

Bureau of Transportation Statistics

**Survey Documentation for the
Bureau of Transportation Statistics
Omnibus Survey Program**

(Public Use)

May 2002

**SURVEY DOCUMENTATION FOR THE
BUREAU OF TRANSPORTATION STATISTICS
OMNIBUS SURVEY PROGRAM**

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1. INTRODUCTION AND BACKGROUND

The Bureau of Transportation Statistics (BTS) is conducting a series of monthly surveys to monitor expectations of and satisfaction with the transportation system and to gather event, issue, and mode-specific information. The surveys will serve as an information source for the U.S. Department of Transportation (DOT) modal administrators, who can use them to support congressional requests and for internal DOT performance indicators. Overall, the surveys will support the collection of information on a wide range of transportation-related topics.

This report presents the results of the May 2002 Household Survey, the eleventh of the monthly household surveys that will be conducted. Each of these monthly surveys will contain a set of core questions that are based on critical information needs within DOT. In addition, supplemental questions will be included each month that correspond to one of DOT's five strategic goals: safety, mobility, economic growth, human and natural environment, and security. Finally, specific questions posed by the various DOT modes will be included in each survey.

The May 2002 survey collected data from May 4, 2002 through May 15, 2002. Data were collected from households in the U.S. using a Random-Digit-Dialed telephone methodology. The final completed sample size is 1,015 cases, and the total number of variables in the public-use dataset is 163. The data were collected by M. Davis and Company, under contract with the BTS.

This report provides technical documentation for the May 2002 Household Survey. Its primary goal is to document background information, sampling procedures, data collection, data elements and survey variables, response rates, final weights and standard errors estimation.

This report contains the following information:

- Background of the survey initiative;
- A detailed description of how sample respondents were selected for the survey;
- Information regarding the data collection period, the number of completed interviews, and response rates;
- Information on interviewer training, pre-testing, interviewing methods, household screening methods and methods for call attempts and callbacks;
- Information on the number of cases in the file;
- Guidance on the use of weights for analyses;
- Instructions for calculating standard error estimates;
- The final survey questionnaire;

- A data dictionary that provides the names of survey variables, their codes, labels and the associated response categories; and
- A SAS formats library.

2. SAMPLE DESIGN

2.1 Target Population

The target population is the United States non-institutionalized adult population (18 years of age or older).

2.2 Sampling Frame and Selection

To ensure that the monthly Omnibus Survey conducted in May 2002 and thereafter is comparable to past Omnibus Surveys (March, 2001 and earlier) the previous methodology was replicated. The methodology was used to achieve a random sample of non-institutionalized adults 18 years and older in the fifty states of the United States and the District of Columbia. A national probability sample of households using list-assisted random digit dialing (RDD) methodology was employed for the survey. The sample was purchased from GENESYS, a firm that provides sample for numerous government agencies and the private sector. In summary, GENESYS initiated a sample development process by first imposing an implicit stratification on the telephone prefixes using the Census Bureau divisions and metropolitan status (See the Census Bureau regions and divisions below).

Table 1: Census Bureau Regions and Divisions

REGION	DIVISION	STATES
Northeast	New England	CT, ME, MA, NH, RI, VT
	Middle Atlantic	NJ, NY, PA
Midwest	E. North Central	IN, IL, MI, OH, WS
	W. North Central	IA, KS, MN, MO, NE, ND, SD
South	South Atlantic	DE, DC, FL, GA, MD, NC, SC, VA, WV
	E. South Central	AL, KY, MS, TN
	W. South Central	AR, LA, OK, TX
West	Mountain	AZ, CO, ID, NM, MT, UT, NV, WY
	Pacific	AK, CA, HI, OR, WA

Within each Census Bureau division, counties and their associated prefix areas located in Metropolitan Statistical Areas (MSA) were sorted by the size of the MSA. Counties and their associated prefix areas within a Census Bureau division that are located outside of MSAs were first sorted by state. Within each state, the counties and their associated prefix areas were sorted by geographic location. This implicit stratification ensures that the sample of telephone numbers is geographically representative.

The resulting sample of telephone numbers was address-matched for subsequent mailing of a pre-contact letter to each address.

M. Davis and Company purchased 8,200 telephone numbers for the May 2002 survey. A total of 5,061 of these numbers were identified as working residential numbers and were divided into 67 replicates. Each of the 34 fielding replicates released initially contained approximately 100 households. Eleven additional replicates were released during fielding containing approximately 50 households each. Eight unused replicates from May's sample were used to conduct a pretest. Each pretest replicate had approximately 50 households. Fourteen of the 67 May replicates were not utilized in the actual interviewing, resulting in 3,955 numbers being released for use by the telephone interviewers.

2.2.1 RDD Sample

To generate the sample the GENESYS System employs list-assisted random digit dialing methodology. List-assisted refers to the use of commercial lists of directory-listed telephone numbers to increase the likelihood of dialing household residences. This method gives unlisted telephone numbers the same chance to be selected as directory-listed numbers.

The system utilizes a database consisting of all residential telephone exchanges, working bank information, and various geographic service parameters such as state, county, Primary ZIP code, etc. In addition, the database provides working bank information at the two-digit level – each of the 100 banks (i.e. first two digits of the four-digit suffix) in each exchange is defined as "working" if it contains one or more listed telephone households. On a National basis, this definition covers an estimated 96.4% of all residential telephone numbers and 99.96% of listed residential numbers. This database is updated on a quarterly basis.

The sample frame consists of the set of all telephone exchanges that meet the geographic criteria. This geographic definition is made using one or more of the geographic codes included in the database. Following specification of the geographic area, the system selects all exchanges and associated working banks that meet those criteria.

