM         FUNCTION
-------         --------

copyall.bat     Copies all programs (below) from the programs path
                to a state's path, renaming the state-specific filenames.

stfcv_XX.bat    Converts STF3A files to SAS format

stfmg_XX.sas    Merges all STF3A files into one (mcd-level) file
                Input:  original STF3A files in SAS format
                Output: stfmcdXX.sd2
```

```
mcdpr_XX.sas    Reads in precinct-level PL94 data and
                outputs in format for PLVDKEY program
                Input:  original PL94 data
                Output: XX.mcd, mcdpr_XX.sd2 (pared-down PL94 file)

plvdkey.exe     Assigns optimal MCD groups
                Input:  XX.mcd, XX.mge (exceptions file)
                Output: XX.mg (key file), XX.mgl (log of process),
                        XX.mgs (MCDgroup statistics)

getdbf.bat      Unzips and translates original PLVD datafiles.

matct2XX.sas    Assigns county and MCD group codes to PLVD data and
                PL94-based Census precinct match file
                Input:  XX.mg, mcdpr_XX.sd2
                Output: key.sd2, key1.sd2, key2.sd2 (SAS versions of plvdkey
                        output), four original PLVD files, and census.sd2
                        (a PL94-based Census precinct file for matching)
                [NOTE: No state-specific information in this one.]

matcYYXX.sas    Runs computer match of Census and PLVD precincts
                and outputs results in Excel format for hand-matching
                Input:  original PLVD file, census.sd2
                Output: matcYYXX.xls, matc__XX.log
                        (and census2.sd2 & plvd.sd2, which can be dropped
                        once the operation is successful)

[first look for county exceptions; if found, create a .MGE file, unzip
and translate original copies of the PLVD voting data files using
GETDBF.BAT, translate them to SAS 6.04 (SSD) format, and and re-run
plvdkey, matctyXX.sas and matcYYXX.sas]

matfYYXX.sas    Takes hand-matched precinct info from Excel file
                and inserts MCD group codes into PLVD dataset;
                deletes absentee and unmatched precincts
                Input:  mathYYXX.xls, original PLVD file
                Output: matf__XX.log, matfYYXX.sd2

matstfXX.sas    Adds MCD group codes to (mcd-level) STF3A dataset
```

```
                [make sure you do this *after* running the exceptions
                for plvdkey]
                Input:  stfmcdXX.sd2, key2.sd2
                Output: stfmcdXX.sd2

mgpvXX.sas      Aggregates PLVD dataset to MCDgroup-level
                Input:  matfYYXX.sd2 (all years)
                Output: mgpvXX.sd2

mgstfXX.sas     Aggregates STF3A dataset to MCDgroup-level
                Input:  stfmcdXX.sd2
                Output: mgstfXX.sd2

mg_XX.sas       Merges aggregate PLVD and STF3A data at MCDgroup-level
                Input:  mgpvXX.sd2, mgstfXX.sd2
                Output: mg_XX.sd2

labeler.sas     Adds SAS variable labels to final dataset (not implemented)
```

# Chapter 14

# Hand-Matching: The Correspondence between Precincts, VTDs, and MCD-Groups

This chapter contains the instructions (mostly verbatim) given to our hand-matchers. It describes exactly our procedure to assign files from the precinct data a column of precinct numbers from the `PL94-171` dataset. The purpose of this assignment is to give the electoral dataset a field whose values can be used to aggregate and match its vote data with census data from the `STF3a` dataset. Precincts and VTDs do not match exactly in most areas, but precincts can always be assigned to one and only one MCD-Group. Thus, the errors created in precinct-to-VTD matches are almost always eliminated when aggregating up to MCD-Groups. We nonetheless try to minimize errors at this lower level of matching in the documentation that follows.

## 14.1 Overview

Our goal is to match units of observation from the Census to the electoral database. We are matching at the lowest level of aggregation for which data for the same unit exists on both the Census and electoral sides. That turns out to be a unit of our creation — what we call the MCD Group . The MCD Group combines 1 or more Census units called MCDs (which are minor civil

divisions).

In order to perform this merging of databases at the MCD Group level, each database has to have MCD Group values filled in. This has already been done for the Census precincts, and for the electoral files' precincts in cases where a given county equals just one MCD Group .

Your mission is to assign MCD Group values to the remaining precincts without them. You do this by finding the Census precinct name that matches a given precinct name; you then take the Census precinct name's MCD Group and assign it to the precinct match.

## 14.2 Summary of What to Do

You will be working with four files, one for each of the years for which we have voting data (i.e., 1984, 1986, 1988, and 1990). These files are called `mathxxyy.xls`, where *xx* is the state's two-letter abbreviation and *yy* is the year.

1. First, make sure there are no counties for which *exceptions* must be made. See the section on how to make exceptions (14.6). If there are exception counties, make a list of all such counties for that state (in one year's file is sufficient), and notify me so that the state can be reprocessed before you continue.

2. Next, do a survey of the computer matching. If a large number of precincts have very, very bad matches, report to headquarters at once! What constitutes a *consequential* bad match is a match of one name to a precinct when a much better name existed to match on, and when the unused match *has a different MCD Group number than the matched precinct*.

3. Now you can proceed down the list, assigning MCD Group numbers as you go. Copy the MCD Group number from the correct Census precinct name and paste it into the MCDGRP field for the as-yet-unmatched precinct name. See the section on rules (14.5) that you should follow in this process. You can skip over precincts that are simply units for tabulating absentee or other ballots without a geographical home base. See the absentee item (7) below.

4. Save your work in the same file.

5. Do all four years as above.

6. Make a record of your *major* decisions and problems in `math_xx.log`. There is no need to record every match you made — that is obvious in the files you saved. Also, don't record information about precinct spelling differences. Rather, *you should note important patterns or things that would not be obvious to someone else, things that you yourself won't remember in a month or two.*

7. Also in the log file you should record all distinct text strings in the precinct name field that you think identify absentee or other unusable precincts. For example, 'ABSENTEE PRECINCT', 'CHALLENGE BALLOTS', 'CURBSIDE TOTAL', 'BARRIER FREE', 'ABS.', and '(AV)' have all fallen under this rubric for certain states. All precincts with any occurrence of these strings will be dropped, so just make sure to *not* list any strings that occur in any valid PLVD precinct.

## 14.3 Some Terminology

A *precinct* is a creation of the political world for electoral data. We use Census geographical identifiers, which are roughly hierarchical. Top down, these are *state*, *county*, *MCD* (minor civil division, like a town or city), and VTD (voter tabulation district). (What is confusing is that VTD was once called "precinct," although this "census precinct" and the real electoral precincts are not identical.)

MCD Group is our construct. It is smaller than or equal to a county, and (except in California) is greater than or equal to the size of an MCD.

## 14.4 Some Basic Facts to Guide You

1. A single *precinct* can sometimes overlap more than one *MCD*.

2. An *MCD* is always fully contained within a given county.

3. Hence, an MCD Group will always be fully contained within a given county.

4. Precinct naming schemes will usually follow a consistent pattern within a given county.

## 14.5 Match Rules

1. Look for spelling variants or typos, especially when no other precinct name is remotely close. The people who typed these things in were not perfect. Also, slight punctuation differences are common. For example, 'JONES' BRIDGE' matches 'JONESBRIDGE', 'WARREN' matches 'WAREN', and so forth.

2. Abbreviations and slightly different wordings are common. For example, 'SMITH FIRE STA.' matches 'SMITH FIRE STATION', 'JEFFERSON ELEM. SCH.' goes with 'JEFF. ELEMENTARY SCHOOL', 'BURGESS REC. CTR.' with 'BURGESS RECREATION CENTER,' etc.

3. Often two or more precincts will exist with only one corollary on the other side, e.g., 'PCT 17-A' and 'PCT 17-B' compared to 'PRECINCT 17'. The typical solution is to assume that both of the variants on the one side are geographical components of the single precinct on the other, so that they should both get the same MCDGRP. When you make this assumption, make sure that there are no other slight differences in the text names that would indicate that the assumption is invalid, such as if one of the precincts '17' is for a city ward in the county and the other is for a rural ward in the county.

4. If an entire family of precinct names, e.g., 17-A through 17-X, has the same MCDGRP, and most of them have unique corollaries on the other side, but one or a few do not, then to those missing corollaries you can assign the same MCDGRP that all the others have. Do not do this if the family has *different* MCDGRP values, though!

5. ***Remember, you can leave precincts blank!*** We don't want to do this if we can avoid it, but if the match is simply not possible, or if a candidate is truly suspect, then skip it and move on. Just don't do this too often in a single county, or you will threaten its MCD Group-ing (see the exceptions section (14.6) below).

6. Sometimes a given precinct record, either on the Census or PLVD sides, will contain names for actual precincts that are obviously different: e.g., 'PRECINCTS 15, 16, & 18'. On the other side you may see three different rows, e.g., 'PREC 15', 'PREC 16', and 'PREC 18'. You can confidently make this match.

7. Sometimes acronyms are used, e.g., a 'MOAPA' series on one side becomes 'MOA' on the other, or 'NORTH LAS VEGAS' becomes 'NLV'. Go ahead and make the appropriate matches based on obvious acronyms, as long as they are unique, i.e., there is no other name that would produce the same acronym by the prevailing acronym-creation scheme in that county. If they are *not* unique, then you will have to skip these kinds of precincts.

8. Unfortunately, a new problem crops up with every state. Be flexible, record the problem, your options, and your decision, and move on, keeping in mind Rule Number 5 above!

## 14.6 Identifying Exceptions

If more than 50 percent of the precinct names in a county (1) currently lack MCDGRP values and (2) are simply not matchable by our most aggressive assumptions, then a county qualifies as an *exception*.

Also, even if 50 percent or more of the distinct PLVD precinct names have matches, if one or more MCD Group s from the Census side do not have any precinct matches, then the county must be an exception.

For an exception county, we have to renumber the MCD Group s. Hand-matching should not proceed until proper re-grouping is completed.

*Not matchable* means that there is no information in the Census precinct names for that county that corresponds to the text in the precinct names. For instance, the Census precincts may have full text names (e.g., Smith, Jones, Williams, etc.) and no numbers whatsoever, while the precincts may be just numbers (e.g., 1, 2, 3, etc.).

I also want to emphasize the county-specific nature of this problem. You must look at all precincts in a given county before you can make this decision. Count up the number of distinct precinct names. If more than half of those – not of those plus Census precinct rows! – are unmatchable, then you have an exception.

What you should look for are large numbers of contiguous rows with no MCD Group values. Less frequently, a county will have names on both sides, just ones that don't match. This will appear as a county with interleaved precincts, but with virtually no matches, every other line or so having a blank MCD Group field.

*NOTE:* Make a plain ASCII file that lists the exception counties in a

single column. Save it as `xx.MGE` in the state's PLVD directory. For example, it could look like the following:

```
51
123
125
131
143
```

## 14.7 When We Get Hand-Matching Results Back

After the hand-matcher has produced the `MATH`*yyxx*`.XLS` files, we integrate that information back into the SAS databases.

Given that hand-matching errors and oversights are inevitable, we have to follow a rigorously-defined process when reintegrating the hand-matcher's results. The goal, of course, is to limit the number of matching errors and absence of matches.

Our rules are:

1. We spot-check the hand-matching for 1990 and 1984 for 20 minutes or more.

2. If in 20 minutes of spot-checking (for the whole state), we discover *greater than* three precincts for which valid matches *could have been made*, then we send the whole batch of files back to a second hand-matcher for thorough review.

3. If in 20 minutes of spot-checking (for the whole state), we discover *greater than* 2 *bad* matches, we send the whole batch of files back to a second hand-matcher, in original condition. Once we get them back from the second hand-matcher, we compare to the first hand-matcher's results.

4. After all hand-matching is completed, we run the `matf` sequence of programs. This reveals a variety of errors (see the final match step 5 in Section 13.1.4), which are corrected immediately.

# Chapter 15

# State-by-State Exceptions and Notes for all ROADDatasets

This chapter describes special concerns and merge issues for each state.

## 15.1 Alaska

Merged at state level.

Alaska does not have typical county names on the Census side. The data were thoroughly checked to verify that the correct SUMLEV was extracted from the PL94-171 data, and it was (SUMLEV=050 for the county level). The Census numbering scheme is unusual (e.g., 013, 016, 020, 050, 060, etc.), unlike the typical odd number approach. Moreover, the Census "counties" are labeled "Borough" or "Census Area", *not* "County."

On the other side, the county abbreviations used in the electoral data have few matches to the text strings for the "county" variable on the Census side. And electoral county numbers do not follow the same sequence (i.e., 401, 402, 403,...).

Even the population counts on the Census side have very little corollary on the electoral side (using the electoral data total registered voters variable, G90R).

Finally, the number of county units is not the same on either side, with

27 on the electoral end and 25 from the Census.

Therefore, this state could not even be merged at the county level.

The potential county matches I are listed below, using the electoral CY variable and the Census CNTY variable.

```
CY      CNTY

401     130
402
403
404     110
405     122
406
407
408
409
410
411
412
413
414
415
416     170
417
418     240
419     201 (too many on electoral side)
420     090 (too few on electoral side)
421     016
422     185
423
424
425
426     060 (too many on electoral side)
427     150
```

This list leaves out 14 more Census counties which are unmatched.

## 15.2 Alabama

Merged at MCD Group level.

MCDGRPs 060 and 061 for 1984 only have validity problems. 061 has no electoral data. 060 is based on a suspect match: there is probably a smaller universe on the Census side than on the electoral side.

MCDGRPs 072 and 073 have a similar problem. 072 is empty of voting data. 073 has probably a smaller universe on the Census side than on the electoral side.

For MATH84AL, County 123 there are 55 unmatched electoral precincts named Tallapoosa. These were treated as the same as Tallassee.

For MATH86AL County 123 only 2 electoral precincts was named Tallapoosa City.

For MATH88AL and MATH90AL County 123 only 1 electoral precincts named Tallapoosa City.

## 15.3 Arkansas

Merged at MCD Group level.

There are several electoral precincts of the form A-B where A and B have different MCDGRPs. MCDGRP -A gets the electoral precincts information and MCDGRP -B gets nothing which often results in no voting data for that group. An exception is made MCDGRP -A already has other electoral precincts information matched and MCDGRP -B has none, in which case the match goes to B. The following is a list of the MCDGRPs that received a surplus and deficit of electoral precincts information:

| SURPLUS | DEFICIT | 1990 | 1988 | 1986 | 1984 |
|---|---|---|---|---|---|
| 23 | 24 | | | | x |
| 120 | 127 | x | | | |
| 131 | 128 | x | | | |
| 110 | 132 | x | | | |
| 123 | 124 | x | | | |
| 130 | 129 | x | | | |
| 111 | 117 | x | | | |
| 115 | 114 | x | | | |

| | | | | | |
|---|---|---|---|---|---|
| 112 | 119 | x | | | |
| 141 | 140 | | | x | |
| 233 | 234 | | | x | |
| 249 | 248 | x | x | x | x |
| 285 | 282 | x | | | |
| 296 | 284 | x | | | |
| 359 | 358 | x | | | |
| 392 | 408 | | x | x | x |
| 403 | 391 | x | x | | |
| 391 | 403 | | | x | x |
| 452 | 456,451 | x | | | |
| 476 | 470 | x | x | x | x |
| 479 | 480 | | x | x | x |
| 488 | 489 | x | x | x | x |
| 481 | 480,486 | x | | | |
| 486 | 480 | | x | | |
| 487 | 475 | x | x | x | x |
| 472 | 480 | x | | | |
| 522 | 521 | x | x | x | x |
| 567 | 566 | x | | | |
| 600 | 599 | | x | | |
| 601 | 602 | | x | | |
| 605 | 603 | | x | | |
| 608 | 607 | | x | | |
| 611 | 608 | | x | | |
| 617 | 612,616 | | x | x | x |
| 618 | 615 | | x | x | x |
| 620 | 621,619 | | x | x | x |
| 622 | 614 | | x | x | x |
| 635 | 636 | x | x | x | |
| 653 | 652 | x | | | |
| 659 | 655 | | x | | |
| 660 | --- | x | | | |
| 660 | 655 | | x | | |
| 739 | 742 | x | x | | |
| 744 | 745 | x | x | | |
| 749 | 751 | | x | | |
| 754 | 753,758 | x | x | | |
| 757 | 756 | | x | | |
| 762 | 763 | | x | | |

| | | | |
|---|---|---|---|
| 772 | 770 | x | x |
| 775 | 774 | x | x |
| 764 | 763 | x | |

The x's signify for which years a problem exists in any pair. In any year checked, both members of the pair are marked as questionable.

Spelling errors abound in this state. The following are the more dubious matches which are possibly matched in error:

| Year | MCDGRP | Census Precinct | Electoral Precinct |
|---|---|---|---|
| 1988 | 713 | DOBSON | DOLESON |
| 1988 | 715 | LUNSFORD | SUNSFORD |
| 1986 | 79 | OLEVY | ILVEY |
| 1986 | 133 | LADRAN | CADRAN |
| 1986 | 135 | CENTER POST | O. POST |
| 1986 | 138 | GRASSEY | TRASSEY |
| 1986 | 365 | BROWN SPRINGS | BROWN SANNAS |
| 1986 | 396 | GREENSBORO | GAINSBORO |
| 1986 | 715 | LUNSFORD | SUNSFORD |
| 1984 | 365 | BROWN SPRINGS | BROWN SANNAS |
| 1984 | 855 | MARION | MORION |

This state had to be re-grouped and re-processed with new exceptions.

Electoral precincts with 'PAPER ' in their names were assumed to be absentee precincts.

## 15.4 Arizona

Merged at MCD Group level.

## 15.5 California

Merged at blockgroup level.

For more information see details on the the California Block Group Merge.

## 15.6 Colorado

Merged at MCD Group level.

Some CENSPRECs (xyz) in county 001 are divided into (xyz)A and (xyz)B. However, there exists similar divisions in the electoral data only in 1990.

Normally both A and B parts are in the same MCDGRP. The one exception is PRECINCT 3208A and 3208B. 3208A is in MCDGRP 001 and 3208B is in MCDGRP 002. This causes a positive result to appear in the matf county log file under: Stats to check that no MCDGRP value was changed.

In 1990 this is dealt with properly. In 1984-88 there is probably a slight excess of of electoral data attributed to MCDGRP 001 at the expense of MCDGRP 002. There are 184 observations between MCDGRPs 1 and 2 and so this error should prove to be slight.

The numeric portions of the full text precinct names in the electoral and Census databases matched about 99% of the precincts. Over the four years, no more than 15 precincts were hand assigned an MCDGRP.

## 15.7 Connecticut

Merged at MCD level.

## 15.8 District of Columbia

Merged at state level.

## 15.9 Delaware

Merged at county level.

## 15.10 Florida

Merged at MCD Group level.

Because of size constraints in using the PLVDKEY FL was divided into two MCD files, FL1.mcd and FL2.mcd, and the PLVDKEY was run on them separately. FL2.mg was then appended to to FL1.mg, and the MCDGROUP numbers on the FL2.mg records were corrected. The result, FL.mg, is the correctly-processed output that PLVDKEY would produce if it could handle 5000-line input files.

The 1984 electoral file for County 57 has no recognizable electoral precinct /CENSPREC match.

## 15.11 Georgia

Merged at MCD Group level.

There is one MCDGRP (93) that has no electoral precinct matches in 1990. It is marked as questionable in that year.

The original hand-matcher recognized several counties that should have been made exceptions. After including these exceptions, the computer match process was re-run.

## 15.12 Hawaii

Merged at county level.

Census VTD definitions existed but overlapped MCDs to such an extent that no nontrivial MCD Group-ing was possible.

While Hawaii's Census data allows on for reasonable MCDgrouping, and while the voting data is usable, no precinct matches can be made for any year: the electoral data has only text names, while the Census data has only numeric names (in the full-text precinct name field). Furthermore, the electoral PR field (a numeric variable) does not follow any pattern that could serve as a recognizable basis for matching to the numeric values in the Census full-text precinct name field.

Therefore, Hawaii can only be aggregated at the MCDGRP=COUNTY level.

The exceptions file HI.MGE now contains a list of every county in the state, reflecting the condition above. However, other than running PLVDKEY with these (correct) exceptions, no other processing has been done on these data for now.

## 15.13 Iowa

Merged at MCD Group level.

There are several electoral precincts of the form A-B where A and B have different MCDGRPs. In county 151 these were left in place. MCDGRP -A gets the electoral precinct information and MCDGRP -B ges nothing which often results in no voting data for that group. The following is a list of the MCDGRPs that recieved a surplus and deficit of electoral information in 1990:

```
SURPLUS         DEFICIT

  895             897
  899             901  **
  894             903
  910             905
  896             909  **

and also:
  810             807,813 **
in county 129.

and also:
  116             120 **
in county 17.