Based on the sample frame defined above, the system computes an interval such that the number of intervals is equivalent to the desired number of sample pieces. The interval is computed by dividing the total possible telephone numbers in the sample frame (i.e. # of working banks X 100) by the number of RDD sample pieces required. Within each interval a single random number is generated between 1 and the interval size; the corresponding phone number within the interval is identified and written to an output file.

The result is that every potential telephone number within the defined sample frame has a known and equal probability of selection.

2.2.2 ID-PLUS

This process is designed to purge about 75% of the non-productive numbers (non-working, businesses and fax/modems). Since this process is completed after the sample is generated, the statistical integrity of the sample is maintained.

The Pre-Dialer Phase – The file of generated numbers is passed against the ID database, comprised of the GENESYS-Plus business database and the listed household database. Business numbers are eliminated while listed household numbers are set aside, to be recombined after the active Dialer Phase.

The Dialer Phase – The remaining numbers are then processed using automated dialing equipment – actually a specially configured PROTYTS Telephony system. In this phase, the dialing is 100% attended and the phone is allowed to ring up to two times. Specially trained agents are available to speak to anyone who might answer the phone and the number is dispositioned accordingly. Given this human intervention in evaluating all call results, virtually all remaining businesses, non-working and non-tritone intercepts, compensate for differences in non-working intercept behavior. The testing takes place during the restricted hours of 9 a.m. – 5 p.m. local time, to further minimize intrusion since fewer people are home during these hours.

The Post-Dialer Phase – The sample is then reconstructed, excluding the non-productive numbers identified in the previous two phases.

2.2.3 Address Matching

The Donnelley (InfoUSA) listed residential database was used for residential reverse matches (name and address). This file contains approximately 174 million names and addresses, of which 90 million have a phone number. This file is white-page based and has NCOA updates applied to it monthly. Full updates to the file are received 3 times a year as well as monthly ZIP Code replacements. Name and address or address (including ZIP+4's) only, is appended, where available.

2.3 Precision of Estimates

The precision of estimated frequencies can be assessed by evaluating the width of the 95 percent confidence interval around the estimates. For this application, the confidence interval can be *approximated* for design purposes as:

$$p_s \pm Z\sqrt{Var(p_s)}$$

Where p_s is the estimated (sample) proportion;

Z is the 5 percent critical value of the normal distribution; and

$Var(p_s)$ is the variance of p_s .

The calculation of the end points of the confidence interval can be re-written as:

$$p_s \pm Z\sqrt{\frac{p_s(1-p_s)}{n}}$$

Or

$$p_s - Z\sqrt{\frac{p_s(1-p_s)}{n}} \leq P \leq p_s + Z\sqrt{\frac{p_s(1-p_s)}{n}}$$

Where P is the true population value of the proportion; and
 n is the sample size.

Therefore, with a sample size of 1,015 and $p_s = 50$ percent, the confidence interval range would be 47 P 53, *approximately*.¹

¹ This method of confidence interval calculation is conservative.

3. SAMPLING WEIGHTS AND ADJUSTMENTS

This section discusses the development of survey weights. Two types of weights were used in the present survey: inverse-probability weights (to correct for unequal selection probabilities) and post-stratification (to correct for known discrepancies between the sample and the population). The final analysis weight reflects both types of adjustments, i.e. adjustment for non-response, multiple telephone lines, and persons-per-household, and post-stratification adjustments. The final analysis weight is the weight that should be used for analyzing the survey data.

The final analysis weight was developed using the following steps:

- Calculation of the base sampling weights;
- Adjustment for unit non-response;
- Adjustment for households with multiple voice telephone numbers;
- Adjustment for selecting an adult within a sampled household; and
- Post-stratification adjustments to the target population.

The product of all the above variables represents the final analysis weight. If needed, extreme values of the final analysis weight can be reduced (or trimmed) using standard weight trimming procedures.

3.1 Base Sampling Weights

The first step in weighting the sample is to calculate the sampling weight for each telephone number in the sample. The sampling rate is the inverse of the telephone number's probability of selection, or:

$$W_s = \frac{N}{n}$$

Where N is the total number of telephone numbers in the population and n is the total number of telephone numbers in the sample. For this survey, the total number of telephone numbers in the sampling frame, N, is 261,905,600. The total number of telephone numbers in the sample (numbers dialed) is 3,871.

3.2 Adjustment for Unit Non-Response

Sampled telephone numbers are classified as responding or non-responding households according to Census division and metropolitan status (inside or outside a Metropolitan Statistical Area). The non-response adjustment factor for all telephone numbers in each Census division (*c*) by metropolitan status (*s*), is calculated as follows:

$$ADJ_{NR} = \frac{1}{CASRO \text{ response rate}_{(c, s)}}$$

Where the denominator is the CASRO response rate for Census division c and metropolitan status s . The non-response adjustment factor for a specific cell (defined by metropolitan status and Census division) is a function of the response rate, which is given by the ratio of the estimated number of telephone households to the number of completed surveys.

The non-response adjusted weight (W_{NR}) is the product of the sampling weight (W_S) and the non-response adjustment factor (ADJ_{NR}) within each Census division / metropolitan status combination.

3.3 Adjustment for Households with Multiple Telephone Numbers

Some households have multiple telephone lines for voice communication. Thus, these households have multiple chances of being selected into the sample and adjustments must be made to their survey weights. The adjustment for multiple telephone lines is:

$$ADJ_{MT} = \frac{1}{\text{Min}(Nb \text{ telephone lines}, 3)}$$

As shown in the formula, the adjustment is limited to a maximum factor of three. In other words, the adjustment factor ADJ_{MT} will be one over two (0.50) if the household has two telephone lines, and one over three (0.33) if it has three *or more*.