**also a problem in 1988, 86 and 84.
```

In three cases a electoral precinct could be easily assigned by a matching keyword to one of two MCDGRPs. In both cases one of the two groups had as yet no associated electoral precincts and so the match was given to that MCDGRP.

The single match to 098 could conceivably have gone to 097, similarly the match to 1059 could have gone to 1060, and the matched pair to 1124 could have gone to 1125.

All other empty MCDGRPs in the Matf ia.log are empty. There are 55 in 1990, 37 in 88, 36 in 86 and ** in 84.

The following electoral precincts were left blank, since each of their component parts has a different MCDGRP. It is possible they were assigned an MCDGRP in the first place due to mistaken handmatching.

For all years: County 129: Rawles-Lyons-Tabor County 151: Center-Sherman

For MATH90IA only: County 151: Swan Lake-Marshall

A number of counties had a new kind of problem – one PLVDKEY precinct matching to two or more Census precincts with *different* MCDGRPs. For the sake of accuracy, all counties in which such problems occurred, no matter how slight, were made exceptions and the PLVDKEY was re-run. The cost was about 400-500 units, with over 1100 still remaining. After the Exceptions Were Incorporated

Many electoral precinct in Iowa seem to be aggregations of CENSPREC. Often the component CENSPRECs have different MCDGRPs, so it was not clear which MCDGRP to assign to the electoral precinct.

In hand matching through county 151 of the 1984 data problematic electoral precincts are followed by potential MCDGRPs.

```
County 009:
CAMERON LINCOLN (061 or 063)
DOUG ME'VILLEN 1/2 LEROY (067 or 066)
HAMLIN and GREELEY (064 or 065)

County 027:
KNIEST/MAPLE RIVER (064 or 065)
RICHLAND/GLIDDEN (194 or 201)

County 031:
CASS-LINN (218 or 227)
IOWA-SUGAR CREEK (226 or 233)

County 063:
CENTER-SWAN LK (446 or 455)
DENMARK-JACK CREEK (447 or 453)
ELLSWORTH-LINCOLN (448 or 454)

County 083:
ELDORA CITY (601 or 602)
```

County 103:
PLEASANT VALLEY-E LUCAS S (746 or 736)

County 105:
MORLEY (755 or 760)

County 115:
COLUMBUS JCT-OAKLAND (832 or 840)
ELM GROVE-MARSHALL (835 or 838)
GRANDVIEW-S PORT LOUISA (836 or 841)
WAPELLO TWP-JEFF (843 or 837)

County 119:
CENTENNIAL LOGAN (858 or 866)
LARCHWOOD 1 SIOUX (856 or 870)
LIBERAL MIDLAND (863 or 868)
LYON RICHLAND (867 or 865)

County 121:
DOUGLAS LINCOLN (872 or 878)
RAWLES LYONS TABOR (939 or 936 or 942)
WEST OAK ST MARY'S (937 or 941)

County 133:
FAIRVIEW LAKE (963 or 959)
FRANKLIN LINCOLN (964 or 959)
JORDAN SOLDIER (966 or 970)

County 135:
BLUFF CR AND PLEASANT (975 or 977)
CEDAR AND UNION (976 or 983)
FRANKLIN AND MONROE (978 or 982)
JACKSON AND WAYNE (980 or 985)
TROY AND MANTUA (974 or 981)

County 137:
DOUGLAS GRANT (986 or 987)

County 149:

```
AMERICA ELGIN (1056 or 1057)
FRED-MARION (1059 or 1067)
HUNGERFORD-LINCOLN (1063 or 1066)
JOHNSON-WASHINGTON (1064 or 1076)
LIBERTY PLYMOUTH (1065 or 1070)
PRESTON GRANT (1072 or 1060)
REMSEN HENRY (1067 or 1062)
SIOUX WESTFIELD (1073 or 1077)
```

## 15.14 Idaho

Merged at MCD Group level.

## 15.15 Illinois

Merged at MCD level.

## 15.16 Indiana

Merged at MCD level.

## 15.17 Kansas

Merged at MCD Group level.

There are several possible mismatches where it is believed that a electoral precinct should be associated with the MCDGRP it is assigned, but it is conceivable that it might belong to another.

```
MCDGRP  CENSUS PRECINCT              ELECTORAL PRECINCT

In 1990:

 604    Gardner 1 and 2              Gardner TWP 1 and 2
 605    Gardner Precinct 1 and 2     GAC (two of them)
1040    Phillipsburg                 Phillipsburg/Armory
1355    City of Lake Quivira         QC1
```

```
1462    Wellington Ward              /          /
        1/1,1/2,2/1,2/2,            1/1,1/2,1/3,1/4,
        3/1,3/2,4/1,4/2.            2/1,2/2,2/3,2/4.

In 1988:

 604    Gardner 1 and 2             Gardner Twnshp 1 and 2
 605    Gardner Precinct 1 and 2    Gardner City Precinct 1 and 2
 816    Odee                        Adee
1040    Phillipsburg                Phillipsburg/Armory

In 1986 and 1984:

 604, 816, 1040:  as above.
```

There are also several electoral precincts of the form A-B where A and B have different MCDGRPs. MCDGRP -A gets the electoral information and MCDGRP -B gets nothing which often results in no voting data for that group. The following is a list of the MCDGRPs that recieved a surplus and deficit of electoral information in 1984:

```
SURPLUS          DEFICIT

  582**          585**
  751            750
  793            783
  833**          834**
  860            856
  888**          890**
  889**          890**
 1295*          1294*

*  and also 1984 and 1986.
** and also 1984 and 1986 and 1990.
```

Intitial hand matching found that only County 069 should be an exception for all years. Checking the remainder of the state found a few more exception counties. The state was then reprocessed to be computer-matched again.

## 15.18 Kentucky

Merged at county level.

Kentucky was one of the four non-participants in the Census `PL94-171` program to define VTD codes.

## 15.19 Louisiana

Merged at MCD Group level.

There are 2 MCDGRPs with no electoral precinct match. One (88) does not match in any year, the other (42) matches only in 1988.

## 15.20 Massachusetts

Merged at MCD level.

## 15.21 Maryland

Merged at MCD Group level.

There are 3 MCDGRPs with no electoral precinct match. The same three occur in all years, except in 1984 where the appearance of "Carroll WD12" gives voting data to one of these MCDGRPs in that year. All three MCDGRPs are in County 013.

## 15.22 Maine

Merged at MCD level.

## 15.23 Michigan

Merged at MCD Group level.

There exists a possible mismatch in MCDGRP 580. CENSPREC "Goldwater" is matched to electoral precinct "Coldwater" as a possible mis-

spelling. This is the only electoral precinct match in MCDGRP 580. MCDGRP is marked as questionable in all four data sets.

Also, there exist some data where CENSPRECs "ANAME CITY" and "ANAME TWP." were split between two separate MCDGRPs, but the electoral precinct names did not specify "TWP." or "CITY". A best estimate was made based on any numbers or precinct letters associated with the data, or patterns existing elsewhere in the same county. The MCDGRP pairs affected are listed below, along with the relative expected error (surplus or deficit) in the amount of electoral information associated with that MCDGRP.

| SURPLUS | DEFICIT |
|---|---|
| 048 | 049 |
| 308 | 307 |
| 318 | 317 |
| 479 | 478 |
| 769 | 768 |
| 1270 | 1269 |

There exist a lot of MDCDGRPs in the 1990 data set with out any usable electoral precinct matches. A common motif running among them is that they are made up of only one CENSPREC, and this CENSPREC has exactly two 901-(AV) matches (which are discarded because these should be absentees). In other CENSPRECs where usable matches are made there is only one 901-(AV) match and one usable match. Perhaps one of these two 901-(AV) matches is not really a 901-(AV) but a normal electoral precinct mislabeled.

There are eighteen occurrences. They are all empty of electoral data and so are marked questionable in 1990. They are MCDGRPs: 62, 67, 68, 95, 97, 102, 234, 235, 242, 249, 289, 456, 459, 542, 635, 801, 1078, and 1084.

Very often, two CENSPREC have the same name but for the addition of "city of" (e.g. Harrisville and Harrisville, city of). When such CENSPRECs have different MCDGRPS, they were matched based on whether the word "city" was part of the electoral precinct name. Otherwise, whether the word city was included or not was ignored (e.g. in county 5, electoral precinct "Holland" was matched with CENSPREC "Holland, city of" because there is no CENSPREC "Holland.")

Precincts ending in (AV), usually preceded by 901 or some other 900 number, are absentee precincts. None of these were matched. In MATH86MI,

some (very few) of the 901s are not followed by (AV), but they appear to follow the pattern of absentee precincts, so they were not matched either.

Plainwell-901(AV) is an absentee precinct and should not be matched,but was matched before hand-matching was begun.

## 15.24 Minnesota

Merged at MCD Group level.

There are three electoral precincts in the 1990 dataset of the form A-B where A and B have different MCDGRPs. MCDGRP -A gets the electoral information and MCDGRP -B ges nothing which often results in no voting data for that group. The MCDGRP pairs involved are:

| SURPLUS | DEFICIT |
|---|---|
| 453 | 430 |
| 932 | 928 |
| 1695 | 1696 |

They are all marked as questionable for this year, 1990.

There are 15 other MCDGRPs have no electoral precinct matches for 1990, these are simply empty and are marked as questionable for that year. There are 16 in 1988, 19 in 1986 and 29 in 1984.

There exist CENSPREC pairs of the form "ANAME", "ANAME TWP." and corresponding electoral precinct pairs of the form "ANAME CITY", "ANAMETWP". Where the two CENSPRECs were in different MCDGRPs.

In such cases the CENSPREC "ANAME" was matched to "ANAME CITY" electoral precinct, and CENSPREC "ANAME TWP." was matched to "ANAME TWP." electoral precinct.

This follows the pattern in other pairs where the word "CITY" is not missing in the CENSPREC label, and follows the pattern in other years where the "CITY" label is missing from the electoral precinct label. These pairs are found in MCDGRPs: [(481,482), (1165,1166), (1169,1170), (1695,1696), (2205,2206), (2428,2429), (2439,2440), (2442,2443)].

The computer had initially matched CENSPREC "ANAME" to "ANAME TWP." electoral precinct, and had provided no match to CENSPREC "ANAME TWP." or "ANAME CITY" electoral precinct.

There are 15 other MCDGRPs with no matching electoral precincts in the 1990 data. These are simply empty. There are 16 in 1988, 19 in 1986 and ** in 1984.

For MATH90MN.XLS only: Eleven unmatched electoral precincts had a name followed by a slash followed by "UNORG" and sometimes a number. (e.g. "AULT/UNORG 54-13" or "COLVIN/UNORG COMB"). Although many CENSPREC are named "UNORG" followed by a number, none of these numbers matched the unmatched electoral precinct, they were matched according to the name before the slash. (e.g. AULT or COLVIN). For one of these eleven, "LEIDING/UNORG 66-19," there was a CENSPREC named UT 66-19, but not UNORG 66-19, so I stuck with the above decision rule.

## 15.25 Missouri

Merged at MCD Group level.

Missouri has a very large number of MCDGRPs allowable due to Census geographical definitions. Thus, for each of the four years, there were 2-3 invalid MCDGRPs that were left in. Users should be aware of this problem. Specifically, in 2-3 cases for each year, there is a pair of MCDGRPs, one of which has a larger population according to the electoral data than the Census variables show, and one of which has a smaller (or nonexistent) population according to the electoral data than the Census variables indicate. See the file MATF MO.LOG for more information about which MCDGRPs have no PLVD information. Some of these – but not necessarily all – will be one half of the 'problem pairs' described. These problem pairs are:

| | SURPLUS | DEFICIT |
|---|---|---|
| In 1990: | 25 | 23 |
| | 336 | 334 |
| In 1988: | 25 | 23 |
| | 336 | 334 |
| | 616 | 617 |
| In 1986: | 25 | 23 |
| | 336 | 334 |
| | 1073 | 1075 |

```
In 1984:       25         23
              336        334
              800        801
```

## 15.26 Mississippi

Merged at county level.

Mississippi was one of the four non-participants in the Census `PL94-171` program to define VTD codes.

## 15.27 Montana

Merged at county level.

Montana was one of the four non-participants in the Census `PL94-171` program to define VTD codes.

## 15.28 North Carolina

Merged at MCD Group level.

Some counties did not participate in the VTD definition project under `PL94-171`, but most did, leaving the potential for significant gains through MCD Grouping.

## 15.29 North Dakota

Merged at MCD Group level.

In 1990 there are CENSPREC sets of the form "Aname NUMBER" with each NUMBER in a different MCDGRP. The corresponding electoral precincts are fewer in number and of the form "Aname". The electoral precincts are matched to the lowest numbered CENSPREC. Probably this causes a surplus of electoral information to be sent to certain MCDGRPs at the expense of MCDGRPs with higher numbered CENSPREC labels. This only occurs in 1990 and the affected MCDGRPs are:

| SURPLUS | DEFICIT |
|---|---|
| 13 | 14,15 |
| 19 | 15 |
| 16 | 17,18 |

They are all marked at questionable for that year.

Similarly for the 1986 dataset electoral precinct "Halliday-Collins" is matched to CENSPREC "Halliday" in MCDGRP 110, and not "Collins" which is in MCDGRP 107. Both these MCDGRPs are marked as questionable in this year, as 110 probably has too much electoral information associated with it at the expense of MCDGRP 107.

For the 1986 dataset the computer matched electoral precincts "10" and "10a" to two CENSPRECs "10" and "10" and nothing to "10-1". It could be interpreted that "10a" belongs to "10-1", however there is also a electoral precinct "9a" and no "9-1". Based on this the computer match is left as is, but the two MCDGRPs are marked as questionable. CENSPREC "10" is in MCDGRP 320 while CENSPREC "10-1", which is empty for this year, is in MCDGRP 321.

## 15.30 Nebraska

Merged at MCD Group level.

There are several electoral precincts of the form A-B where A and B have different MCDGRPs. MCDGRP -A gets the electoral information and MCDGRP -B ges nothing which often results in no voting data for that group. The following is a list of the MCDGRPs that recieved a surplus and deficit of electoral information in 1990:

| SURPLUS | DEFICIT |
|---|---|
| 46 | 45 |
| 47 | 42 |
| 146 | 144 |
| 149 | 148,147 |
| 161 | 159 |
| 151 | 155 |
| 213 | 212 |

| | |
|---|---|
| 208 | 207 |
| 203 | 202 |
| 200 | 199 |
| 206 | 205 |
| 252 | 251 |
| 255 | 257 |
| 254 | 263 |
| 266 | 267 |
| 272 | 268,269,270 |
| 386 | 385 |
| 391 | 387 |
| 397 | 394,389 |
| 398 | 395 |
| 399 | 388 |
| 400 | 390 |
| 401 | 384 |
| 383 | 393 |
| 490 | 439 |
| 477 | 465,476 |
| 488 | 491,493 |
| 483 | 479,482 |
| 461 | 464 |
| 480 | 478 |
| 474 | 475,479 |
| 473 | 470 |
| 462 | 463 |
| 492 | 481,484 |
| 495 | 494 |
| 469 | 467,472 |
| 468 | 471 |
| 507 | 514 |
| 665 | 663,667 |
| 726 | 743 |
| 728 | 727 |
| 740 | 739 |
| 735 | 732,731 |
| 730 | 729 |
| 737 | 736 |
| 788 | 790 |
| 787 | 789 |

| | |
|---|---|
| 802 | 797,794 |
| 786 | 785 |
| 799 | 801 |
| 796 | 793 |
| 972 | 964,971 |
| 979 | 978 |
| 975 | 974 |
| 970 | 969 |
| 977 | 976 |

Some pairs disappear in earlier years. In any year, both members of a pair that exists in the data for that year are marked as questionable.

Also, Four matches were made on the basis of a string of ward or precinct numbers alone. There would be some number of CENSPRECs which would have only ward or precinct numbers, and the same number of electoral precincts which would have a name each followed by a matchable number. When letters were also used they matched exactly also. The strings were always over four PRECs long. These seem plausible matches. They are found in each year in MCDGRPs 275,441,512 and 654. They are marked as questionable in each year.

## 15.31 New Hampshire

Merged at MCD level.

## 15.32 New Jersey

Merged at MCD level.

Has voting data for the odd years 1985, 1987, and 1989, as well as for the standard even years, 1984-1990.

## 15.33 New Mexico

Merged at county level.

Census VTD definitions existed in some cases, but overlapped MCDs to such an extent that no nontrivial MCD Group-ing was possible.

## 15.34 Nevada

Merged at MCD Group level.

Nevada's merge was virtually flawless, after making exceptions of certain counties (see AZ.MGE).

Two MCDGRPs (4 and 17) lack voting data values for 1984 only – no matches were available for that year alone for those MCDGRPs.

County 023. Matched Censprec "Currant Creek" with electoral precinct "Current"

County 031. Precincts are numbered sequentially. The computer match was fairly successful and handmatchers matched several more. Handmatchers also matched some absentee precincts, since the computer match seemed to match based solely on the precinct number, regardless of whether the name begins "WA PREC" or "Absentee." 1988 is the worst year, with almost 80 remaining unmatched precincts. 1990 has under 50, and 1986 and 1984 have under 40 unmatched.

For MATH88NV.XLS, county 031 still has more unmatched electoral precinct than other years. That year, the following precincts have no MCDGRP:

```
WASHOE PREC 001 - 043, 207, 307, 320, 400, 431, 504, 601,
603, 607 - 609, 618, 636, 645, 646, 711, 717, 751, and 912 -929.
```

Compare this with county 031 in MATH90NV.XLS, in which the next most precincts have no MCDGRP:

```
WASHOE PREC 001 - 004, 006, 008, 010 - 019, 023, 027 - 031, 036 - 041,
343, 645, 844, 862, 931, 934.
```

In general, though, 031 is a very large county, and a very high percentage of the precincts are now matched.

## 15.35 New York

Merged at MCD level.

## 15.36 Ohio

Merged at MCD level.

## 15.37 Oklahoma

Merged at MCD Group level.

The computer merge worked well. Handmatching was done for all but 3 counties (Kay, Washington, which could be aggregated to county level) and Washita (no census data).

Oklahoma codes to go with math90ok.xls are in the two columns after the censusprec column.