The table below provides summary statistics for the number of telephone lines in the monthly sampled households.

Table 2: Number of Telephone Lines per Household

	Value
Mean	1.161
Standard deviation	0.487
Minimum	1
25th percentile	1
Median	1
75th percentile	1
Maximum	5

For respondents that did not provide this information, it is assumed that the household contained only *one* telephone line. The non-response adjusted weight (W_{NR}) is multiplied by the adjustment factor for multiple telephone lines (multiple probabilities of selection) (ADJ_{MT}) to create a weight that is adjusted for non-response and for multiple probabilities of selection (W_{NRMT}).

3.4 Adjustment for Number of Eligible Household Members

The probability of selecting an individual respondent depends upon the number of eligible respondents in the household. Therefore, it is important to account for the total number of eligible household members when constructing the sampling weights. The adjustment for selecting a random adult household member is:

$$ADJ_{RA} = \text{Number of Eligible Household Members}$$

The table below provides summary statistics for the number of eligible members in the monthly sampled households.

Table 3: Number of Eligible Household Members

	Value
Mean	1.960
Standard deviation	0.804
Minimum	1
25th percentile	1
Median	2
75th percentile	2
Maximum	6

For respondents that did not provide this information, a value for ADJ_{RA} is imputed according to the distribution of the number of eligible persons in a household (from responding households) within the age, gender, and race/ethnicity cross-classification cell matching that of the respondent for which the value is being imputed.

The weight adjusted for non-response and for multiple probabilities of selection (W_{NRMT}) is then multiplied by ADJ_{RA} , resulting in W_{NRMTRA} , a weight adjusted for non-response, multiple probabilities of selection, and for selecting a random, household member.

3.5 Post-Stratification Adjustments

Adjusting weighted survey counts so that they agree with population counts provided by the Census Bureau can compensate for different response rates by demographic subgroups, increase the precision of survey estimates, and reduce the bias present in the estimates resulting from the inclusion of only telephone households. The final adjustment to the survey weight is a post-stratification adjustment that allows the weights to sum to the target population (i.e. U.S. non-institutionalized persons 18 years of age or older) by age, gender and race/ethnicity.

The outcome of post-stratification is a factor or multiplier (M) that scales W_{NRMTRA} within each age/gender/race cell, so that the weighted marginal sums for age, gender and race/ethnicity agree with the corresponding Census Bureau distribution for these characteristics. The method used in the post-stratification adjustment is a simple ratio adjustment applied to the sampling weight

using the appropriate national population total for a given cell defined by the intersection of age, gender, and race/ethnicity.² The general method for ratio adjusting is:

- A table of the sum of the weights for each cell denoted by each age, gender, and race/ethnicity combination is created. Each cell is denoted by $S(i,j,k)$, where i is the indicator for age, j is the indicator for gender, and k is the indicator for race/ethnicity;
- A similar table of national population controls is created, where each cell is denoted by $P(i,j,k)$;
- The ratio $R(i,j,k) = P(i,j,k) / S(i,j,k)$ is calculated; the cell ratio $R(i,j,k)$ is denoted as the multiplier M ;
- Each weight, at the record level, is multiplied by the appropriate cell ratio of $R(i,j,k)$ to form the post-stratification adjustment.

Again, cells used in the post-stratification are defined by the combination of age, gender, and race/ethnicity. With two categories for gender, six for age and four for race/ethnicity,³ a total of 48 (2x6x4) cells can be used. In any month, some race/ethnicity or, preferably, age categories may be merged if the number of completed interviews within the corresponding cells falls below thirty.

For this survey, many of the cells had less than thirty observations. After grouping, and to remain consistent with what was done in the previous months, a total of 19 cells were used for post-stratification. The cells, used to construct post-stratification adjustments for May 2002, together with the number of sample observations and the national population estimates from the Census Bureau are shown in the table on the next page.

² The Census Bureau provides a detailed breakdown of population count by age, gender and race/ethnicity.

³ The four race/ethnicity categories used for post-stratification purposes are: Hispanic (any race), Non-Hispanic Black, Non-Hispanic White, and Non-Hispanic Other.

Table 4: Post-Stratification Cells

CELL	DESCRIPTION	SAMPLE SIZE	POPULATION
1	Male - Hispanic (Any Race)	40	10,167,034
2	Male - Non-Hispanic Black	29	9,883,467
3	Male - Age 18 – 24 - Non-Hispanic White	22	8,635,241
4	Male - Age 25 – 34 - Non-Hispanic White	66	11,985,017
5	Male - Age 35 – 44 - Non-Hispanic White	65	15,833,339
6	Male - Age 45 – 54 - Non-Hispanic White	75	14,165,493
7	Male - Age 55 – 64 - Non-Hispanic White	57	9,215,914
8	Male - Age 65 or older - Non-Hispanic White	70	11,755,768
9	Male - Non-Hispanic Other	27	4,146,032
10	Female - Hispanic (Any Race)	35	10,625,145
11	Female - Age 18 – 44 - Non-Hispanic Black	31	7,307,267
12	Female - Age 45 or older - Non-Hispanic Black	11	5,144,462
13	Female - Age 18 – 24 - Non-Hispanic White	35	8,531,226
14	Female - Age 25 – 34 - Non-Hispanic White	56	12,373,489
15	Female - Age 35 – 44 - Non-Hispanic White	79	16,061,583
16	Female - Age 45 – 54 - Non-Hispanic White	104	14,513,973
17	Female - Age 55 – 64 - Non-Hispanic White	67	9,837,412
18	Female - Age 65 or older - Non-Hispanic White	100	15,762,147
19	Female - Non-Hispanic Other	31	4,762,691
N/A	Missing Demographic Information	15	N/A
TOTAL		1,015	200,706,700

Those respondents who did not supply the demographic information necessary to categorize their age, gender and/or race/ethnicity are excluded from the post-stratification process and assigned a value of 1 for M .