```
00:unmatched
01:absentee vote
02:assumes 32s=320
03:match basis was wrong (check on why, see "match" variable)
04:questionable; good guess
05:zero before "censprec" number caused no-match
06:assumes x=x+xa
07:assumes x=xa+xb
08:2 electoral precincts=1censprec (usually joined by ampersand)
09:3 electoral precincts=1cp
10:4 electoral precincts=1cp
11:5 electoral precincts=1cp
12:x=x+xa+xb (no such cases in OK)
13:dashes created no-matches
14:spelling or word similar but not exactly the same
89:2mcd=3 electoral precincts=1cp
90:3mcds=4 electoral precincts=1cp
91:3mcds=2 electoral precincts=1cp
92:4mcds=2 electoral precincts=1cp
93:2mcds=4 electoral precinct=1cp
94:3mcds=5 electoral precincts=1cp
95:3mcds=3 electoral precincts=1cp
96:2mcds=1 electoral precinct=2cps
97:2mcds=3 electoral precincts
98:countywide problem
```

```
99:2mcds=2 electoral precincts=1cp
```

Note some of the information in 89-99 repeats the information in 6-12 so these codes could be collapsed or changed.

Additional codes in the 3rd and following columns after "censprec" column are each of the MCD codes (from 2 to 4) that were "lost" in the merge.

## 15.38 Oregon

Merged at county level.

Oregon was one of the four non-participants in the Census `PL94-171` program to define VTD codes.

## 15.39 Pennsylvania

Merged at MCD level.

## 15.40 Rhode Island

Merged at MCD level.

## 15.41 South Carolina

Merged at MCD Group level.

Because the 1984 precinct definitions differed substantially from those in 1986-1990, and because a common MCD Group structure would have unnecessarily restricted the number of valid groups in the 1986- 1990 data, we defined MCD Groups separately for 1984 and 1986-1990.

ALL YEARS: County 007 - electoral precincts Anderson W1 P1 through W6 P2 have no obvious matches, but CENSPRECs Ward 1 through 6 seem like they might be correct. These were not matched

MATH84SC County 079 - electoral precincts Columbia 1 through 30 have no obvious matches, but CENSPRECs Ward 1 through 34 seem like they might be correct. These were not matched.

Absentee precincts are labeled absentee, but there is also something called "Barrier Free" and in 1990, "Curbside total." Also, there are "challenged ballots."

South Carolina's 1984 electoral data file has one county – 085 – with virtually no common precinct names as the Census file *or* the other three electoral data files (1986-90). County 085 can break into as many as 4 MCDgroups, however. One possible option was to identify County 085 as an 'exception' for PLVDKEY. This technique cost three extra units that could be used in the 1986-90 data. However, the option selected was to use *different* MCDgroup assignments for 1984 and for 1986-90, and then to merge to Census data separately as well.

The 1986-90 merge process used the filenames as they are specified in the programs sheet.

The 1984-only process used sc 84.mcd, sc 84.mge, sc 84.mgl, sc 84.mgs -¿ PLVDKEY input and output

## 15.42 South Dakota

Merged at MCD Group level.

There are several electoral precincts of the form A-B where A and B have different MCDGRPs. MCDGRP -A gets the electoral information and MCDGRP -B ges nothing which often results in no voting data for that group. The following is a list of the MCDGRPs that recieved a surplus and deficit of electoral information:

| SURPLUS | DEFICIT | 1990 | 1988 | 1986 | 1984 |
|---|---|---|---|---|---|
| 15 | 11 | | | x | |
| 19 | 26 | | x | | |
| 26 | 45 | | | x | |
| 42 | 23 | x | x | | |
| 43 | 24 | x | x | x | |
| 44 | 25 | x | x | x | |
| 45 | 26 | x | | | |
| 40 | 18,19,20,21 | x | x | | |
| 46 | 27 | x | | | |
| 47 | 28 | x | x | | |
| 48 | 29 | x | x | x | x |

| | | | | | |
|---|---|---|---|---|---|
| 51,52,53,54 | 50 | x | | | |
| 74 | 70 | x | x | x | x |
| 129 | 140,144 | | x | | |
| 157 | 141,146 | | x | | |
| 134 | 136,149 | | x | | |
| 135 | 148 | x | | | |
| 138 | 131 | x | | | |
| 142 | 137,145 | | x | | |
| 154 | 156 | x | | | |
| 156 | 154 | | x | | |
| 158 | 178 | x | x | x | x |
| 162 | 179 | | x | | |
| 168 | 181 | x | x | x | x |
| 164 | 180 | x | x | x | x |
| 173 | 182 | x | x | | x |
| 213 | 217 | x | x | x | x |
| 213 | 219 | x | x | x | x |
| 215 | 218 | x | x | x | x |
| 287 | 271 | | | | x |
| 288 | 279 | x | x | | |
| 285 | 269 | x | x | | x |
| 344 | 361 | | | x | |
| 349 | 360 | x | x | x | |
| 346 | 359 | x | x | x | |
| 366 | 370 | x | x | x | x |
| 364 | 371 | x | x | | x |
| 372 | 375 | x | x | | |
| 372 | 376 | x | | | |
| 398 | 405 | x | | | |
| 399 | 406 | x | x | x | |
| 420 | 436 | x | x | x | x |
| 424 | 434 | x | x | | x |
| 423 | 438 | x | x | x | x |
| 421 | 437 | x | x | x | x |
| 429 | 440 | | x | x | x |
| 432 | 441 | x | x | | x |
| 425 | 439 | x | x | | x |
| 479 | 460,459 | | x | | |
| 468 | 469 | x | | | |
| 462 | 465 | x | | | |

| | | | | | |
|---|---|---|---|---|---|
| 457 | 474 | x | | | |
| 467 | 470 | x | | | |
| 476 | 466 | x | | | |
| 521 | 508 | x | x | x | x |
| 520 | 507 | x | x | x | x |
| 522 | 511 | x | x | | x |
| 533 | 540 | x | x | | |
| 541 | 536 | | x | | |
| 593 | 584 | x | | | |
| 594 | 585 | x | | | |
| 628 | 647 | | x | | |
| 653 | 645,641 | | x | | |
| 640 | 651 | x | | | |
| 644 | 632 | x | | | |
| 647 | 628,631,643 | x | | | |
| 637 | 650 | x | x | | x |
| 627 | 646,630 | | x | | |
| 634 | 635,638 | | x | | |
| 636 | 649 | x | | | |
| 637 | 650 | | | x | |
| 633 | 648 | x | x | | |
| 642 | 652 | x | x | x | |
| 646 | 627 | | x | | |

The x's signify for which years a problem exists in any pair. In any year checked, both members of the pair are marked as questionable.

## 15.43 Tennessee

Merged at MCD Group level.

CENSPREC "Henry School" is matched to electoral precinct "HENRY" or "HENERY". It is the only electoral precinct match in this MCDGRP. In other matches, when the suffix "School" is found in the CENSPREC label, it is also found in the electoral precinct label. There is also a CENSPREC "Henry County High School" in another MCDGRP in this county, and although it is matched with electoral precinct "HEN(E)RY CO. HIGH SCHOOL", there is the chance that electoral precinct "HEN(E)RY" belongs here instead. CENSPREC "Henry School" is in MCDGRP 61, and CENSPREC "Henry County High School" is in MCDGRP 59. For the above

reasons, they are labeled as questionable.

## 15.44 Texas

Merged at county level.

Census VTD definitions did not exist in most counties and overlapped MCDs to such an extent in the others that no nontrivial MCD Group-ing was possible.

## 15.45 Utah

Merged at MCD Group level.

## 15.46 Virginia

Merged at MCD Group level.

Has voting data for the odd years 1985, 1987, and 1989, as well as for the standard even years, 1984-1990.

Virginia has voting data files for *every* year from 1984, not just the even years. All operations were performed on the full set of 7 files.

MCDGRPs 072 and 073 have no voting data due to unavailable matches.

No precincts required an invalid match, i.e., for no electoral precinct was there more than one Census precinct (with differing MCDGRPs).

## 15.47 Vermont

Merged at MCD level.

## 15.48 Washington

Merged at MCD Group level.

County 053 - All precincts named by number have MCDGRP 029, except 26/503 - 26/554 which have MCDGRP 030.

There are large amounts of missing data in counties 033 and 063.

A number of counties (e.g., 9, 19, 29, etc.) have many more electoral precincts for 1990 than Census precincts. Rather than make these PLVD-KEY 'exceptions,' these could have been left them alone. The rationale for this would be that while everything from the Census is included, not necessarily everything for the electoral precincts is included – hence a few unmatched electoral precincts will not cause as much inequality at the MCD-group level as unmatched Census precincts will.

However, if one assumes that the county definitions are the same for both, and that the total number of people are the same within a given county, the extra electoral precincts HAVE TO belong to Census precincts that seemingly are exact matches with single electoral precincts. Given this assumption they were grouped together for these problematic counties.

MATH84WA Exceptions:

Counties 19, 29, 35, 45, 61, 69, 73

For county 61, all CENSPREC except CADET have MCDGRP 039. For county 73, all CENSPREC except POINT ROBERTS have MCDGRP 041.

## 15.49 Wisconsin

Merged at MCD level.

## 15.50 West Virginia

Merged at MCD Group level.

Because the 1984 precinct definitions differed substantially from those in 1986-1990, and because a common MCD Group structure would have unnecessarily restricted the number of valid groups in the 1986- 1990 data, we defined MCD Groups separately for 1984 and 1986-1990.

This state is notable for having a very unusual pattern of 'exception' counties. It is NOT true here that the same counties are exceptions for each year. RATHER, some counties that are exceptions in 1990 are fine in 1986, and vice-versa. Every county that is an exception in at least one year is identified in the exceptions file READ WV.MGE, along with the years in which it is an exception (if no year is listed, it is an exception in all years). The question is whether to implement this exceptions file, using the lowest common denominator approach, in order to merge all four years together

at the end, or whether to instead treat each year on its own to get the maximum number of MCDGRP units for each year.

At the moment, the data reflect the first technique, and but can potentially be changed to the latter if the number of MCDGRPs from the former is too close to the number of counties. Having done this, the result is 80 MCDgrps from 55 counties, where initially the number of MCDGRPs was 180.

If one eliminates 1984 from the grouping, then 102 MCDgroups are usable, with 1984 only 80. Thus, 1984 is excluded from the grouping. The merge only includes 1986-1990. A second set of files were created based on 1984 only and it has 85 MCDGRPs.

The 1986-90 merge process used the filenames as they are specified in the programs sheet.

The 1984-only process, programs and output, is all in wv 84.mcd, wv 84.mge, wv 84.mgl, wv 84.mgs -¿ PLVDKEY input and output

The 1984-only final merge files are in the regular WV directory, as MG WV 84.SD2 and .SSD.

The same solution was used, e.g., for South Carolina.

## 15.51 Wyoming

Merged at county level.

Census VTD definitions existed but overlapped MCDs to such an extent that no nontrivial MCD Group-ing was possible.

# Chapter 16

# Details on the the California Block Group Merge

Our California voting data is organized differently from our data from the rest of the country, and is at a lower level of aggregation. It was provided Kenneth McCue and Wendy Tam of the Institute of Governmental Studies; 109 Moses Hall; Number 2370; University of California Berkeley; CA 94720-2370. The documentation in this chapter is an edited version of material provided by them. Related additional documentation is available at http://garnet.berkeley.edu/~igs/database/doc92.html.

## 16.1 Data Description

### 16.1.1 Database Attributes

The database is a geographical database based on the level of the census block. Census blocks roughly correspond to city blocks in urban areas. There are approximately four hundred thousand census blocks in the State of California. The census block format is ideal for a couple of reasons. First, many types of analysis are best done at the census block level. Second, it is the lowest level building block which can be used in redistricting since it is the lowest level at which population counts are reported.

Data which accords naturally to such a database is of course census data, some of which is released at the census block level. Data which is not released at that level can be statistically allocated back to the census block level and can then be used at higher levels of aggregation, such as the census tract.

Other data in the database must be merged to the census block through a process called geocoding. An example of such data is the registered voter file where voters are assigned to precincts, a county-defined area, rather than census blocks. To be useful to an integrated database, registered voters must be merged to the census geography. The software required for this is involved and complex since it must keep track of the relationship between thirteen million registered voters, four hundred thousand census blocks, forty thousand registration precincts and thirty thousand election precincts.

The census-block based database can be displayed geographically. There are numerous programs with such capability extant. Much of the usefulness of this database can be realized through geographic manipulation that can be taught to naive users within several hours. The archival data are, however, valuable in and of themselves, even without the display programs.

### 16.1.2 Overview

Data is collected for California state-wide elections held in November of even-numbered years. This data consists of lists of registered voters, precinct maps, and election results for state-wide and state offices. The data is merged to the census block level.

A complete statewide database at the block level has been constructed for both the 1990 and 1992 General elections. The data can be classified as either SOR (Statement of Registration), SOV (Statement of Vote), or Census. All data used in the construction of this database is publicly available through the sources noted throughout this document.

SOR information consists of information about registered voters. Organized at the level of the individual, this data is available from individual county registrars and from the Secretary of State's Office in Sacramento. Formats of the data from the several counties tend to be different, though some standardization has occurred in recent years as software vendors have begun providing software. The data from the Secretary of State comes in a uniform format and is available for every county in the state, though its file does not contain all information that is available on the county tapes. The information for a voter typically contains his or her date of birth, sex, address, marital status, affidavit number (the number by which the Secretary of State keeps track of registered voters), registration precinct, partisan affiliation, and sometimes other information such as occupation. Not all of this information may be present for every voter.

SOV information consists of information pertaining to election results. This information is organized at the level of the election precinct, which is the unit by which electoral results are reported. There are three types of statewide elections, primary, general, and special. Primary elections are held in June of every even-numbered year (though in 1996 this election will be held in March) while general elections are held in November of every even-numbered year, with special elections being (rarely) held at other times. Presidential races (both primary and general) are held every four years and in the alternate even-year (the off-year) state-wide constitutional officers are elected. State offices are Assembly and State Senate. Federal offices are Congress and the United States Senate. On every ballot, there are various initiatives, ballot measures, constitutional amendments, and (rarely) referenda. Additionally, each county or municipality may put other measures on the ballot.

Census information consists of information describing population, ethnicity, housing, and other demographic data obtained by the decennial census conducted by the Federal government. This data is tabulated at various levels of the census geography, with some data (PL94-171 and STF1) at the census block level and other data at the block group level (STF3).

Mergers are made to the census block as follow. For each individual voter, the registration tapes contain, among other things, both the voter's registration precinct the voter's address. Using geocoding, the process of matching an address to its corresponding census geography, it is possible to create an (incomplete) conversion table between registration precincts and census geography. Since election precincts are made up of registration precincts, this allows the creation of a conversion file of election precinct to census geography.

Since merges are organized by Assembly district, the files going into a merge are organized by the level of the Assembly District (the merged data by block is at the county level, however). Assembly District 00 consists of those absentee precincts which could not be allocated to an Assembly District.

### 16.1.3 Files

In what follows, ## represents the Census county code, %% represents the California Assembly District number. To obtain the Census county code from the county name, refer to Appendix A. "T" represents a code for the type of election (e.g. "G" = general election. "P" = primary election).

"YR" represents the year. For example, data at the block level have filename naming conventions such as BLOCK_##.TYR. So the file BLOCK_01.G92 is the data at the block level for the general election in 1992 in Alameda county. There are 58 California Counties and 80 Assembly districts.

In addition to being part of the ROAD collection, all files are currently on disk$data on cain.berkeley.edu. Cain.berkeley.edu can be reached by anonymous FTP. Downloads on standard media of these files can also be obtained from UC DATA at Berkeley. They should be requested by the filenames specified below. All codebook files reside in disk$data:[igs.doc] or disk$data:[igs.doc.g92].

1. Data at the block level

   (a) Name: BLOCK_##.TYR
   (b) Type: ASCII
   (c) Codebook : blockTYR.cdb
   (d) Ftp location: [igs.c##]

   (a) Name: RB##AD%%.TYR
   (b) Type: ASCII
   (c) Codebook : rb_rr.cdb
   (d) Ftp location: [igs.c##_ad%%]

2. Data at the registration precinct level

   (a) Name: RTYR##%%.TYR
   (b) Type: ASCII
   (c) Codebook : rg92_rg.cdb
   (d) Ftp location: [igs.c##_ad%%]

3. Data at the consolidated registration precinct level

   (a) Name: PL94##%%.TYR
   (b) Type: ASCII
   (c) Codebook : pl94_rr.cdb
   (d) Ftp location: [igs.c##_ad%%]

   (a) Name: SG90##%%.TYR

(b) Type: ASCII
(c) Codebook : sg90_rr.cdb
(d) Ftp location: [igs.c##_ad%%]

4. Data at the election precinct level

(a) Name: STYR##%%.TYR
(b) Type: ASCII
(c) Codebook : sg92_sv.cdb
(d) Ftp location: [igs.c##_ad%%]

5. Data at the consolidated election precinct level

(a) Name: MTYR##%%.TYR
(b) Type: ASCII
(c) Codebook : mg92_sr.CDB
(d) Ftp location: [igs.c##_ad%%]

6. Precinct Polygon Definitions

(a) Name: C##AD%%.TXT
(b) Type: ASCII
(c) Codebook

### 16.1.4 Codebook: CA Data at the Block Level

The variables below are only in the California block group files.

**blckgrp** block group

**tractbna** census tract/block numbering area

**COUNTY** Census county code

**TRACT** Tract number

**BLOCK** Block number

**BLOCKSUF** Block suffix

**PLACE** Census city code

**AD** Assembly District

**P1** Persons

**P2** White

**P3** Black

**P4** American Indian

**P5** Asian or Pacific Islander

**P6** Other

**P7** White 18+

**P8** Black 18+

**P9** American Indian 18+

**P10** Asian or Pacific Islander 18+

**P11** Other 18+

**P12** Latino all races

**P13** White not of Latino origin

**P14** Black not of Latino origin

**P15** American Indian not of Latino origin

**P16** Asian or Pacific Islander not of Latino origin

**P17** Other not of Latino origin

**P18** Latino all races 18+

**P19** White not of Latino origin 18+

**P20** Black not of Latino origin 18+

**P21** American Indian not of Latino origin 18+

**P22** Asian or Pacific Islander not of Latino origin 18+

**P23** Other not of Latino origin 18+

**P24** Housing units

**R1** Total Registration

**R2** Dem, PAF, Misc and DCL registration

**R3** Rep, AIP and Lib registration

**R4** Number of voters with registration

**R5** Number of voters with birth date

**R6** Hispanic Democrats

**R7** Hispanic Republicans

**R8** Hispanic Declined to State

**R9** Hispanic Others

**R10** Jewish Democrats

**R11** Jewish Republicans

**R12** Jewish Declined to State

**R13** Jewish Others

**R14** Mr name prefix

**R15** Mrs name prefix

**R16** Miss name prefix

**R17** Ms name prefix

**R18** Men

**R19** Women

**R20** Democrats

**R21** Republicans

**R22** American Independence Party

**R23** Peace and Freedom

**R24** Miscellaneous

**R25** Libertarian

**R26** Declined to State

**R27** Renters

**R28** Rental Units

**R29** Democratic-Democratic Households

**R30** Republican-Republican Households

**R31** Other-Other Households

**R32** Democratic-Republican Households

**R33** Democratic-Other Households

**R34** Republican-Other Households

**R35** Male age unknown

**R36** Male age 18 to 25

**R37** Male age 26 to 35

**R38** Male age 36 to 45

**R39** Male age 46 to 55

**R40** Male age 56 to 64

**R41** Male age 65 plus

**R42** Female age unknown

**R43** Female age 18 to 25

**R44** Female age 26 to 35

**R45** Female age 36 to 45

**R46** Female age 46 to 55

**R47** Female age 56 to 64

**R48** Female age 65 plus

**R49** Democratic registration 91 to 92

**R50** Democratic registration 89 to 90

**R51** Democratic registration 87 to 88

**R52** Democratic registration 85 to 86

**R53** Democratic registration 83 to 84

**R54** Republican registration 91 to 92

**R55** Republican registration 89 to 90

**R56** Republican registration 87 to 88

**R57** Republican registration 85 to 86

**R58** Republican registration 83 to 84

**R59** Korean Democrats

**R60** Korean Republicans

**R61** Korean Declined to State

**R62** Korean Others

**R63** Japanese Democrats

**R64** Japanese Republicans

**R65** Japanese Declined to State

**R66** Japanese Others

**R67** Asian Democrats

**R68** Asian Republicans

**R69** Asian Declined to State

**R70** Asian Others

**R71** Democratic males 18 to 35

**R72** Democratic males 36 to 55

**R73** Democratic males 56 and over

**R74** Democratic males age unknown

**R75** Democratic females 18 to 35

**R76** Democratic females 36 to 55

**R77** Democratic females 56 and over

**R78** Democratic females age unknown

**R79** Republican males 18 to 35

**R80** Republican males 36 to 55

**R81** Republican males 56 and over

**R82** Republican males age unknown

**R83** Republican females 18 to 35

**R84** Republican females 36 to 55

**R85** Republican females 56 and over

**R86** Republican females age unknown

**R87** Declined to State males 18 to 35

**R88** Declined to State males 36 to 55

**R89** Declined to State males 56 and over

**R90** Declined to State males age unknown

**R91** Declined to State females 18 to 35

**R92** Declined to State females 36 to 55

**R93** Declined to State females 56 and over

**R94** Declined to State females age unknown

**S1** Total Registration on SOV

**S2** Democratic Registration on SOV

**S3** Republican Registration on SOV

**S4** Libertarian Registration on SOV

**S5** Peace and Freedom Registration on SOV

**S6** American Independence Registration on SOV

**S7** Declined to State Registration on SOV

**S8** Miscellaneous Registration on SOV

**S9** Total Vote on SOV

**S10** Democratic Vote on SOV

**S11** Republican Vote on SOV

**S12** Libertarian Vote on SOV

**S13** Peace and Freedom Vote on SOV

**S14** American Independence Vote on SOV

**S15** Declined to State Vote on SOV

**S16** Miscellaneous Vote on SOV

**S17** Bill Clinton

**S18** George Bush

**S19** Libertarian Presidential

**S20** Peace and Freedom Presidential

**S21** American Independence Presidential

**S22** H. Ross Perot

**S23** Congressional Democrat

**S24** Congressional Republican

**S25** Congressional Libertarian

**S26** Congressional Peace and Freedom

**S27** Congressional American Independence

**S28** State Senate Democrat

**S29** State Senate Republican

**S30** State Senate Libertarian

**S31** State Senate Peace and Freedom

**S32** State Senate American Independence

**S33** Assembly Democrat

**S34** Assembly Republican

**S35** Assembly Libertarian

**S36** Assembly Peace and Freedom

**S37** Assembly American Independence

**S38** Barbara Boxer

**S39** Bruce Herschensohn

**S40** US Senate Long Libertarian

**S41** US Senate Long Peace and Freedom

**S42** US Senate Long American Independence

**S43** Diane Feinstein

**S44** Seymour

**S45** US Senate Short Libertarian

**S46** US Senate Short Peace and Freedom

**S47** US Senate Short American Independence

**S48** Supervisorial Race 1

**S49** Supervisorial Race 2

**S50** PR155Y YES-1992 School Facilities Bond Act

**S51** PR155N NO-1992 School Facilities Bond Act

**S52** PR156Y YES-Passenger Rail and Clean Air Bond Act

**S53** PR156N NO- Passenger Rail and Clean Air Bond Act

**S54** PR157Y YES-Toll Roads and Highways

**S55** PR157N NO- Toll Roads and Highways

**S56** PR158Y YES-Office of Legislative Analyst

**S57** PR158N NO- Office of Legislative Analyst

**S58** PR159Y YES-Office of the Auditor General

**S59** PR159N NO- Office of the Auditor General

**S60** PR160Y YES-Property Tax Exemption

**S61** PR160N NO- Property Tax Exemption

**S62** PR161Y YES-Physician-Assisted Death

**S63** PR161N NO- Physician-Assisted Death

**S64** PR162Y YES-Public Employees Retirement Systems

**S65** PR162N NO- Public Employees Retirement Systems

**S66** PR163Y YES-Ends Taxation of Certain Food Products

**S67** PR163N NO- Ends Taxation of Certain Food Products

**S68** PR164Y YES-Congressional Term Limits

**S69** PR164N NO- Congressional Term Limits

**S70** PR165Y YES-Budget Process, Welfare (Wilson)

**S71** PR165N NO- Budget Process, Welfare (Wilson)

**S72** PR166Y YES-Basic Health Care Coverage

**S73** PR166N NO- Basic Health Care Coverage

**S74** PR167Y YES-State Taxes

**S75** PR167N NO- State Taxes

### 16.1.5 Problems with the Data

Known Errors and Omissions