The multiplier M is then applied to W_{NRMTRA} to create $W_{NRMTRAPS}$. However, $W_{NRMTRAPS}$ is overstated because a portion of the sample is not included in the calculation of the post-stratification adjustment. Therefore, a deflation factor is applied to the value of $W_{NRMTRAPS}$. The deflation factor DEF is calculated as follows:

$$DEF = \frac{\sum_{i=1}^6 \sum_{j=1}^2 \sum_{k=1}^4 P(i, j, k)}{TW_{NRMTRA_NA} + \sum_{i=1}^6 \sum_{j=1}^2 \sum_{k=1}^4 P(i, j, k)}$$

Where:

$P(i, j, k)$ is the national population count for cell (i, j, k) ; and

TW_{NRMTRA_NA} is the sum of the W_{NRMTRA} weights for respondents with missing demographic information.

This deflation factor denotes the proportion of the target population represented by respondents with non-missing demographic information. The final analysis weight, W_{FINAL} , is the scaled value of $W_{NRMTRAPS}$, calculated as:

$$W_{FINAL} = DEF \times W_{NRMTRAPS}$$

W_{FINAL} can be viewed as the number of population members that each respondent represents.

3.6 Trimming of Final Analysis Weights

Extreme values of W_{FINAL} are trimmed to avoid over-inflation of the sampling variance. In short, the trimming process limits the relative contribution of the variance associated with the k^{th} unit to the overall variance of the weighted estimate by comparing the square of each weight to a threshold value determined as a multiple of the sum of the squared weights. Letting w_1, w_2, \dots, w_j , denote the final analysis weights for the n completed interviews, the threshold value is calculated using the following formula:

$$Threshold = \left(10 \sum_{j=1}^n w_j^2 / n \right)^{\frac{1}{2}}$$

Each household having a final analysis weight that exceeds the determined threshold value is assigned a trimmed weight equal to the threshold. Next, the age/gender/race cell used in the post-stratification is identified for each household with a trimmed weight. To maintain the overall weighted sum within the cell, the trimmed portions of the original weights are reassigned to the cases whose weights are unchanged in the trimming process.

For cases having trimmed weights but missing age, gender, and/or race/ethnicity information, the trimmed portions of the original weights are assigned to all remaining cases whose weights are unchanged in the trimming process.

The entire trimming procedure is repeated on the new set of weights: a new threshold value is recalculated and the new extreme values are re-adjusted. The process is repeated until no new extreme values are found.

4. VARIANCE ESTIMATION

The data collected in the Omnibus Household Survey was obtained through a complex sample design involving stratification, and the final weights were subject to several adjustments. Any variance estimation methodology must involve some simplifying assumptions about the design and weighting. Some simplified conceptual design structures are provided in this section.

4.1 Variance Estimation Methodology

The software package SUDAAN® (Software for the Statistical Analysis of Correlated Data) Version 7.5.6 was used for computing standard errors.

4.1.1 Software

SUDAAN® is a statistical software package developed by Research Triangle Institute to analyze data from complex sample surveys. SUDAAN® uses advanced statistical techniques to produce robust variance estimates under various survey design options. The software, in particular, can handle stratification and the numerous adjustments associated with weights subject to multiple adjustments.

4.1.2 Methods

Overall, three variables, CENDIV (Census Division), METRO (metropolitan status), and FNLWGT (final analysis weights), are needed for variance estimation in SUDAAN®. The method used in the present survey utilizes the variables CENDIV and METRO to create 18 (9x2) strata, a single stage selection with replacement procedure, and the final analysis weights. This method provides somewhat conservative standard error estimates.

Assuming a simplified sample design structure, the following SUDAAN® statements can be used (note that the data file first must be sorted by the variables CENDIV and METRO before using it in SUDAAN®):

```
PROC ... DESIGN = STRWR;  
NEST CENDIV METRO;  
WEIGHT FNLWGT;
```

More precisely, the following code is used to produce un-weighted and weighted frequency counts, percentages and standard errors (the variable of interest here is "var1", a categorical variable with seven levels):

```
PROC CROSSTAB DATA = datafile DESIGN=STRWR;  
WEIGHT FNLWGT;  
NEST CENDIV METRO;  
SUBGROUP var1;  
LEVELS 7;  
TABLE var1;  
PRINT nsum wsum totper setot / STYLE=nchs;  
RUN;
```

When sampling weights are post-stratified, the variance of an estimate is reduced since the totals are known without sampling variation.⁴ Using SUDAAN® without any modifications produces standard errors of estimates that do not reflect this reduction in variance. The estimates of the standard errors can be improved by using SUDAAN® post-stratification option (POSTVAR and POSTWGT). This option reflects the reduction in variance due to adjustment to control totals in one dimension. However, this approach still does not reflect the full effect of post-stratification, as the other post-stratification dimensions are ignored.⁵

4.2 Degrees of Freedom and Precision

A typically used rule-of-thumb for degrees of freedom associated with a standard error is the quantity: number of un-weighted records in the dataset *minus* number of strata. The rule-of-thumb degrees of freedom for the method above will fluctuate from month to month depending upon the number of records in each monthly dataset. Most monthly dataset will yield degrees of freedom of around 1,000.