Amador, Plumas, Santa Cruz, and Siskiyou counties are inaccurate due to no maps to make the registration to census consolidations (there is no information available for geocoding these counties, so maps are necessary). The odds of getting the maps for Plumas are good, for Siskiyou middling, and for Amador and Santa Cruz very poor. While there is SOV and reg data for Santa Cruz it is not based on mapping with the correct maps and it should not be used. There are minor known errors in the merging and consolidation process, relatively inconsequential, some of which may be corrected at a later date (probably when the SOV data is adjusted by voting propensities). Lists of known errors are given below. Differences between the Secretary of State database and IGS entries by SOV precincts by SOV, by county

| COUNTY | Database Race Name | Database Race Totals | SOS Race Totals | Difference |
|---|---|---|---|---|
| Alameda | PRSDEM | 334148 | 334224 | -76 |
| | PRSPER | 81641 | 81643 | -2 |
| | PRSREP | 109284 | 109292 | -8 |
| | TOTREG | 756487 | 758435 | -1948 |
| | USLDEM | 342974 | 343020 | -46 |
| | USLREP | 128484 | 128489 | -5 |
| | USSDEM | 374627 | 374675 | -48 |
| | USSREP | 113220 | 113223 | -3 |
| Amador | USLREP | 7366 | 7336 | 30 |
| Colusa | TOTREG | 7174 | 7173 | 1 |

| | | | | |
|---|---|---|---|---|
| Del Norte | PR166N | 5943 | 5933 | 10 |
| Fresno | PR155Y | 107212 | 107213 | -1 |
| | PR156N | 120249 | 120250 | -1 |
| | PR156Y | 83377 | 83378 | -1 |
| | PR157N | 157264 | 157266 | -2 |
| | PR158N | 128097 | 128099 | -2 |
| | PR159Y | 65186 | 65188 | -2 |
| | PR160N | 107435 | 107436 | -1 |
| | PR160Y | 91984 | 91985 | -1 |
| | PR161N | 123963 | 123965 | -2 |
| | PR162N | 111700 | 111701 | -1 |
| | PR162Y | 85268 | 85269 | -1 |
| | PR163Y | 122207 | 122209 | -2 |
| | PR164N | 79310 | 79311 | -1 |
| | PR164Y | 124129 | 124130 | -1 |
| | PR165N | 108782 | 108784 | -2 |
| | PR166N | 144791 | 144792 | -1 |
| | PR166Y | 64009 | 64010 | -1 |
| | PR167N | 127034 | 127036 | -2 |
| | PRSREP | 89137 | 89138 | -1 |
| | USLREP | 117891 | 117893 | -2 |
| | USSPAF | 4888 | 4890 | -2 |
| Glenn | TOTREG | 11147 | 11145 | 2 |
| Kern | PR162N | 89640 | 89639 | 1 |
| Kings | TOTREG | 36691 | 36690 | 1 |
| Lassen | TOTREG | 12503 | 12509 | -6 |
| Los Angeles | AIPREG | 50511 | 0 | 50511 |
| | DCLREG | 373619 | 0 | 373619 |
| | DCLVOT | 2831077 | 0 | 2831077 |
| | DEMREG | 2061025 | 0 | 2061025 |
| | LIBREG | 11782 | 0 | 11782 |
| | PAFREG | 15468 | 0 | 15468 |
| | REPREG | 1211010 | 0 | 1211010 |

| | | | | |
|---|---|---|---|---|
| Modoc | PR155N | 2937 | 2940 | -3 |
| | PR155Y | 1399 | 1402 | -3 |
| | PR156N | 3549 | 3554 | -5 |
| | PR156Y | 694 | 695 | -1 |
| | PR157N | 3529 | 3535 | -6 |
| | PR158N | 3463 | 3468 | -5 |
| | PR158Y | 735 | 736 | -1 |
| | PR159N | 3350 | 3356 | -6 |
| | PR160N | 2578 | 2583 | -5 |
| | PR160Y | 1753 | 1754 | -1 |
| | PR161N | 2348 | 2351 | -3 |
| | PR161Y | 2071 | 2073 | -2 |
| | PR162N | 2379 | 2384 | -5 |
| | PR162Y | 1925 | 1926 | -1 |
| | PR163N | 1687 | 1690 | -3 |
| | PR163Y | 2721 | 2724 | -3 |
| | PR164N | 1488 | 1493 | -5 |
| | PR164Y | 2875 | 2876 | -1 |
| | PR165N | 2106 | 2108 | -2 |
| | PR165Y | 2272 | 2276 | -4 |
| | PR166N | 3316 | 3319 | -3 |
| | PR166Y | 1093 | 1096 | -3 |
| | PR167N | 2917 | 2922 | -5 |
| | PR167Y | 1465 | 1466 | -1 |
| | PRSDEM | 1485 | 1489 | -4 |
| | PRSREP | 1802 | 1803 | -1 |
| | TOTVOT | 4696 | 4702 | -6 |
| | USLAIP | 357 | 358 | -1 |
| | USLDEM | 1426 | 1429 | -3 |
| | USLREP | 2365 | 2367 | -2 |
| | USSAIP | 228 | 229 | -1 |
| | USSDEM | 1568 | 1572 | -4 |
| | USSREP | 2326 | 2327 | -1 |
| Monterey | TOTREG | 160798 | 160821 | -23 |
| | USLAIP | 4648 | 4378 | 270 |
| Napa | TOTREG | 65221 | 65171 | 50 |

| | | | | |
|---|---|---|---|---|
| San Francisco | TOTREG | 477726 | 477740 | -14 |
| Shasta | TOTREG | 84455 | 84450 | 5 |
| Sierra | TOTREG | 2332 | 2331 | 1 |
| Stanislaus | TOTREG | 179472 | 179471 | 1 |
| Tehama | USSLIB | 856 | 846 | 10 |
| Trinity | TOTREG | 8129 | 8248 | -119 |
| Yuba | TOTREG | 23768 | 23766 | 2 |

Differences between the Secretary of State database and IGS entries by SOV precincts by SOV, by District within county

| COUNTY | Race Name | Database Race Totals | SOS Race Totals | Difference |
|---|---|---|---|---|
| Alameda | 09CNGDEM | 164239 | 164265 | -26 |
| | 09CNGPAF | 10471 | 10472 | -1 |
| | 09CNGREP | 53705 | 53707 | -2 |
| | 09SENDEM | 186895 | 0 | 186895 |
| | 10CNGDEM | 43917 | 43919 | -2 |
| | 10CNGREP | 43284 | 43285 | -1 |
| | 13CNGREP | 57753 | 57754 | -1 |
| Fresno | 19CNGDEM | 77058 | 77059 | -1 |
| | 30ASSREP | 6875 | 6877 | -2 |
| Los Angeles | **CNGDEM | 3928 | 0 | 3928 |
| | **CNGDEM | 4351 | 0 | 4351 |
| | **CNGPAF | 345 | 0 | 345 |
| | **CNGPAF | 394 | 0 | 394 |
| | **CNGREP | 2318 | 0 | 2318 |
| | **CNGREP | 2730 | 0 | 2730 |
| | 01CNGDEM | 262 | 0 | 262 |

| | | | |
|---|---|---|---|
| 01CNGPAF | 25 | 0 | 25 |
| 01CNGREP | 204 | 0 | 204 |
| 02CNGDEM | 1512 | 0 | 1512 |
| 02CNGPAF | 100 | 0 | 100 |
| 02CNGREP | 446 | 0 | 446 |
| 03CNGDEM | 1506 | 0 | 1506 |
| 03CNGPAF | 95 | 0 | 95 |
| 03CNGREP | 441 | 0 | 441 |
| 04CNGDEM | 1834 | 0 | 1834 |
| 04CNGPAF | 187 | 0 | 187 |
| 04CNGREP | 689 | 0 | 689 |
| 05CNGDEM | 2487 | 0 | 2487 |
| 05CNGPAF | 243 | 0 | 243 |
| 05CNGREP | 1500 | 0 | 1500 |
| 06CNGDEM | 3389 | 0 | 3389 |
| 06CNGPAF | 326 | 0 | 326 |
| 06CNGREP | 1848 | 0 | 1848 |
| 07CNGDEM | 4019 | 0 | 4019 |
| 07CNGPAF | 364 | 0 | 364 |
| 07CNGREP | 1936 | 0 | 1936 |
| 08CNGDEM | 5036 | 0 | 5036 |
| 08CNGPAF | 437 | 0 | 437 |
| 08CNGREP | 2262 | 0 | 2262 |
| 09CNGDEM | 5685 | 0 | 5685 |
| 09CNGPAF | 627 | 0 | 627 |
| 09CNGREP | 2927 | 0 | 2927 |
| 10CNGDEM | 6029 | 0 | 6029 |
| 10CNGPAF | 554 | 0 | 554 |
| 10CNGREP | 2414 | 0 | 2414 |
| 11CNGDEM | 6481 | 0 | 6481 |
| 11CNGPAF | 650 | 0 | 650 |
| 11CNGREP | 2701 | 0 | 2701 |
| 12CNGDEM | 3111 | 0 | 3111 |
| 12CNGPAF | 316 | 0 | 316 |
| 12CNGREP | 1852 | 0 | 1852 |
| 13CNGDEM | 3461 | 0 | 3461 |
| 13CNGPAF | 326 | 0 | 326 |
| 13CNGREP | 1928 | 0 | 1928 |
| 14CNGDEM | 5738 | 0 | 5738 |
| 14CNGPAF | 553 | 0 | 553 |

| | | | |
|---|---|---|---|
| 14CNGREP | 2428 | 0 | 2428 |
| 15CNGDEM | 2437 | 0 | 2437 |
| 15CNGPAF | 254 | 0 | 254 |
| 15CNGREP | 1016 | 0 | 1016 |
| 16CNGDEM | 2483 | 0 | 2483 |
| 16CNGPAF | 245 | 0 | 245 |
| 16CNGREP | 1138 | 0 | 1138 |
| 17CNGDEM | 1512 | 0 | 1512 |
| 17CNGPAF | 154 | 0 | 154 |
| 17CNGREP | 843 | 0 | 843 |
| 18CNGDEM | 1652 | 0 | 1652 |
| 18CNGPAF | 189 | 0 | 189 |
| 18CNGREP | 987 | 0 | 987 |
| 19CNGDEM | 1837 | 0 | 1837 |
| 19CNGPAF | 170 | 0 | 170 |
| 19CNGREP | 1097 | 0 | 1097 |
| 20CNGDEM | 1523 | 0 | 1523 |
| 20CNGPAF | 184 | 0 | 184 |
| 20CNGREP | 675 | 0 | 675 |
| 21CNGDEM | 994 | 0 | 994 |
| 21CNGPAF | 114 | 0 | 114 |
| 21CNGREP | 739 | 0 | 739 |
| 22CNGDEM | 470 | 0 | 470 |
| 22CNGPAF | 78 | 0 | 78 |
| 22CNGREP | 278 | 0 | 278 |
| 23CNGDEM | 438 | 0 | 438 |
| 23CNGPAF | 47 | 0 | 47 |
| 23CNGREP | 280 | 0 | 280 |
| 24CNGDEM | 121139 | 120480 | 659 |
| 24CNGPAF | 11111 | 11027 | 84 |
| 24CNGREP | 69493 | 69223 | 270 |
| 25CNGDEM | 72528 | 72233 | 295 |
| 25CNGPAF | 5127 | 5090 | 37 |
| 25CNGREP | 113728 | 113611 | 117 |
| 26CNGDEM | 0 | 73807 | -73807 |
| 26CNGLIB | 0 | 3468 | -3468 |
| 26CNGPAF | 0 | 7180 | -7180 |
| 26CNGREP | 0 | 36453 | -36453 |
| 30CNGDEM | 49103 | 48800 | 303 |
| 30CNGPAF | 6214 | 6173 | 41 |

| | | | | |
|---|---|---|---|---|
| | 30CNGREP | 20195 | 20034 | 161 |
| | 31CNGDEM | 68699 | 68324 | 375 |
| | 31CNGPAF | 41 | 0 | 41 |
| | 31CNGREP | 41101 | 40873 | 228 |
| | 41ASSLIB | 9625 | 9265 | 360 |
| Modoc | 01SENDEM | 1447 | 1452 | -5 |
| | 01SENREP | 2558 | 2559 | -1 |
| | 02CNGDEM | 1265 | 1269 | -4 |
| | 02CNGLIB | 229 | 230 | -1 |
| | 02CNGREP | 2888 | 2889 | -1 |
| | 03ASSDEM | 1786 | 1790 | -4 |
| | 03ASSLIB | 370 | 371 | -1 |
| | 03ASSREP | 2218 | 2219 | -1 |
| Placer | 04ASSREP | 47462 | 47459 | 3 |
| Sacramento | 03CNGAIP | 4 | 0 | 4 |
| San Bernadino | 62ASSDEM | 51373 | 51372 | 1 |
| | 62ASSLIB | 5578 | 5496 | 82 |
| | 62ASSREP | 30753 | 30750 | 3 |
| San Diego | 76ASSPAF | 3489 | 3189 | 300 |
| Sutter | 03CNGLIB | 1929 | 1922 | 7 |
| | 03CNGREP | 13492 | 13491 | 1 |

Differences between total registration for the SOS tapes and that data merged to the level of the census block, excluding Amador, Plumas, Santa Cruz and Siskiyou Counties

| CNTY | Assembly District | Amount Off | From Reg Tapes | From Block File |
|---|---|---|---|---|
| Contra Costa | 14 | 10 | 90519 | 90509 |
| El Dorado | 4 | 49 | 81177 | 81128 |
| Humboldt | 1 | 100 | 76796 | 76696 |
| Kern | 30 | 653 | 60501 | 59848 |

| | | | | |
|---|---|---|---|---|
| Kern | 32 | -653 | 143283 | 143936 |
| Lassen | 3 | 13 | 12495 | 12482 |
| Los Angeles | 36 | 766 | 190072 | 189306 |
| Mariposa | 25 | 925 | 10137 | 9212 |
| Monterey | 27 | 25 | 96044 | 96019 |
| Monterey | 28 | 1 | 63965 | 63964 |
| Orange | 67 | 16 | 226184 | 226168 |
| Riverside | 65 | 2 | 124145 | 124143 |
| San Diego | 74 | 27 | 216063 | 216036 |
| San Diego | 75 | 1893 | 228466 | 226573 |
| San Diego | 77 | 495 | 200603 | 200108 |
| Sutter | 2 | 218 | 34363 | 34145 |
| Tehama | 2 | 2 | 27072 | 27070 |

Differences between total registration from the SOV files and that data merged to the level of the census block

| CNTY | Assembly District | Amount Off | From SOV Files | From Block File |
|---|---|---|---|---|
| Colusa | 2 | 212 | 7174 | 6962 |
| Kern | 30 | 653 | 60581 | 59928 |
| Los Angeles | 36 | 726 | 189019 | 188293 |
| Mariposa | 25 | 925 | 10139 | 9214 |
| Monterey | 27 | 1168 | 97520 | 96352 |
| Monterey | 28 | 79 | 63277 | 63198 |
| Orange | 67 | 16 | 226354 | 226338 |
| San Diego | 75 | 1414 | 228472 | 227058 |

## 16.2 Merging Process

### 16.2.1 Accuracy of Merging Process

For all blocks greater than or equal to 10 people and excluding Amador, Plumas, Santa Cruz and Siskiyou Counties, below is the distribution of percent registered voters (values greater than 150 are set to 150).

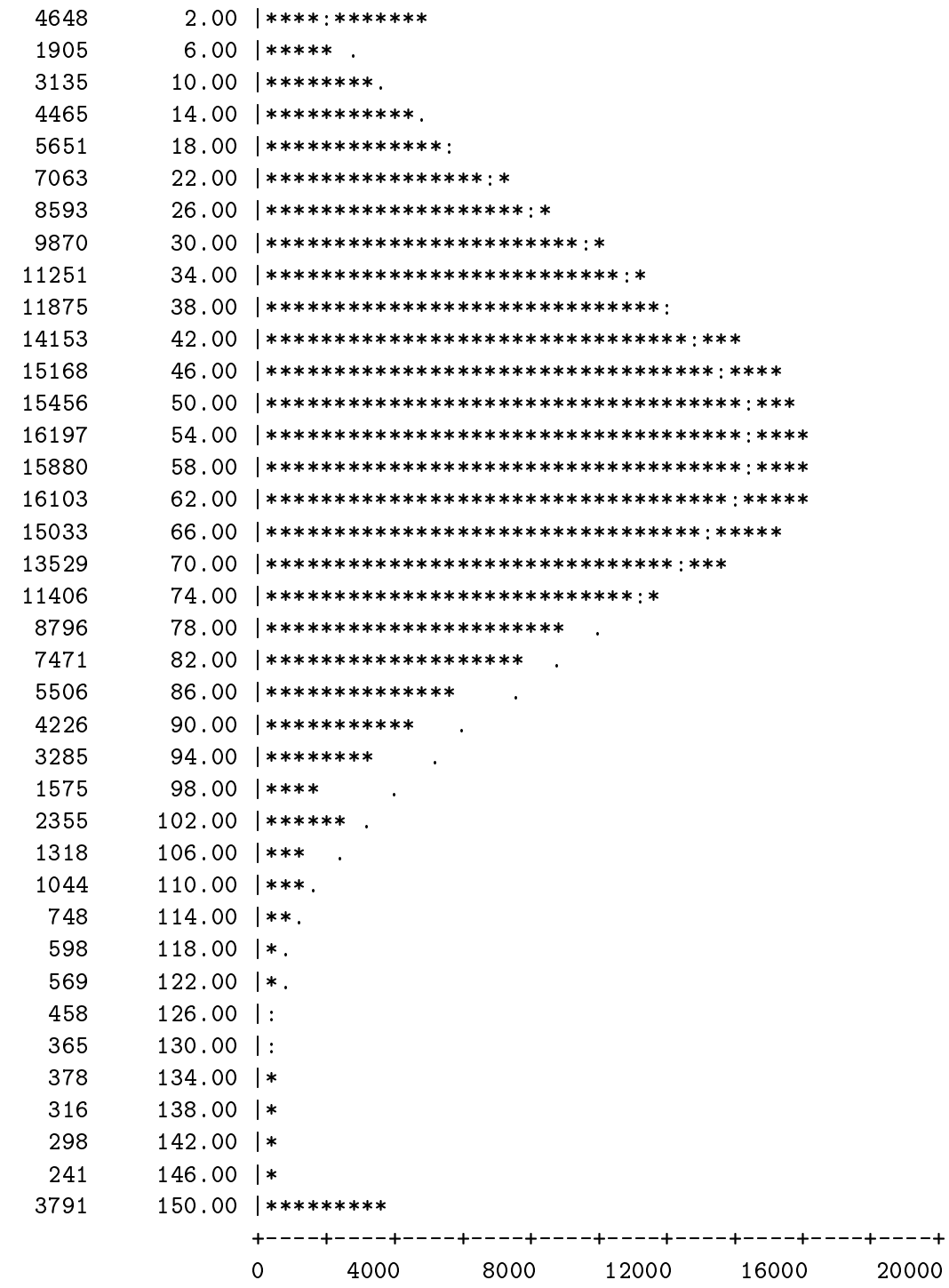
| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 0 | 3912 | 1.6 | 1.6 | 1.6 |
| | 1 | 170 | .1 | .1 | 1.7 |
| | 2 | 274 | .1 | .1 | 1.8 |
| | 3 | 292 | .1 | .1 | 1.9 |
| | 4 | 335 | .1 | .1 | 2.0 |
| | 5 | 479 | .2 | .2 | 2.2 |
| | 6 | 543 | .2 | .2 | 2.5 |
| | 7 | 548 | .2 | .2 | 2.7 |
| | 8 | 659 | .3 | .3 | 2.9 |
| | 9 | 778 | .3 | .3 | 3.3 |
| | 10 | 814 | .3 | .3 | 3.6 |
| | 11 | 884 | .4 | .4 | 4.0 |
| | 12 | 942 | .4 | .4 | 4.3 |
| | 13 | 1083 | .4 | .4 | 4.8 |
| | 14 | 1106 | .5 | .5 | 5.2 |
| | 15 | 1334 | .5 | .5 | 5.8 |
| | 16 | 1443 | .6 | .6 | 6.4 |
| | 17 | 1303 | .5 | .5 | 6.9 |
| | 18 | 1565 | .6 | .6 | 7.5 |
| | 19 | 1340 | .5 | .5 | 8.1 |
| | 20 | 1861 | .8 | .8 | 8.9 |
| | 21 | 1624 | .7 | .7 | 9.5 |
| | 22 | 1629 | .7 | .7 | 10.2 |
| | 23 | 1949 | .8 | .8 | 11.0 |
| | 24 | 1547 | .6 | .6 | 11.6 |
| | 25 | 2516 | 1.0 | 1.0 | 12.6 |
| | 26 | 2156 | .9 | .9 | 13.5 |
| | 27 | 2374 | 1.0 | 1.0 | 14.5 |
| | 28 | 2422 | 1.0 | 1.0 | 15.5 |
| | 29 | 2136 | .9 | .9 | 16.4 |
| | 30 | 2724 | 1.1 | 1.1 | 17.5 |
| | 31 | 2588 | 1.1 | 1.1 | 18.5 |
| | 32 | 2365 | 1.0 | 1.0 | 19.5 |
| | 33 | 3120 | 1.3 | 1.3 | 20.8 |
| | 34 | 2592 | 1.1 | 1.1 | 21.8 |
| | 35 | 3174 | 1.3 | 1.3 | 23.1 |
| | 36 | 3248 | 1.3 | 1.3 | 24.4 |

| | | | | |
|---|---|---|---|---|
| 37 | 2879 | 1.2 | 1.2 | 25.6 |
| 38 | 3252 | 1.3 | 1.3 | 27.0 |
| 39 | 2496 | 1.0 | 1.0 | 28.0 |
| 40 | 3818 | 1.6 | 1.6 | 29.5 |
| 41 | 3553 | 1.5 | 1.5 | 31.0 |
| 42 | 3520 | 1.4 | 1.4 | 32.4 |
| 43 | 3262 | 1.3 | 1.3 | 33.8 |
| 44 | 3254 | 1.3 | 1.3 | 35.1 |
| 45 | 4006 | 1.6 | 1.6 | 36.7 |
| 46 | 4007 | 1.6 | 1.6 | 38.4 |
| 47 | 3901 | 1.6 | 1.6 | 40.0 |
| 48 | 3805 | 1.6 | 1.6 | 41.5 |
| 49 | 2179 | .9 | .9 | 42.4 |
| 50 | 5885 | 2.4 | 2.4 | 44.8 |
| 51 | 3587 | 1.5 | 1.5 | 46.3 |
| 52 | 4142 | 1.7 | 1.7 | 48.0 |
| 53 | 4019 | 1.6 | 1.6 | 49.6 |
| 54 | 4047 | 1.7 | 1.7 | 51.3 |
| 55 | 3989 | 1.6 | 1.6 | 52.9 |
| 56 | 4014 | 1.6 | 1.6 | 54.5 |
| 57 | 4278 | 1.7 | 1.7 | 56.3 |
| 58 | 4335 | 1.8 | 1.8 | 58.0 |
| 59 | 3253 | 1.3 | 1.3 | 59.4 |
| 60 | 4596 | 1.9 | 1.9 | 61.3 |
| 61 | 3996 | 1.6 | 1.6 | 62.9 |
| 62 | 3741 | 1.5 | 1.5 | 64.4 |
| 63 | 3770 | 1.5 | 1.5 | 66.0 |
| 64 | 3929 | 1.6 | 1.6 | 67.6 |
| 65 | 3676 | 1.5 | 1.5 | 69.1 |
| 66 | 4276 | 1.7 | 1.7 | 70.8 |
| 67 | 3152 | 1.3 | 1.3 | 72.1 |
| 68 | 3665 | 1.5 | 1.5 | 73.6 |
| 69 | 3133 | 1.3 | 1.3 | 74.9 |
| 70 | 3582 | 1.5 | 1.5 | 76.3 |
| 71 | 3149 | 1.3 | 1.3 | 77.6 |
| 72 | 3315 | 1.4 | 1.4 | 79.0 |
| 73 | 2854 | 1.2 | 1.2 | 80.2 |
| 74 | 2069 | .8 | .8 | 81.0 |
| 75 | 3168 | 1.3 | 1.3 | 82.3 |
| 76 | 2690 | 1.1 | 1.1 | 83.4 |

| | | | | |
|---|---|---|---|---|
| 77 | 2231 | .9 | .9 | 84.3 |
| 78 | 2269 | .9 | .9 | 85.2 |
| 79 | 1606 | .7 | .7 | 85.9 |
| 80 | 2301 | .9 | .9 | 86.8 |
| 81 | 1875 | .8 | .8 | 87.6 |
| 82 | 1697 | .7 | .7 | 88.3 |
| 83 | 1598 | .7 | .7 | 88.9 |
| 84 | 1543 | .6 | .6 | 89.6 |
| 85 | 1513 | .6 | .6 | 90.2 |
| 86 | 1376 | .6 | .6 | 90.7 |
| 87 | 1074 | .4 | .4 | 91.2 |
| 88 | 1210 | .5 | .5 | 91.7 |
| 89 | 920 | .4 | .4 | 92.1 |
| 90 | 1172 | .5 | .5 | 92.5 |
| 91 | 924 | .4 | .4 | 92.9 |
| 92 | 988 | .4 | .4 | 93.3 |
| 93 | 829 | .3 | .3 | 93.7 |
| 94 | 773 | .3 | .3 | 94.0 |
| 95 | 695 | .3 | .3 | 94.3 |
| 96 | 678 | .3 | .3 | 94.5 |
| 97 | 496 | .2 | .2 | 94.7 |
| 98 | 315 | .1 | .1 | 94.9 |
| 99 | 86 | .0 | .0 | 94.9 |
| 100 | 1486 | .6 | .6 | 95.5 |
| 101 | 207 | .1 | .1 | 95.6 |
| 102 | 328 | .1 | .1 | 95.7 |
| 103 | 334 | .1 | .1 | 95.9 |
| 104 | 355 | .1 | .1 | 96.0 |
| 105 | 334 | .1 | .1 | 96.1 |
| 106 | 321 | .1 | .1 | 96.3 |
| 107 | 308 | .1 | .1 | 96.4 |
| 108 | 270 | .1 | .1 | 96.5 |
| 109 | 270 | .1 | .1 | 96.6 |
| 110 | 284 | .1 | .1 | 96.7 |
| 111 | 220 | .1 | .1 | 96.8 |
| 112 | 184 | .1 | .1 | 96.9 |
| 113 | 200 | .1 | .1 | 97.0 |
| 114 | 170 | .1 | .1 | 97.1 |
| 115 | 194 | .1 | .1 | 97.1 |
| 116 | 194 | .1 | .1 | 97.2 |

| | | | | |
|---|---|---|---|---|
| 117 | 148 | .1 | .1 | 97.3 |
| 118 | 165 | .1 | .1 | 97.3 |
| 119 | 91 | .0 | .0 | 97.4 |
| 120 | 192 | .1 | .1 | 97.5 |
| 121 | 138 | .1 | .1 | 97.5 |
| 122 | 126 | .1 | .1 | 97.6 |
| 123 | 113 | .0 | .0 | 97.6 |
| 124 | 72 | .0 | .0 | 97.6 |
| 125 | 156 | .1 | .1 | 97.7 |
| 126 | 110 | .0 | .0 | 97.7 |
| 127 | 120 | .0 | .0 | 97.8 |
| 128 | 98 | .0 | .0 | 97.8 |
| 129 | 75 | .0 | .0 | 97.9 |
| 130 | 114 | .0 | .0 | 97.9 |
| 131 | 78 | .0 | .0 | 97.9 |
| 132 | 57 | .0 | .0 | 98.0 |
| 133 | 142 | .1 | .1 | 98.0 |
| 134 | 68 | .0 | .0 | 98.1 |
| 135 | 111 | .0 | .0 | 98.1 |
| 136 | 94 | .0 | .0 | 98.1 |
| 137 | 100 | .0 | .0 | 98.2 |
| 138 | 75 | .0 | .0 | 98.2 |
| 139 | 47 | .0 | .0 | 98.2 |
| 140 | 97 | .0 | .0 | 98.3 |
| 141 | 73 | .0 | .0 | 98.3 |
| 142 | 78 | .0 | .0 | 98.3 |
| 143 | 50 | .0 | .0 | 98.4 |
| 144 | 78 | .0 | .0 | 98.4 |
| 145 | 58 | .0 | .0 | 98.4 |
| 146 | 60 | .0 | .0 | 98.4 |
| 147 | 45 | .0 | .0 | 98.5 |
| 148 | 38 | .0 | .0 | 98.5 |
| 149 | 18 | .0 | .0 | 98.5 |
| 150 | 3735 | 1.5 | 1.5 | 100.0 |
| | ------- | ------- | ------- | |
| Total | 244719 | 100.0 | 100.0 | |

Count Midpoint One symbol equals approx. 400.00 occurrences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1905 6.00 |***** .
3135 10.00 |********.
4465 14.00 |***********.
5651 18.00 |*************:
7063 22.00 |****************:*
8593 26.00 |******************:*
9870 30.00 |***********************:*
11251 34.00 |***************************:*
11875 38.00 |*****************************:
14153 42.00 |*******************************:***
15168 46.00 |*********************************:****
15456 50.00 |***********************************:***
16197 54.00 |************************************:****
15880 58.00 |************************************:****
16103 62.00 |************************************:*****
15033 66.00 |*********************************:*****
13529 70.00 |*******************************:***
11406 74.00 |***************************:*
8796 78.00 |*********************** .
7471 82.00 |******************* .
5506 86.00 |************** .
4226 90.00 |*********** .
3285 94.00 |******** .
1575 98.00 |**** .
2355 102.00 |****** .
1318 106.00 |*** .
1044 110.00 |***.
748 114.00 |**.
598 118.00 |*.
569 122.00 |*.
458 126.00 |:
365 130.00 |:
378 134.00 |*
316 138.00 |*
298 142.00 |*
241 146.00 |*
3791 150.00 |*********
+----+----+----+----+----+----+----+----+----+----+
0 4000 8000 12000 16000 20000

Histogram frequency

Breakdown of non-zero population blocks with no registered voters by county.

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 1 | 128 | 3.3 | 3.3 | 3.3 |
| | 4 | 87 | 2.2 | 2.2 | 5.5 |
| | 6 | 14 | .4 | .4 | 5.9 |
| | 7 | 85 | 2.2 | 2.2 | 8.0 |
| | 9 | 60 | 1.5 | 1.5 | 9.6 |
| | 10 | 61 | 1.6 | 1.6 | 11.1 |
| | 11 | 1 | .0 | .0 | 11.1 |
| | 12 | 62 | 1.6 | 1.6 | 12.7 |
| | 14 | 5 | .1 | .1 | 12.9 |
| | 15 | 240 | 6.1 | 6.1 | 19.0 |
| | 16 | 15 | .4 | .4 | 19.4 |
| | 17 | 1 | .0 | .0 | 19.4 |
| | 18 | 14 | .4 | .4 | 19.8 |
| | 19 | 646 | 16.5 | 16.5 | 36.3 |
| | 20 | 5 | .1 | .1 | 36.4 |
| | 21 | 39 | 1.0 | 1.0 | 37.4 |
| | 23 | 2 | .1 | .1 | 37.4 |
| | 24 | 6 | .2 | .2 | 37.6 |
| | 25 | 3 | .1 | .1 | 37.7 |
| | 26 | 7 | .2 | .2 | 37.9 |
| | 27 | 573 | 14.6 | 14.6 | 52.5 |
| | 28 | 4 | .1 | .1 | 52.6 |
| | 29 | 5 | .1 | .1 | 52.7 |
| | 30 | 290 | 7.4 | 7.4 | 60.1 |
| | 31 | 23 | .6 | .6 | 60.7 |
| | 33 | 127 | 3.2 | 3.2 | 64.0 |
| | 34 | 94 | 2.4 | 2.4 | 66.4 |
| | 35 | 9 | .2 | .2 | 66.6 |
| | 36 | 251 | 6.4 | 6.4 | 73.0 |
| | 37 | 369 | 9.4 | 9.4 | 82.5 |
| | 38 | 56 | 1.4 | 1.4 | 83.9 |
| | 39 | 24 | .6 | .6 | 84.5 |

| | | | | |
|---|---|---|---|---|
| 40 | 36 | .9 | .9 | 85.4 |
| 41 | 65 | 1.7 | 1.7 | 87.1 |
| 42 | 40 | 1.0 | 1.0 | 88.1 |
| 43 | 221 | 5.6 | 5.6 | 93.8 |
| 45 | 2 | .1 | .1 | 93.8 |
| 46 | 4 | .1 | .1 | 93.9 |
| 48 | 25 | .6 | .6 | 94.6 |
| 49 | 23 | .6 | .6 | 95.1 |
| 50 | 19 | .5 | .5 | 95.6 |
| 51 | 7 | .2 | .2 | 95.8 |
| 53 | 8 | .2 | .2 | 96.0 |
| 54 | 75 | 1.9 | 1.9 | 97.9 |
| 55 | 8 | .2 | .2 | 98.1 |
| 56 | 57 | 1.5 | 1.5 | 99.6 |
| 57 | 11 | .3 | .3 | 99.9 |
| 58 | 5 | .1 | .1 | 100.0 |
| | ------- | ------- | ------- | |
| Total | 3912 | 100.0 | 100.0 | |

For all blocks greater than or equal to 10 people and excluding Amador, Plumas, Santa Cruz and Siskiyou Counties, below is the distribution of percent voters (with respect to registration–values greater than 150 are set to 150).

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 0 | 2301 | .9 | .9 | .9 |
| | 1 | 1 | .0 | .0 | .9 |
| | 2 | 3 | .0 | .0 | .9 |
| | 3 | 5 | .0 | .0 | .9 |
| | 4 | 2 | .0 | .0 | .9 |
| | 5 | 2 | .0 | .0 | .9 |
| | 6 | 2 | .0 | .0 | .9 |
| | 7 | 4 | .0 | .0 | .9 |
| | 8 | 5 | .0 | .0 | 1.0 |
| | 9 | 4 | .0 | .0 | 1.0 |
| | 10 | 6 | .0 | .0 | 1.0 |
| | 11 | 5 | .0 | .0 | 1.0 |

| | | | | |
|---|---|---|---|---|
| 12 | 5 | .0 | .0 | 1.0 |
| 13 | 6 | .0 | .0 | 1.0 |
| 14 | 2 | .0 | .0 | 1.0 |
| 15 | 12 | .0 | .0 | 1.0 |
| 16 | 11 | .0 | .0 | 1.0 |
| 17 | 11 | .0 | .0 | 1.0 |
| 18 | 12 | .0 | .0 | 1.0 |
| 19 | 14 | .0 | .0 | 1.0 |
| 20 | 33 | .0 | .0 | 1.0 |
| 21 | 30 | .0 | .0 | 1.0 |
| 22 | 62 | .0 | .0 | 1.0 |
| 23 | 60 | .0 | .0 | 1.1 |
| 24 | 44 | .0 | .0 | 1.1 |
| 25 | 130 | .1 | .1 | 1.1 |
| 26 | 98 | .0 | .0 | 1.2 |
| 27 | 95 | .0 | .0 | 1.2 |
| 28 | 119 | .0 | .0 | 1.3 |
| 29 | 125 | .1 | .1 | 1.3 |
| 30 | 230 | .1 | .1 | 1.4 |
| 31 | 167 | .1 | .1 | 1.5 |
| 32 | 170 | .1 | .1 | 1.5 |
| 33 | 509 | .2 | .2 | 1.8 |
| 34 | 237 | .1 | .1 | 1.8 |
| 35 | 367 | .1 | .1 | 2.0 |
| 36 | 435 | .2 | .2 | 2.2 |
| 37 | 655 | .3 | .3 | 2.4 |
| 38 | 639 | .3 | .3 | 2.7 |
| 39 | 447 | .2 | .2 | 2.9 |
| 40 | 1325 | .5 | .5 | 3.4 |
| 41 | 1018 | .4 | .4 | 3.8 |
| 42 | 1385 | .6 | .6 | 4.4 |
| 43 | 1076 | .4 | .4 | 4.9 |
| 44 | 1530 | .6 | .6 | 5.5 |
| 45 | 1764 | .7 | .7 | 6.2 |
| 46 | 1908 | .8 | .8 | 7.0 |
| 47 | 2114 | .9 | .9 | 7.8 |
| 48 | 2213 | .9 | .9 | 8.7 |
| 49 | 847 | .3 | .3 | 9.1 |
| 50 | 7579 | 3.1 | 3.1 | 12.2 |
| 51 | 2533 | 1.0 | 1.0 | 13.2 |

| | | | | |
|---|---|---|---|---|
| 52 | 3868 | 1.6 | 1.6 | 14.8 |
| 53 | 3998 | 1.6 | 1.6 | 16.4 |
| 54 | 4202 | 1.7 | 1.7 | 18.2 |
| 55 | 5379 | 2.2 | 2.2 | 20.4 |
| 56 | 4900 | 2.0 | 2.0 | 22.4 |
| 57 | 7036 | 2.9 | 2.9 | 25.2 |
| 58 | 6770 | 2.8 | 2.8 | 28.0 |
| 59 | 4781 | 2.0 | 2.0 | 29.9 |
| 60 | 11136 | 4.6 | 4.6 | 34.5 |
| 61 | 8349 | 3.4 | 3.4 | 37.9 |
| 62 | 9856 | 4.0 | 4.0 | 41.9 |
| 63 | 9233 | 3.8 | 3.8 | 45.7 |
| 64 | 9780 | 4.0 | 4.0 | 49.7 |
| 65 | 9767 | 4.0 | 4.0 | 53.7 |
| 66 | 16892 | 6.9 | 6.9 | 60.6 |
| 67 | 7696 | 3.1 | 3.1 | 63.7 |
| 68 | 10511 | 4.3 | 4.3 | 68.0 |
| 69 | 8042 | 3.3 | 3.3 | 71.3 |
| 70 | 10961 | 4.5 | 4.5 | 75.8 |
| 71 | 9360 | 3.8 | 3.8 | 79.6 |
| 72 | 8265 | 3.4 | 3.4 | 83.0 |
| 73 | 6157 | 2.5 | 2.5 | 85.5 |
| 74 | 3042 | 1.2 | 1.2 | 86.8 |
| 75 | 8531 | 3.5 | 3.5 | 90.3 |
| 76 | 4054 | 1.7 | 1.7 | 91.9 |
| 77 | 3190 | 1.3 | 1.3 | 93.2 |
| 78 | 2386 | 1.0 | 1.0 | 94.2 |
| 79 | 1046 | .4 | .4 | 94.6 |
| 80 | 3756 | 1.5 | 1.5 | 96.2 |
| 81 | 1361 | .6 | .6 | 96.7 |
| 82 | 775 | .3 | .3 | 97.0 |
| 83 | 1280 | .5 | .5 | 97.5 |
| 84 | 488 | .2 | .2 | 97.7 |
| 85 | 966 | .4 | .4 | 98.1 |
| 86 | 239 | .1 | .1 | 98.2 |
| 87 | 346 | .1 | .1 | 98.4 |
| 88 | 305 | .1 | .1 | 98.5 |
| 89 | 43 | .0 | .0 | 98.5 |
| 90 | 219 | .1 | .1 | 98.6 |
| 91 | 60 | .0 | .0 | 98.6 |

| | | | | |
|---|---|---|---|---|
| 92 | 64 | .0 | .0 | 98.7 |
| 93 | 48 | .0 | .0 | 98.7 |
| 94 | 33 | .0 | .0 | 98.7 |
| 95 | 12 | .0 | .0 | 98.7 |
| 96 | 8 | .0 | .0 | 98.7 |
| 97 | 8 | .0 | .0 | 98.7 |
| 98 | 3 | .0 | .0 | 98.7 |
| 99 | 4 | .0 | .0 | 98.7 |
| 100 | 2253 | .9 | .9 | 99.6 |
| 101 | 7 | .0 | .0 | 99.6 |
| 102 | 8 | .0 | .0 | 99.6 |
| 103 | 5 | .0 | .0 | 99.6 |
| 104 | 4 | .0 | .0 | 99.6 |
| 105 | 11 | .0 | .0 | 99.6 |
| 106 | 3 | .0 | .0 | 99.6 |
| 107 | 5 | .0 | .0 | 99.6 |
| 108 | 7 | .0 | .0 | 99.7 |
| 109 | 6 | .0 | .0 | 99.7 |
| 110 | 2 | .0 | .0 | 99.7 |
| 111 | 9 | .0 | .0 | 99.7 |
| 112 | 9 | .0 | .0 | 99.7 |
| 113 | 3 | .0 | .0 | 99.7 |
| 114 | 13 | .0 | .0 | 99.7 |
| 115 | 8 | .0 | .0 | 99.7 |
| 116 | 12 | .0 | .0 | 99.7 |
| 117 | 7 | .0 | .0 | 99.7 |
| 118 | 4 | .0 | .0 | 99.7 |
| 119 | 2 | .0 | .0 | 99.7 |
| 120 | 17 | .0 | .0 | 99.7 |
| 121 | 5 | .0 | .0 | 99.7 |
| 122 | 2 | .0 | .0 | 99.7 |
| 123 | 6 | .0 | .0 | 99.7 |
| 124 | 2 | .0 | .0 | 99.7 |
| 125 | 20 | .0 | .0 | 99.7 |
| 126 | 6 | .0 | .0 | 99.7 |
| 127 | 2 | .0 | .0 | 99.7 |
| 128 | 9 | .0 | .0 | 99.7 |
| 129 | 1 | .0 | .0 | 99.7 |
| 130 | 5 | .0 | .0 | 99.7 |
| 131 | 3 | .0 | .0 | 99.7 |

| | | | | |
|---|---|---|---|---|
| 133 | 30 | .0 | .0 | 99.7 |
| 134 | 3 | .0 | .0 | 99.7 |
| 135 | 2 | .0 | .0 | 99.7 |
| 136 | 2 | .0 | .0 | 99.7 |
| 137 | 5 | .0 | .0 | 99.7 |
| 138 | 7 | .0 | .0 | 99.7 |
| 139 | 1 | .0 | .0 | 99.7 |
| 140 | 12 | .0 | .0 | 99.7 |
| 141 | 2 | .0 | .0 | 99.7 |
| 142 | 11 | .0 | .0 | 99.7 |
| 143 | 1 | .0 | .0 | 99.7 |
| 144 | 3 | .0 | .0 | 99.7 |
| 145 | 8 | .0 | .0 | 99.7 |
| 146 | 3 | .0 | .0 | 99.8 |
| 147 | 2 | .0 | .0 | 99.8 |
| 148 | 3 | .0 | .0 | 99.8 |
| 149 | 1 | .0 | .0 | 99.8 |
| 150 | 604 | .2 | .2 | 100.0 |
| | ------- | ------- | ------- | |
| Total | 244719 | 100.0 | 100.0 | |