For practical purposes, any degrees of freedom exceeding 120 is treated as infinite, i.e., if one uses a normal Z-statistic instead of a t-statistic for testing. Note, that a one-tailed critical t at 120 degrees of freedom is 1.98 while at an infinite degrees of freedom (a 0.025 z-value) is 1.96. If a variable of interest covers most of the sample strata, this limiting value probably will be adequate for analysis.

⁴ For a discussion of the impact of poststratification on the variance of survey estimates see, in particular, "Sampling and Weighting in the National Assessment", Keith F. Rust and Eugene G. Johnson, *Journal of Educational Statistics*, 17(2): 111-129, Summer 1992.

⁵ For a presentation of SUDAAN®'s handling of poststratification adjustments see "1999 Variance Estimation," *National Survey of America's Families Methodology Report*, 1999 Methodology Series, Report No. 4, prepared by J.M. Brick, P. Broene, D. Ferraro, T. Hankins, C. Rauch and T. Strickler, November 2000.

5. DATA COLLECTION PLAN

5.1 Expert Panel

The following panelists participated in the review of the May 2002 draft survey questionnaire: Tom Hillegass, Brian McCollom and Jim Beckwith.

Panelists were sent a copy of the May 2002 draft survey on March 22, 2002. Additionally, a link to the BTS website was sent to panelists to provide information about the purpose and history of the Omnibus Household Survey Program. Panelists were instructed to prioritize their comments about the draft survey. On March 25, 2002 a conference call was conducted among the panelists to identify problems and issues, reach consensus, where possible, on the most significant problems and associated recommendations. The discussion and associated recommendations were summarized and distributed to the panelists to review for accuracy. Edits and modifications were then incorporated into the document and distributed to the panelists.

5.2 Cognitive Interviews

A total of twenty (20) cognitive interviews are to be conducted each month. Twenty-five (25) cognitive interviews were conducted for the May 2002 draft survey questionnaire on March 26, 2002 at the Cherry Hill, NJ mall. The interviewing was conducted between 11 a.m. and 4:30 p.m. to broaden the distribution of participants that could participate. Recruiters intercepted individuals in the mall and screened based on race, gender, age and income to ensure the ending sample of respondents were reflective of the United States population regarding the aforementioned characteristics. They were also screened for no personal experience and/or close relationship with someone working in any of the sensitive occupations (transit agency, market research, advertising or public relations) and their non-participation in any survey initiative in the past six (6) months. Respondents were paid \$10 for their participation in the cognitive interview.

Respondents who agreed to participate were escorted to an interviewing facility in the mall and were administered the cognitive interview by MDAC personnel. Interviewers were required to compile results from their interviews and develop a summary of noteworthy issues and any suggested solutions by the end of the next day.

5.3 Data Collection Schedule

The survey period was twelve days, from May 4 through May 15. Interviewers did not work Sunday, May 12 as it was Mother's Day. In addition, there was an eleventh day of interviewing in May 2002 in order to achieve the 1,000-interview minimum.

5.4 Interview Procedures

The following outlines the key phases of the interviewing procedures utilized in the survey.

5.4.1 Pre-Testing

A Pre-Test was conducted prior to the initiation of actual calling. The Pre-Test was used to replicate the data collection process and identify any problem areas related to the process, the

survey instrument in total, specific questions, answer choices, questionnaire instructions or question format. It was also used to test the interview length.

Telephone supervisors conducted a total of 25 pre-test interviews (Wats Room - 17 interviews, and MDAC - 8 interviews) of the draft survey instrument. All problematic questions, issues and recommendations resulting from the pre-test were included in the list of problematic issues.

5.4.2 Interviewer Training

All new interviewers initially completed a generic two-day (approximately 12 hours) classroom training on general interviewing skills. Additionally, each month all interviewers will complete approximately four to six hours of classroom training on specific aspects of the Omnibus Household Survey. In response to normal interviewer turnover and/or increased staffing needs, all interviewers new to the project will receive the full complement of training prior to beginning their interviewing for this study.

An outline of the generic two-day training is below. This generic training included these topics as well as Asking questions as worded (Verbatim Reading and Recording), use of bold type on the screen, use of light type on the screen, use of ALL CAPS on the screen (Maneuvering through CfMC: Start Interviewing, Meaning/Significance of font style (e.g., bold) and text effects (e.g., all caps). Also, interviewers were provided with a list of Frequently Asked Questions so they were ready to counter a respondent's potential refuse to participate in the study.

I. ORIENTATION

Introduction to M. Davis and Company, Inc.

Welcome

MDAC Way

Organizational Chart

Your Job Description/Responsibilities

Policies and Procedures

II. TRAINING

***Includes Excerpts from the Market Research Association (MRA) Training Manual

A. Introduction to the Marketing and Opinion Research Industry

What is marketing and opinion research?

Types of interviews

Techniques used in data collection

Survey settings

Overview of the marketing and opinion research process

Key Terms

B. The Interviewer's Role

Appropriate Attitude

Characteristics of a successful interviewer

Recruiting Respondents
The “Art” of Interviewing
Key Terms

C. Respondents

Relating to Respondents
“Training” Respondents
Building and Maintaining Rapport
“Active Listening”
Callback Scenarios and Procedures
Terminations

D. Questions and Answers Plus Other Topics

The One Unbreakable Rule
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E. Bias, Probing and Clarifying

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Good Feedback
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F. Objections and Refusal Conversion

Nine Most Common Objections and Reasons for Refusal
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G. Getting Familiar With The Computer

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H. Maneuvering through CfMC

Keyboard Commands

Introduction to CfMC Phone System
Starting the Interviewing
Interviewing with SURVENT
Responding to Different Question Types
SURVENT Commands
More About CfMC
Role Playing

I. Open Discussion

Additional questions

Each survey month, a questionnaire update training is conducted to discuss the questionnaire changes. An updated interviewer training manual specific to the new month is developed and distributed to the interviewers. An outline of the approximately four-to-six hour training includes:

- A review of last month's results;
- Feedback from interviewers, supervisors;
- Problems and issues emerging from last month's data collection;
- An Overview of changed sections from last month (Sections B, S and M);
- Question-by-Question Training for New Sections.