```
Count   Midpoint    One symbol equals approx.     1600.00 occurrences

 2310       2.00 |*
   10       6.00 |
   20      10.00 |
   25      14.00 |
   48      18.00 |
  185      22.00 |
  367      26.00 |
  641      30.00 |.
 1283      34.00 |*.
 2176      38.00 |* .
 4804      42.00 |*** .
 7316      46.00 |*****  .
13172      50.00 |********  .
17447      54.00 |**********  .
23487      58.00 |*************** .
38574      62.00 |*****************:******
```

```
 44135      66.00 |*****************:**********
 38874      70.00 |***************:********
 25995      74.00 |*************:***
 10676      78.00 |*******  .
  7172      82.00 |****  .
  2039      86.00 |*  .
   627      90.00 | .
   157      94.00 |.
    23      98.00 |.
  2273     102.00 |*
    23     106.00 |
    24     110.00 |
    33     114.00 |
    25     118.00 |
    30     122.00 |
    30     126.00 |
    18     130.00 |
    35     134.00 |
    15     138.00 |
    26     142.00 |
    16     146.00 |
   608     150.00 |
                  +----+----+----+----+----+----+----+----+----+----+
                  0     16000     32000     48000     64000     80000
                        Histogram frequency
```

Breakdown of non-zero pop blocks (10 or greater people) with no actual voters by County

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 1 | 59 | 2.6 | 2.6 | 2.6 |
| | 4 | 75 | 3.3 | 3.3 | 5.8 |
| | 6 | 17 | .7 | .7 | 6.6 |
| | 7 | 41 | 1.8 | 1.8 | 8.3 |
| | 9 | 45 | 2.0 | 2.0 | 10.3 |
| | 10 | 32 | 1.4 | 1.4 | 11.7 |
| | 11 | 5 | .2 | .2 | 11.9 |
| | 12 | 47 | 2.0 | 2.0 | 14.0 |

| | | | | |
|---|---|---|---|---|
| 15 | 166 | 7.2 | 7.2 | 21.2 |
| 16 | 11 | .5 | .5 | 21.6 |
| 18 | 12 | .5 | .5 | 22.2 |
| 19 | 437 | 19.0 | 19.0 | 41.2 |
| 21 | 13 | .6 | .6 | 41.7 |
| 24 | 8 | .3 | .3 | 42.1 |
| 26 | 7 | .3 | .3 | 42.4 |
| 27 | 320 | 13.9 | 13.9 | 56.3 |
| 29 | 4 | .2 | .2 | 56.5 |
| 30 | 147 | 6.4 | 6.4 | 62.8 |
| 31 | 3 | .1 | .1 | 63.0 |
| 33 | 38 | 1.7 | 1.7 | 64.6 |
| 34 | 25 | 1.1 | 1.1 | 65.7 |
| 35 | 2 | .1 | .1 | 65.8 |
| 36 | 187 | 8.1 | 8.1 | 73.9 |
| 37 | 185 | 8.0 | 8.0 | 82.0 |
| 38 | 39 | 1.7 | 1.7 | 83.7 |
| 39 | 5 | .2 | .2 | 83.9 |
| 40 | 3 | .1 | .1 | 84.0 |
| 41 | 29 | 1.3 | 1.3 | 85.3 |
| 42 | 20 | .9 | .9 | 86.1 |
| 43 | 103 | 4.5 | 4.5 | 90.6 |
| 45 | 2 | .1 | .1 | 90.7 |
| 46 | 5 | .2 | .2 | 90.9 |
| 48 | 13 | .6 | .6 | 91.5 |
| 49 | 8 | .3 | .3 | 91.8 |
| 50 | 16 | .7 | .7 | 92.5 |
| 53 | 8 | .3 | .3 | 92.9 |
| 54 | 67 | 2.9 | 2.9 | 95.8 |
| 55 | 11 | .5 | .5 | 96.3 |
| 56 | 83 | 3.6 | 3.6 | 99.9 |
| 57 | 3 | .1 | .1 | 100.0 |
| Total | 2301 | 100.0 | 100.0 | |

| LEVEL | CNTY | AD | DIFF1 | From SOS | From IGS |
|---|---|---|---|---|---|

| | | | | File | File |
|---|---|---|---|---|---|
| 3 | 1 | 14 | 0 | 165572 | 165572 |
| | | 15 | 0 | 63844 | 63844 |
| | | 16 | 0 | 201732 | 201732 |
| | | 18 | 0 | 205174 | 205174 |
| | | 20 | 0 | 121868 | 121868 |
| | Sum | | 0 | 758190 | 758190 |
| | 2 | 4 | 0 | 702 | 702 |
| | Sum | | 0 | 702 | 702 |
| | 3 | 4 | 17905 | 17905 | 0 |
| | Sum | | 17905 | 17905 | 0 |
| | 4 | 2 | 0 | 4146 | 4146 |
| | | 3 | 0 | 108271 | 108271 |
| | Sum | | 0 | 112417 | 112417 |
| | 5 | 4 | 0 | 20753 | 20753 |
| | Sum | | 0 | 20753 | 20753 |
| | 6 | 2 | 0 | 6914 | 6914 |
| | Sum | | 0 | 6914 | 6914 |
| | 7 | 11 | 0 | 220356 | 220356 |
| | | 14 | 10 | 90519 | 90509 |
| | | 15 | 0 | 196697 | 196697 |
| | Sum | | 10 | 507572 | 507562 |
| | 8 | 1 | 0 | 12194 | 12194 |
| | Sum | | 0 | 12194 | 12194 |

| | | | | | |
|---|---|---|---|---|---|
| | 9 | 4 | 49 | 81177 | 81128 |
| | Sum | | 49 | 81177 | 81128 |
| | 10 | 25 | 0 | 26077 | 26077 |
| | | 29 | 0 | 154220 | 154220 |
| | | 30 | 0 | 31061 | 31061 |
| | | 31 | 0 | 100593 | 100593 |
| | Sum | | 0 | 311951 | 311951 |
| | 11 | 2 | 0 | 11110 | 11110 |
| | Sum | | 0 | 11110 | 11110 |
| 3 | 12 | 1 | 100 | 76796 | 76696 |
| | Sum | | 100 | 76796 | 76696 |
| | 13 | 80 | 0 | 39760 | 39760 |
| | Sum | | 0 | 39760 | 39760 |
| | 14 | 34 | 0 | 10506 | 10506 |
| | Sum | | 0 | 10506 | 10506 |
| | 15 | 30 | 653 | 60501 | 59848 |
| | | 32 | -653 | 143283 | 143936 |
| | | 34 | 0 | 48371 | 48371 |
| | Sum | | 0 | 252155 | 252155 |
| | 16 | 30 | 0 | 36687 | 36687 |
| | Sum | | 0 | 36687 | 36687 |
| | 17 | 1 | 0 | 29467 | 29467 |

| | | | | | |
|---|---|---|---|---|---|
| | | Sum | | 0 | 29467 | 29467 |
| | | 18 | 3 | 13 | 12495 | 12482 |
| | | Sum | | 13 | 12495 | 12482 |
| | | 19 | 36 | 766 | 190072 | 189306 |
| | | | 38 | 0 | 122570 | 122570 |
| | | | 39 | 0 | 101637 | 101637 |
| | | | 40 | 0 | 159214 | 159214 |
| | | | 41 | 0 | 240886 | 240886 |
| | | | 42 | 0 | 235208 | 235208 |
| | | | 43 | 0 | 158308 | 158308 |
| | | | 44 | 0 | 206621 | 206621 |
| | | | 45 | 0 | 91408 | 91408 |
| | | | 46 | 0 | 58878 | 58878 |
| | | | 47 | 0 | 193912 | 193912 |
| | | | 48 | 0 | 120608 | 120608 |
| | | | 49 | 0 | 119653 | 119653 |
| | | | 50 | 0 | 65241 | 65241 |
| | | | 51 | 0 | 151408 | 151408 |
| | | | 52 | 0 | 127700 | 127700 |
| | | | 53 | 0 | 235484 | 235484 |
| | | | 54 | 0 | 207632 | 207632 |
| | | | 55 | 0 | 131586 | 131586 |
| | | | 56 | 0 | 178603 | 178603 |
| | | | 57 | 0 | 112919 | 112919 |
| | | | 58 | 0 | 147695 | 147695 |
| | | | 59 | 0 | 194161 | 194161 |
| | 3 | 19 | 60 | 0 | 170986 | 170986 |
| | | | 61 | 0 | 20186 | 20186 |
| | | Sum | | 766 | 3742576 | 3741810 |
| | | 20 | 25 | 0 | 41543 | 41543 |
| | | | 30 | 0 | 2261 | 2261 |
| | | Sum | | 0 | 43804 | 43804 |
| | | 21 | 6 | 0 | 153255 | 153255 |

| | | | | |
|---|---|---|---|---|
| Sum | | 0 | 153255 | 153255 |
| 22 | 25 | 925 | 10137 | 9212 |
| Sum | | 925 | 10137 | 9212 |
| 23 | 1 | 0 | 44513 | 44513 |
| Sum | | 0 | 44513 | 44513 |
| 24 | 26 | 0 | 69641 | 69641 |
| Sum | | 0 | 69641 | 69641 |
| 25 | 3 | 0 | 5870 | 5870 |
| Sum | | 0 | 5870 | 5870 |
| 26 | 4 | 0 | 5635 | 5635 |
| Sum | | 0 | 5635 | 5635 |
| 27 | 27 | 25 | 96044 | 96019 |
| | 28 | 1 | 63965 | 63964 |
| Sum | | 26 | 160009 | 159983 |
| 28 | 7 | 0 | 65211 | 65211 |
| Sum | | 0 | 65211 | 65211 |
| 29 | 3 | 0 | 54676 | 54676 |
| Sum | | 0 | 54676 | 54676 |
| 30 | 67 | 16 | 226184 | 226168 |
| | 68 | 0 | 161670 | 161670 |
| | 69 | 0 | 90632 | 90632 |
| | 70 | 0 | 229054 | 229054 |

| | | | | | |
|---|---|---|---|---|---|
| | | 71 | 0 | 216704 | 216704 |
| | | 72 | 0 | 197778 | 197778 |
| | | 73 | 0 | 117326 | 117326 |
| | Sum | | 16 | 1239348 | 1239332 |
| 3 | 31 | 4 | 0 | 113044 | 113044 |
| | Sum | | 0 | 113044 | 113044 |
| | 32 | 3 | 12458 | 12458 | 0 |
| | Sum | | 12458 | 12458 | 0 |
| | 33 | 64 | 0 | 179318 | 179318 |
| | | 65 | 2 | 124145 | 124143 |
| | | 66 | 0 | 161991 | 161991 |
| | | 80 | 0 | 131415 | 131415 |
| | Sum | | 2 | 596869 | 596867 |
| | 34 | 5 | 0 | 232418 | 232418 |
| | | 8 | 0 | 3708 | 3708 |
| | | 9 | 0 | 207364 | 207364 |
| | | 10 | 0 | 185637 | 185637 |
| | Sum | | 0 | 629127 | 629127 |
| | 35 | 28 | 0 | 17301 | 17301 |
| | Sum | | 0 | 17301 | 17301 |
| | 36 | 34 | 0 | 125066 | 125066 |
| | | 61 | 0 | 120114 | 120114 |
| | | 62 | 0 | 159542 | 159542 |
| | | 63 | 0 | 207184 | 207184 |
| | | 65 | 0 | 71007 | 71007 |
| | Sum | | 0 | 682913 | 682913 |
| | 37 | 66 | 0 | 43226 | 43226 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 73 | 0 | 85677 | 85677 |
| | | | 74 | 27 | 216063 | 216036 |
| | | | 75 | 1893 | 228466 | 226573 |
| | | | 76 | 0 | 227809 | 227809 |
| | | | 77 | 495 | 200603 | 200108 |
| | | | 78 | 0 | 244540 | 244540 |
| | | | 79 | 0 | 135866 | 135866 |
| | | Sum | | 2415 | 1382250 | 1379835 |
| | | 38 | 12 | 0 | 212607 | 212607 |
| | | | 13 | 0 | 265106 | 265106 |
| | | Sum | | 0 | 477713 | 477713 |
| | | 39 | 10 | 0 | 49690 | 49690 |
| | | | 17 | 0 | 176582 | 176582 |
| 3 | | 39 | 26 | 0 | 4530 | 4530 |
| | | Sum | | 0 | 230802 | 230802 |
| | | 40 | 33 | 0 | 128207 | 128207 |
| | | Sum | | 0 | 128207 | 128207 |
| | | 41 | 12 | 0 | 9242 | 9242 |
| | | | 19 | 0 | 191359 | 191359 |
| | | | 21 | 0 | 147063 | 147063 |
| | | Sum | | 0 | 347664 | 347664 |
| | | 42 | 33 | 0 | 71610 | 71610 |
| | | | 35 | 0 | 139402 | 139402 |
| | | Sum | | 0 | 211012 | 211012 |
| | | 43 | 20 | 0 | 72036 | 72036 |
| | | | 21 | 0 | 82050 | 82050 |
| | | | 22 | 0 | 214630 | 214630 |
| | | | 23 | 0 | 147179 | 147179 |

| | | | | | |
|---|---|---|---|---|---|
| | | 24 | 0 | 240465 | 240465 |
| | | 28 | 0 | 63459 | 63459 |
| | Sum | | 0 | 819819 | 819819 |
| | 44 | 27 | 2002 | 131062 | 129060 |
| | | 28 | 0 | 17214 | 17214 |
| | Sum | | 2002 | 148276 | 146274 |
| | 45 | 2 | 0 | 84434 | 84434 |
| | Sum | | 0 | 84434 | 84434 |
| | 46 | 3 | 0 | 2328 | 2328 |
| | Sum | | 0 | 2328 | 2328 |
| | 47 | 2 | 17316 | 25626 | 8310 |
| | Sum | | 17316 | 25626 | 8310 |
| | 48 | 7 | 0 | 58220 | 58220 |
| | | 8 | 0 | 114870 | 114870 |
| | Sum | | 0 | 173090 | 173090 |
| | 49 | 1 | 0 | 64794 | 64794 |
| | | 6 | 0 | 87317 | 87317 |
| | | 7 | 0 | 93407 | 93407 |
| | Sum | | 0 | 245518 | 245518 |
| 3 | 50 | 25 | 0 | 102219 | 102219 |
| | | 26 | 0 | 77234 | 77234 |
| | Sum | | 0 | 179453 | 179453 |
| | 51 | 2 | 218 | 34363 | 34145 |
| | Sum | | 218 | 34363 | 34145 |

| | | | | | |
|---|---|---|---|---|---|
| | 52 | 2 | 2 | 27072 | 27070 |
| | Sum | | 2 | 27072 | 27070 |
| | 53 | 2 | 0 | 8242 | 8242 |
| | Sum | | 0 | 8242 | 8242 |
| | 54 | 29 | 0 | 49822 | 49822 |
| | | 31 | 0 | 29936 | 29936 |
| | | 32 | 0 | 45208 | 45208 |
| | Sum | | 0 | 124966 | 124966 |
| | 55 | 25 | 0 | 29927 | 29927 |
| | Sum | | 0 | 29927 | 29927 |
| | 56 | 35 | 0 | 92950 | 92950 |
| | | 37 | 0 | 185395 | 185395 |
| | | 38 | 0 | 80836 | 80836 |
| | Sum | | 0 | 359181 | 359181 |
| | 57 | 2 | 0 | 1560 | 1560 |
| | | 8 | 0 | 82528 | 82528 |
| | Sum | | 0 | 84088 | 84088 |
| | 58 | 3 | 0 | 23756 | 23756 |
| | Sum | | 0 | 23756 | 23756 |
| Sum | | | 54223 | 15092925 | 15038702 |

| LEVEL | CNTY | AD | DIFF1 | From SOS | From IGS |
|---|---|---|---|---|---|

| | | | | File | File |
|---|---|---|---|---|---|
| 3 | 1 | 14 | 0 | 165724 | 165724 |
| | | 15 | 0 | 63567 | 63567 |
| | | 16 | 0 | 201735 | 201735 |
| | | 18 | 0 | 204065 | 204065 |
| | | 20 | 0 | 121396 | 121396 |
| | Sum | | 0 | 756487 | 756487 |
| | 2 | 4 | 0 | 733 | 733 |
| | Sum | | 0 | 733 | 733 |
| | 3 | 4 | . | . | 0 |
| | Sum | | . | . | 0 |
| | 4 | 2 | 0 | 4147 | 4147 |
| | | 3 | 0 | 108277 | 108277 |
| | Sum | | 0 | 112424 | 112424 |
| | 5 | 4 | 0 | 20823 | 20823 |
| | Sum | | 0 | 20823 | 20823 |
| | 6 | 2 | 212 | 7174 | 6962 |
| | Sum | | 212 | 7174 | 6962 |
| | 7 | 11 | 0 | 220291 | 220291 |
| | | 14 | 0 | 90501 | 90501 |
| | | 15 | 0 | 196643 | 196643 |
| | Sum | | 0 | 507435 | 507435 |
| | 8 | 1 | 0 | 12272 | 12272 |
| | Sum | | 0 | 12272 | 12272 |

| | | | | | |
|---|---|---|---|---|---|
| | 9 | 4 | 0 | 81196 | 81196 |
| | Sum | | 0 | 81196 | 81196 |
| | 10 | 25 | 0 | 26073 | 26073 |
| | | 29 | 0 | 154220 | 154220 |
| | | 30 | 0 | 31059 | 31059 |
| | | 31 | 0 | 100575 | 100575 |
| | Sum | | 0 | 311927 | 311927 |
| | 11 | 2 | 0 | 11147 | 11147 |
| | Sum | | 0 | 11147 | 11147 |
| 3 | 12 | 1 | 0 | 76796 | 76796 |
| | Sum | | 0 | 76796 | 76796 |
| | 13 | 80 | 0 | 39797 | 39797 |
| | Sum | | 0 | 39797 | 39797 |
| | 14 | 34 | 0 | 10500 | 10500 |
| | Sum | | 0 | 10500 | 10500 |
| | 15 | 30 | 653 | 60581 | 59928 |
| | | 32 | 0 | 143335 | 143335 |
| | | 34 | 0 | 48405 | 48405 |
| | Sum | | 653 | 252321 | 251668 |
| | 16 | 30 | 0 | 36691 | 36691 |
| | Sum | | 0 | 36691 | 36691 |
| | 17 | 1 | 0 | 29469 | 29469 |

| | | | | | |
|---|---|---|---|---|---|
| | | Sum | | 0 | 29469 | 29469 |
| | | 18 | 3 | 0 | 12503 | 12503 |
| | | Sum | | 0 | 12503 | 12503 |
| | | 19 | 36 | 726 | 189019 | 188293 |
| | | | 38 | 0 | 122602 | 122602 |
| | | | 39 | 0 | 101611 | 101611 |
| | | | 40 | 0 | 159286 | 159286 |
| | | | 41 | 0 | 240877 | 240877 |
| | | | 42 | 0 | 235402 | 235402 |
| | | | 43 | 0 | 158387 | 158387 |
| | | | 44 | 0 | 206284 | 206284 |
| | | | 45 | 0 | 91448 | 91448 |
| | | | 46 | 0 | 58881 | 58881 |
| | | | 47 | 0 | 193994 | 193994 |
| | | | 48 | 0 | 120631 | 120631 |
| | | | 49 | 0 | 119618 | 119618 |
| | | | 50 | 0 | 65187 | 65187 |
| | | | 51 | 0 | 151365 | 151365 |
| | | | 52 | 0 | 127620 | 127620 |
| | | | 53 | 0 | 235601 | 235601 |
| | | | 54 | 0 | 207428 | 207428 |
| | | | 55 | 0 | 131430 | 131430 |
| | | | 56 | 0 | 178522 | 178522 |
| | | | 57 | 0 | 112511 | 112511 |
| | | | 58 | 0 | 147504 | 147504 |
| | | | 59 | 0 | 193748 | 193748 |
| | 3 | 19 | 60 | 0 | 170905 | 170905 |
| | | | 61 | 0 | 20190 | 20190 |
| | | Sum | | 726 | 3740051 | 3739325 |
| | | 20 | 25 | 0 | 41613 | 41613 |
| | | | 30 | 0 | 2256 | 2256 |
| | | Sum | | 0 | 43869 | 43869 |
| | | 21 | 6 | 0 | 153337 | 153337 |

| | | | | |
|---|---|---|---|---|
| Sum | | 0 | 153337 | 153337 |
| 22 | 25 | 925 | 10139 | 9214 |
| Sum | | 925 | 10139 | 9214 |
| 23 | 1 | 0 | 47035 | 47035 |
| Sum | | 0 | 47035 | 47035 |
| 24 | 26 | 0 | 69659 | 69659 |
| Sum | | 0 | 69659 | 69659 |
| 25 | 3 | 0 | 5936 | 5936 |
| Sum | | 0 | 5936 | 5936 |
| 26 | 4 | 0 | 5687 | 5687 |
| Sum | | 0 | 5687 | 5687 |
| 27 | 27 | 1168 | 97520 | 96352 |
| | 28 | 79 | 63277 | 63198 |
| Sum | | 1247 | 160797 | 159550 |
| 28 | 7 | 0 | 65221 | 65221 |
| Sum | | 0 | 65221 | 65221 |
| 29 | 3 | 0 | 54739 | 54739 |
| Sum | | 0 | 54739 | 54739 |
| 30 | 56 | . | . | 0 |
| | 67 | 16 | 226354 | 226338 |
| | 68 | 0 | 161787 | 161787 |
| | 69 | 0 | 90829 | 90829 |

| | | | | | |
|---|---|---|---|---|---|
| | | 70 | 0 | 229436 | 229436 |
| | | 71 | 0 | 216939 | 216939 |
| | | 72 | 0 | 197927 | 197927 |
| 3 | 30 | 73 | 0 | 117478 | 117478 |
| | Sum | | 16 | 1240750 | 1240734 |
| | 31 | 4 | 0 | 113112 | 113112 |
| | Sum | | 0 | 113112 | 113112 |
| | 32 | 3 | 12320 | 12320 | 0 |
| | Sum | | 12320 | 12320 | 0 |
| | 33 | 64 | 0 | 179355 | 179355 |
| | | 65 | 0 | 124169 | 124169 |
| | | 66 | 0 | 162011 | 162011 |
| | | 80 | 0 | 131458 | 131458 |
| | Sum | | 0 | 596993 | 596993 |
| | 34 | 5 | 0 | 232428 | 232428 |
| | | 8 | 0 | 3701 | 3701 |
| | | 9 | 0 | 207372 | 207372 |
| | | 10 | 0 | 185623 | 185623 |
| | Sum | | 0 | 629124 | 629124 |
| | 35 | 28 | 0 | 17299 | 17299 |
| | Sum | | 0 | 17299 | 17299 |
| | 36 | 34 | 0 | 125073 | 125073 |
| | | 61 | 0 | 120127 | 120127 |
| | | 62 | 0 | 159549 | 159549 |
| | | 63 | 0 | 207192 | 207192 |
| | | 65 | 0 | 71014 | 71014 |
| | Sum | | 0 | 682955 | 682955 |

| | | | | | |
|---|---|---|---|---|---|
| | 37 | 66 | 0 | 43227 | 43227 |
| | | 73 | 0 | 85676 | 85676 |
| | | 74 | 0 | 216076 | 216076 |
| | | 75 | 1414 | 228472 | 227058 |
| | | 76 | 0 | 227837 | 227837 |
| | | 77 | 0 | 200616 | 200616 |
| | | 78 | 0 | 244576 | 244576 |
| | | 79 | 0 | 135879 | 135879 |
| | Sum | | 1414 | 1382359 | 1380945 |
| | 38 | 12 | 0 | 212609 | 212609 |
| | | 13 | 0 | 265105 | 265105 |
| | Sum | | 0 | 477714 | 477714 |
| 3 | 39 | 10 | 0 | 49700 | 49700 |
| | | 17 | 0 | 176610 | 176610 |
| | | 26 | 0 | 4529 | 4529 |
| | Sum | | 0 | 230839 | 230839 |
| | 40 | 33 | 0 | 128897 | 128897 |
| | Sum | | 0 | 128897 | 128897 |
| | 41 | 12 | 0 | 9243 | 9243 |
| | | 19 | 0 | 191372 | 191372 |
| | | 21 | 0 | 147074 | 147074 |
| | Sum | | 0 | 347689 | 347689 |
| | 42 | 33 | 0 | 71371 | 71371 |
| | | 35 | 0 | 138626 | 138626 |
| | Sum | | 0 | 209997 | 209997 |
| | 43 | 19 | . | . | 1 |
| | | 20 | 0 | 72055 | 72055 |

| | | | | | |
|---|---|---|---|---|---|
| | | 21 | 0 | 82061 | 82061 |
| | | 22 | 0 | 214693 | 214693 |
| | | 23 | 0 | 147213 | 147213 |
| | | 24 | 0 | 240507 | 240507 |
| | | 27 | . | . | 0 |
| | | 28 | 0 | 63481 | 63481 |
| | Sum | | 0 | 820010 | 820011 |
| | 44 | 24 | . | . | 0 |
| | | 27 | 1690 | 131007 | 129317 |
| | | 28 | 0 | 17203 | 17203 |
| | Sum | | 1690 | 148210 | 146520 |
| | 45 | 2 | 0 | 84455 | 84455 |
| | Sum | | 0 | 84455 | 84455 |
| | 46 | 3 | 0 | 2332 | 2332 |
| | Sum | | 0 | 2332 | 2332 |
| | 47 | 2 | 17142 | 25644 | 8502 |
| | Sum | | 17142 | 25644 | 8502 |
| | 48 | 7 | 0 | 58250 | 58250 |
| | | 8 | 0 | 114917 | 114917 |
| | Sum | | 0 | 173167 | 173167 |
| 3 | 49 | 1 | 0 | 64794 | 64794 |
| | | 6 | 0 | 87320 | 87320 |
| | | 7 | 0 | 93414 | 93414 |
| | Sum | | 0 | 245528 | 245528 |
| | 50 | 25 | 0 | 102230 | 102230 |
| | | 26 | 0 | 77239 | 77239 |

| | | | | | |
|---|---|---|---|---|---|
| | Sum | | 0 | 179469 | 179469 |
| | 51 | 2 | 0 | 34418 | 34418 |
| | Sum | | 0 | 34418 | 34418 |
| | 52 | 2 | 0 | 27129 | 27129 |
| | Sum | | 0 | 27129 | 27129 |
| | 53 | 2 | 0 | 8129 | 8129 |
| | Sum | | 0 | 8129 | 8129 |
| | 54 | 29 | 0 | 49926 | 49926 |
| | | 31 | 0 | 29947 | 29947 |
| | | 32 | 0 | 45293 | 45293 |
| | Sum | | 0 | 125166 | 125166 |
| | 55 | 25 | 0 | 29932 | 29932 |
| | Sum | | 0 | 29932 | 29932 |
| | 56 | 35 | 0 | 92163 | 92163 |
| | | 37 | 0 | 183823 | 183823 |
| | | 38 | 0 | 80692 | 80692 |
| | Sum | | 0 | 356678 | 356678 |
| | 57 | 2 | 0 | 1560 | 1560 |
| | | 8 | 0 | 82556 | 82556 |
| | Sum | | 0 | 84116 | 84116 |
| | 58 | 3 | 0 | 23768 | 23768 |
| | Sum | | 0 | 23768 | 23768 |
| Sum | | | 36345 | 15074364 | 15038020 |

### 16.2.2 Merger of SOV and Registration precincts

Merger of SOV/Reg precincts

Mergers of the Statement of Vote (SOV) to Registration Precincts (Reg) are done as follows:

RG##AD%%.TYR
RR##AD%%.TYR
SA##AD%%.TYR
SR##AD%%.TYR
SS##AD%%.TYR
SV##AD%%.TYR

Here, the ## is the alphabetic number of the county (1-58), %% is the Assembly District, and TYR is the type of election (T can be either G for General or P for Primary, YR is the year). So, for example, for the 72cd Assembly District in Orange County, there would be six files:

RG30AD72.G92
RR30AD72.G92
SA30AD72.G92
SR30AD72.G92
SS30AD72.G92
SV30AD72.G92

A description of the files follows:

RG file

This has the registration precinct as obtained from the Secretary of State 29-day close of registration tape and the total number of registered voters, also obtained from this file.

Example:

0002016A 710
0002016B 114
0002017A 414
0002017B 928

SV file

This has the SOV precinct the total number of registered voters, and the polling place vote for that SOV precinct. All of this information is obtained from a tape or hardcopy provided by the county.

Example:

0002001N 448 275

SA file

This has precincts which are absentee precincts.
Example:

8000001Y

RR file

This has consolidations between registration precincts made to facilitate the merger of SOV, Reg, and census data. The left-hand column is the precinct which is mapped to the census geography. If a Reg precinct is not in the RR file but is in the RG file then it is mapped to the census geography.

Example:
0002016 0002016A

SS file

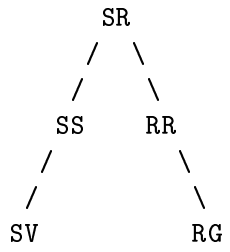
This has consolidations between SOV precincts made to facilitate the merger of SOV, Reg, and census data. The left-hand column is the precinct which is mapped to the census geography.

Example:
0002702N 0002701N

SR file

> This has consolidations between SOV and Reg precincts. If an SOV precinct is in the left-hand column of the SS file, it will appear in the left-hand column of the SR file. If it is in the right-hand column of the SS file, it may not appear in the left-hand column of the SR file. If the SOV precinct is not in the SS file but is in the SV file, it will appear in the left-hand column of the SR file.
>
> Similarly, if a Reg precinct is in the left-hand column of the RR file, it will appear in the right-hand column of the SR file. If the Reg precinct is in the right-hand column of the RR file, it will not appear in the right-hand column of the SR file. If the Reg precinct is not in the RR file but is in the RG file, it will appear in the right-hand column of the SR file.
>
> Example:
> 0002702N 0002016

This scheme can be conceptualized as follows: SOV precincts are associated with Reg precincts in the SR file. Both SOV precincts and Reg precincts may be consolidated with one another, the SOV precincts in the SS file and the Reg precincts in the RR file. If there is a consolidation, the consolidated precinct is the precinct which is used in the SR file–if not, the precinct from the lower-level file (SV or RG) is used in the SR file. Schematically,




Mergers of census data to the precinct are done to precincts at the RR level, or, if the precinct is not in that file, at the RG file.

Here is an example taken from Butte county, AD 03