In addition to the initial (generic) training and monthly refresher (survey-specific) training, interviewer re-training is conducted on an "as-needed" basis – that is, as interviewers are replaced or the survey instrument changes. Also, interviewers are evaluated and retrained as needed for improvement or changes in work habits as identified by our monitoring and editing control procedures.

On a monthly basis MDAC reviews the new questionnaire for changes, incorporates any changes approved by BTS emanating from the Expert Panel Review, the Cognitive Interviews and the Pretest. MDAC re-issues a new manual to each interviewer with the changes.

5.4.3 Pre-Contact Letter

Eight (8) calendar days prior to the start of data collection a BTS-approved pre-contact letter is sent to sample numbers with an address. The intent is for each household with an address to receive the pre-contact letter several days before they receive a call to conduct the interview.

There were 3,206 advance letters sent out on April 26, 2002 out of a total sample of 4,858 (this number included approximately 200 pretest households) cases. The percentage of addresses available for the total sample was 66 percent.

An “800” number is listed in each letter with the specific times to call (M-F, 9 a.m. – 11 p.m. EST; Sat and Sun, 1 p.m. to 9 p.m. EST). The letters are categorized by call center and each call center’s “800” number. Should the respondent call outside the times listed above they will receive a phone message asking them to leave their name and number and someone will contact them as soon as possible to conduct the interview.

The toll free number is also mentioned at the seventh attempt in messages left for potential respondents that have an answering machine in cases where we are unable to make contact with a member of the household. Additionally, after the seventh callback we leave our 1-800 number to arrange for interviewing appointments.

The toll free number is not left before the seventh attempt in messages due to concern that people might avoid the call or feel “harassed” if they were away for a few days and find four to six messages on their answering machine upon returning home. Given that a household with an answering machine is called two to three times per day during the Omnibus Household Survey there must be a balance between perceived harassment and encouraging participation, particularly given the limited duration of fielding.

A study of telephone practices published in February 2000 by the Council for Marketing and Opinion Research (CMOR) found no conclusive data showing that leaving a message on an answering machine for a respondent is effective. This study states that only 17% of the telephone centers surveyed left a message on the answering machine. Of the call centers which did leave a message 75% left an 800 number, 71% left a message on the first call and 62% left a message on subsequent calls.

Given the short time frame for data collection, the potential perception of harassment and prior research results, MDAC believes the best approach is to leave the toll free 800 number for the first time at the seventh call.

5.4.4 Call Attempts and Callbacks

The interviews are conducted using CfMC computer assisted telephone interviewing software. At a minimum, one thousand (1,000) interviews are completed each month. The interviewing is distributed between two call facilities, the Wats Room and MDAC.

The Wats Room has two shifts from Monday through Friday (9 a.m – 4: 30 p.m. and 5 p.m. – Midnight), a shift from 9 a.m. until Midnight on Saturday and a shift from 10 a.m. until Midnight on Sunday. MDAC has three shifts on Monday through Friday (9 a.m. – 2 p.m., 2 p.m. – 6 p.m. and 6 p.m. – 12 midnight) and two shifts on Saturdays (11 a.m. – 4 p.m. and 4 p.m. – 9 p.m.) and Sundays (1 p.m. – 5 p.m. and 5 p.m. – 9 p.m.). Monday through Friday, 9 a.m. to 2 p.m., only callbacks (scheduled and non-scheduled) are initiated at both the Wats Room and at MDAC due to historically documented significantly lower completion rates during this time period. In addition, calls after 9 p.m. local time are for scheduled callbacks only. No non-scheduled callbacks are conducted after 9 p.m. local time.

In 2001, numbers were sent to each call center to initiate the calling. Each month the amount of numbers released initially by each call center was based on the calling experiences of previous

months related to improving the response rate. Additional numbers released during the ten day calling period was based upon past calling history, the quantity of numbers determined to be ineligible, and projection of completes based upon past and current experience, number of callbacks achieved and refusal conversion rates.

In January 2002, the number release protocol was modified. Since that month, all the numbers to be dialed in a month are released on the first day of calling, and no additional numbers are released during the ten-day calling period. This revised protocol facilitates more dials per number released and has in part contributed to the higher response rates experienced since January 2002 compared to previous months of calling.

When a phone number is called initially, the interviewer determines that it is a household. Then the interviewer requests to speak with an adult 18 years of age or older (if the person on the phone is not an adult). Once an adult is on the line, then the interviewer randomly selects the actual survey respondent by asking for the adult in the household who had a birthday most recently. When the adult with the most recent birthday comes onto the phone line the interviewer conducts the survey. Should the interviewer not be able to complete the survey the following dispositions are recorded:

Do-Not-Call dispositions are for households that request their number not be called in the future. This disposition ensures compliance with the respondent's request.

Refusals are defined as when a person refuses to participate in the survey at all. Someone who breaks off the interview or refuses because s/he doesn't have time or says s/he is busy is considered a callback. Refusals are routed to supervisors and selected interviewers capable of converting refusals into completions or other disposition. Interviewers experiencing a refusal enter the appropriate refusal code. Supervisors review refusals the next day and assign the refusal numbers to the appropriate personnel to initiate callbacks with a refusal script. Refusal households are called twice a day, once during the time period contact was initially made and one other time period. The refusal callback is rotated between the morning and late afternoon time periods from Monday through Friday.

Callbacks are scheduled and prioritized by the CfMC software. The callbacks are prioritized based upon the following criteria: first priority – scheduled callback to qualified household member; second priority--scheduled callback to “qualify” household (includes contact with Spanish language barrier households); third priority – callback to make initial contact with household (includes answering machine, busy, ring no answer); and fourth priority – callbacks that are the seventh or higher attempts to schedule interview.

An interview is considered “complete” only if all questions are answered. A refusal to answer an individual question meets the definition of, and counts as, an “answered” question.

Should the interviewer not be able to complete the interview the following procedures will be followed:

Scheduled callbacks can be dialed at anytime during calling hours and as frequently as requested by the callback household up to seven times. Callback attempts in excess of seven are

at the discretion of the interviewer based upon his/her perception of the likelihood of completing the interview. The basis of the interviewer's perception, in part, is determined by how vigorously the interviewer is being encouraged to call back to complete the interview by the potential respondent or another member of the household. The interviewer then confers with a supervisor and a final determination is made as to if the interviewer continues calling.

Callbacks to Spanish language households are conducted by Spanish-speaking interviewers. Interviewer's that identify a household as Spanish speaking alerts supervisor a Spanish-speaking interviewer is needed to handle phone call. If Spanish interviewer is not available, the interviewer will inform respondent someone will call back, then record as CBS (Callback Spanish). If person is not available within the next hour a callback will be scheduled, if possible.

Those records identified as Spanish will be routed to a Spanish-speaking interviewer. Spanish Interviewer makes call and follows standard protocol for all English calls.

Callbacks for initial contact with potential respondents are distributed across the various calling time periods and weekday/weekend to ensure that a callback is initiated during each time period each day. Two (Saturday and Sunday) to three (Monday through Friday) callbacks per number are initiated per day assuming the number retains a callback status during the calling. There are up to twenty (20) callback attempts. This protocol is designed for ring no answer and answering machines. When an interviewer reaches a household with an answering machine during the seventh, fourteenth or twentieth time calling the interviewer leaves a message with the respective appropriate 800 number.

Callbacks to numbers with a **busy signal** are scheduled every 30 minutes until the household is reached, disposition is modified, maximum callbacks are achieved or the study is completed.

5.4.5 Disposition Codes

The following are the disposition codes used for each call outcome:

Out-of-Scope Numbers:

- BG – Business (The number dialed is a non-residential phone number. The call is terminated and the number resolved.)
- CF – Computer/Fax (The number dialed has led to a modem, fax, pager, or cell phone.)
- DS – Disconnected number (The number dialed is disconnected. The call is terminated and the number resolved.)
- NC – Number change (The call yielded a recording that the number was changed, with or without a change in the area code.)
- NQ – No one 18 years old or older in household
- UNB – Unavailable before and during study period

Scope Undetermined:

- NA – No answer (The phone is not answered within 5 rings.)
- BZ – Busy (busy signal)
- AM – Answering machine (The call has led to an answering machine or voicemail.)

- LM – Left message (on the 7th, 14th and 20th calls)
- CCC – Cannot complete call (The message “Your call cannot be completed at this time” is received. This is a message provided by the local telephone company when there is a line problem in the local area. These calls are dialed on another day.)
- PM – Privacy manager (Privacy manager is a feature provided by local telephone companies that requires incoming callers to identify themselves, before the household will accept the call.)
- NQL – Eligibility undetermined because of language problems or deafness
- RFI – Refused to speak with interviewer (screening incomplete) If the respondent refuses to speak with interviewer prior to answering F0250 (screening incomplete) and, if asked, F0200 responded “no”
- HRI – Requests their name be removed from calling list or if the respondent refuses to speak with interviewer for second time prior to answering F0250 (screening incomplete) and, if asked, F0200 responded “no”
- OD – The maximum number of call attempts is reached before being able to determine eligibility

In-Scope Numbers:

- YES – Yes (Respondent has agreed to be screened and is eligible, 18 years old or older.)
- CB – Callback (The respondent has asked that we call them back at another time.)
- CBS – Callback Spanish
- DL – Deaf/Language (The respondent is eligible but is hard of hearing, or cannot speak English fluently to complete the interview.)
- RFQ – Respondent refusal (Respondent refuses after establishing there is a qualified household member by answering F0351 or a later appearing question, or after answering F0200 “yes”.)
- UN – Unavailable (Was available when study began or unable to determine.)
- DR – Respondent deceased prior to completion of interview
- AC – The area code is changed but not the number
- HRQ – Requests their name be removed from calling list or respondent refusal for second time after establishing there is a qualified household member by answering F0351 or a later appearing question, or after answering F0200 “yes”

5.4.6 Household Screening

Qualified respondents are at least 18 years of age or older and must be the household member with the most recent birthday. If the household member is not available at the time of the call a callback is scheduled to screen and/or interview the respondent.

5.4.7 Interviewing Methods

Incentives were not offered to potential respondents in exchange for their participation in the survey. Surveys were conducted in both English and Spanish. If the potential respondent refuses to be interviewed the reason for refusal is recorded. The average length of the interview was 10 to 12 minutes and an additional 3 to 5 minutes to screen and recruit potential respondents.