```
Master Precinct  10000101 totreg from sov, totreg from sor  1137 1137

     SOV precincts and reg in merger

   10000104   793
   10000101   344

     Reg precincts and reg in merger

   0001801   222
   0001851   107
                    0001851A   106
                    0001851B     1
   0001835    16
                    0001835A    16
   0001850   792
                    0001850A   792
```

The following entries are in the following files: SR04AD03.G92

```
10000101 0001801
10000101 0001835
10000101 0001851
10000101 0001850
```

SS04AD03.G92

```
10000101 10000104
```

RR04AD03.G92

```
0001851 0001851A
0001851 0001851B
0001835 0001835A
0001850 0001850A
```

RG04AD03.G92

```
0001801      222
0001835A      16
0001850A     792
0001851A     106
0001851B       1
```

SV04AD03.G92

```
10000101     344     183
10000104     793     501
```

There are five merged files created from this process.

MTYR##%%.TYR
RTYR##%%.TYR
STYR##%%.TYR
SG90##%%.TYR
PL94##%%.TYR

### 16.2.3 Merger of SOV and Registration precincts to census geography

Merger of SOV/Reg precincts to census geography

Mergers of the Statement of Vote (SOV) to Registration Precincts (Reg) are done as follows:

1. Geocoding of Registered Voter files

   All registered voter files are geocoded against the TIGER files. As geocoding puts the census geography on an individual address and this address also has a registration precinct on it, this allows the creation of a registration precinct to census geography equivalency file. If every address on the registered voter file could be placed in census geography, then a complete equivalency table could be built up. Unfortunately, this is not possible. Thus, two further steps are necessary.

2. Geographical Representations of Registration Precincts

The other method of obtaining precinct to census equivalencies is through mapping the registration precincts onto the census geography directly. One can always (assuming one has the precinct maps) create an equivalency this way. For the 1992 General elections, the geographical mapping program utilized required the use of whole blocks in making assignments to the precincts.

3. Assignment of blocks to Registration Precincts

   This allows the assigning of blocks to precincts independent of TIGER or geographical representation, and is useful primarily when the geographical representation (which was required to follow block boundaries) is not an accurate representation of the actual boundaries. This spliting is then handled by a statistical assignment procedure (see below).

4. Balancing (assignment of split census blocks)

   The primary difficulty is when a precinct splits a census block into two or more sections, as it is then indeterminate how many registered voters live in each section. This can be handled either by geographical estimation or statistical estimation (statistical is used in this process). The statistical procedure is designed to allocate registered voters which have been left unassigned to census geography by geo-coding the blocks in such a manner as to equate expected registration with actual registration (the expected registration is also an estimate). This problem is formulated as a linear programming problem and is run through multiple iterations to achieve the final result.

5. Merger of Registration data to Census Geography

   The RB##AD%%.TYR file is a precinct to block conversion file constructed by the methods described in 1, 2, 3 and 4. The precincts here are RR type precincts. For registered voters assigned to a particular block through geocoding, the derived registration data is assigned directly to that block.

   For registered voters assigned through the balancing procedure, a straight breakdown of the derived registration data

proportional to the number of registered voters assigned through the balancing procedure is made. This algorithm could be improved upon by conditioning on the characteristics of the individuals in that block.

6. Merger of Statement of Vote Data to Census Geography

   The RB##AD%%.TYR files are merged to the level of the final consolidation precincts using the SR##AD%%.TRY file. SOV data is then merged to block using this merged file. A straight proportional merge is made using as a breakdown the proportion of voters assigned to each block. Note that a more accurate methodology would be to calculate the estimated proportion of each type of voter in each block voting for a particular race and adjusting by this percent. The calculation of these proportions is a difficult theoretical problem which we believe we have solved, but this solution, if indeed it is a solution, has not been tested at the level necessary to implement it.

   Absentee precincts are not in general merged to the block level unless the absentee precinct results are reported at the level of the registration precinct (counties such as San Francisco and Monterey are reported that way, for example). Thus, areas (primarily in rural, sparsely populated areas) where the election results are collapsed into a larger absentee precinct (usually at the level of the ballot group) will not have any election results reported for them. The number of these areas is relatively small.

### 16.2.4 Conversion between Precincts and Census Geography

File: rb_rr.cdb
Description: Conversion between RR precincts and census geography.

This file is not in a "flat" file format. It is, however ASCII.

`Format:`

```
A   B
```

```
      C  D  E  F  G  H  I  J  K   --> This row repeated an indefinite number
                                        of times

   A. RR precinct
   B. Registration in RR precinct

   C. County
   D. Tract
   E. Block
   F. Place
   G. Percent Assigned
   H. Population in block
   I. Estimated Registration in block
   J. Number assigned through geocoding
   K. Number assigned through balancing procedure

Example

  0024804    710
    34   6100 504   115 0.510638    72   43.20   24.    0.
    34   6100 505   115 0.821918    74   44.40   60.    0.
    34   6100 506   115 1.000000    25   15.00   21.    0.
    34   6100 507   115 1.000000    75   45.00   60.    0.
    34   6100 508   115 0.701493    99   59.40   47.    0.
    34   6100 509   115 0.260870    93   55.80    2.   22.
    34   6100 601   115 0.956140   586  351.60  327.    0.
    34   6100 602   115 1.000000    26   15.60   21.    0.
    34   6100 603   115 1.000000    48   28.80   31.    0.
    34   6100 604   115 1.000000    36   21.60   39.    0.
    34   6100 608   115 0.416667    62   37.20   15.    0.
    34   6100 609   115 0.953488    67   40.20   41.    0.
                                              688.   22.   710.

  0024812    478
    34   6100 501   115 1.000000     9    5.40    7.    0.
    34   6100 502   115 1.000000    41   24.60   29.    0.
    34   6100 504   115 0.489362    72   43.20   23.    0.
    34   6100 505   115 0.178082    74   44.40    3.   10.
    34   6100 508   115 0.298507    99   59.40   20.    0.
```

```
34   6100 509   115 0.739130    93   55.80   68.    0.
34   6100 511   115 1.000000   578  346.80  318.    0.
34   6100 512   115 1.000000     0    0.00    0.    0.
                                            468.   10.   478.
```

# Part IV

# *Glossary of ROAD Project Terminology*

**blockgroup** The lowest level Census geographical identifier for which data is included in the major public Census files (e.g., `STF3a`). The blockgroup is an area that includes several street blocks.

**Census place** A Census geographical identifier roughly corresponding to a city or town.

**Census tract** A Census geographical identifier that groups several blockgroups.

**MCD** Minor civil division. A Census unit of aggregation formally called "County Subdivision (Census)." MCDs are typically smaller than counties, and larger than VTDs. However, a single VTD may overlap several MCDs. MCDs are Census summary level 060; MCD codes are stored in the Census variable COUSUBCE. When MCDs are not well defined, we use the Census County Division (CCD), but for simplicity continue to refer to them as MCDs.

**MCD Group** A geographical identifier constructed by the ROAD Project on the basis of county, MCD, and VTD geographical identifiers from the `PL94-171`Census data. An MCD Group is never bigger than a county and never smaller than an MCD. An MCD Group includes multiple MCDs up to the point where no `PL94-171`VTD contained in any of the MCD Group's MCDs overlaps into an MCD *not* contained in the MCD Group. For more information on the creation of MCD Group units, see Chapter 12.

`PL94-171` A set of files produced by the U.S. Bureau of the Census, containing just demographic variables on race at a variety of levels of aggregation, including the VTD or Census precinct.

**precinct** A usually contiguous geographical area in which the adult citizens are assigned a single voting booth to cast their election ballots. In some states it is called an "election district." Occasionally several physical voting booths exist within one precinct. The precinct-level electoral data files which constitute the central element of the ROAD datasets have this as their unit of observation.

**precinct-level electoral data** Information on a wide variety of electoral variables, including voting registration, registration-by-party, turnout, and voting tallies for each party in federal, state, and local elections. The precinct-level electoral data files cover the years 1984 through 1990 and are at the precinct level.

**ROAD Project** The Record of American Democracy project.

`STF3a` A set of files produced by the U.S. Bureau of the Census, containing 3,727 demographic and socioeconomic variables at the state, county, MCD, place, and blockgroup levels of aggregation.

**VTD** Voting District (or Voter Tabulation District). A Census geographical label roughly corresponding to a precinct. VTD-level data are typically only available in Census `PL94-171` files. Since precincts are defined locally, a Census VTD is in some cases just an approximation of the actual voting precinct. Four states (Kentucky, Mississippi, Montana, and Oregon) did not participate in the Census `PL94-171` Program, in which the precinct-VTD correspondence was made tighter; these states do not have any VTD definitions. Eight other states participated in only a limited capacity (Texas, North Carolina, and others), and thus have VTD definitions only in some counties. VTDs are `PL94-171` summary level 700; VTD codes are stored in the `PL94-171` variable SAC3.