Generally, interviewers introduced themselves, who they worked for, the purpose of the survey, and assured the potential respondent this was not a sales call. Interviewer then determined whether there was an eligible person in the household. Once contact was made with the eligible household member the interviewer they reintroduced themselves when necessary, explained the purpose of the survey, that it is a voluntary study, indicates the survey takes only 15 minutes, indicated all information would remain confidential and they can refuse to answer any question.

If the potential respondent agrees to participate the interviewer provides the respondent an opportunity to ask any questions, addresses their questions and the interview is conducted. However, if it is not a convenient time then a callback is scheduled.

5.5 Data Quality Control Procedures

A key component to successful data quality control procedures is a well-trained and experienced interview staff. All potential interviewers underwent intensive training and orientation regardless of their level of experience prior to being hired for this project. New hires were first screened on their voice quality, dictation, and their ability to administer a simple test questionnaire.

Our interviewer training for administering telephone surveys included:

- Orientation on the purpose and importance of marketing research, company policies, and quality standards including viewing Market Research Association (MRA) training videotapes;
- Testing on material developed by the Market Research Association;
- Background and purposes of the survey;
- Procedure for selection of correct respondent for the interview;
- Intensive hands-on training on the "basics" of interviewing itself- the handling of skip patterns, probing and clarify techniques, sample administration, Computer Assisted Telephone Interviewing (CATI), overcoming refusals, etc.;
- Observing and listening to experienced interviewers conducting actual interviews during which each trainee's performance is closely monitored and evaluated under actual interviewing conditions;
- Constant reference on the importance of accuracy, quality and courtesy; and
- Successful completion of a total of approximately eight hours of training during the different sessions.

5.5.1 Interviewer Performance

Ongoing monitoring of every interviewer is undertaken throughout the BTS Omnibus Survey. Fifteen (15%) to twenty (20%) percent of all calls are monitored. An interviewer evaluation form is completed for each monitored contact with a household. Additionally, the evaluation forms includes two to three evaluations of a completed interview per hour. The evaluation forms are paper hard copy forms and are available for review by BTS at the offices of M. Davis and Company, Inc. in Philadelphia.

5.5.2 Other Procedures

The initial two days of interviews by each interviewer are checked to identify any problems administering the survey. The objective is to identify problems, if any, correct the errors and take action so that the problems do not reappear. Before beginning the second day of work all interviewers are alerted to their problems, if any, and the interviewers review how to ensure the problem does not recur. Interviews that were completed during the second day are checked to see that the first day's errors are not repeated. If errors were repeated and dependent upon the significance of the error, the interviewer is retrained and/or removed from the project for that month of calling.

Newer interviewers are monitored at a higher rate regardless of their level of experience until their first performance evaluation. Additionally, validation is performed on 10% - 20% of each interviewer's work through actual callbacks to respondents to verify responses to key questions. The validation is initiated on the first day of interviewing to ensure early detection of problems and to avoid a backlog of validation calls. Validations are performed for both new and experienced interviewers.

5.6 Summary of Data Cleaning

On a daily basis, the data file is checked as a standard to maintain quality. The CfMC utility called SCAN, allows for checking the data, to be sure that all questions are being asked in accordance with the skip patterns on the final questionnaire. The file is also checked for missing codes.

This survey contains "other specify" questions. These questions allow the interviewer to record text responses that do not appear on the pre-listed set of responses. "Other specify" responses are edited to determine if responses entered in "other specify" appear on the pre-listed set of responses. Upon review of the "other specify" responses, it may be necessary to "code-back" a response to the pre-list. This occurs when an interviewer recorded a response as "other", although one of the pre-listed responses matched the "other" response.

5.7 Treatment of Missing Values

As with any survey, the BTS Omnibus Survey, by design, contains questions that are not asked to certain respondents based on their response(s) to other questions. In addition, there will always be some respondents who do not know the answer to or chose not to answer some items in the survey. Each of these responses can have a different meaning to the data user. While each of these response categories is important in characterizing the results of the survey, they are often removed from certain analyses, particularly those involving percentages. Therefore, the categories were given standard codes for easy identification. The table below presents the response categories and how they are represented in each data file.

Table 5: Summary of Codes for Missing Values by Data File Format

Response Category	Dataset Formats			
	SAS ® Version 7.0	SAS ® Transportable	Microsoft Excel	Text Comma Delimited
Appropriate skip	.S	.S	-7	-7
Refused	.R	.R	-8	-8
Don't know	.D	.D	-9	-9

5.8 Response Rates

The procedures for response rate calculation are based on the guidelines established by the Council of American Survey Research Organizations (CASRO) in defining a response rate.

5.8.1 Number of Completed Interviews

A total of 1,015 interviews were completed during the survey period.

5.8.2 Calculation of Response Rates

The final response rate for the survey is obtained using the following formula:

$$\text{Response Rate} = \frac{\text{Completed HH Interviews}}{\left\{ \text{HHs In Scope} + \left[\text{Scope Undetermined} * \frac{\text{HHs In Scope}}{\text{HHs In \& Out of Scope}} \right] \right\}}$$

The table below presents the distribution of household telephone numbers by disposition categories. The number of household cases in each category was then used in the above formula to calculate an overall response rate of 42.7 percent.

Table 6: Distribution of Household Cases by Disposition

Disposition Category	Number of Households
Telephone Numbers Available	4,661
Telephone Numbers Released	3,955
Telephone Numbers Not Dialed	84
Telephone Numbers Dialed	3,871
Out-of-Scope Numbers (Ineligible)	865
BG - Business	219
CF - Computer/Fax	146
DS - Disconnected number	453
NC - Number change	23
NQ - No one 18 years old or older in household	16
UNB - Unavailable before and during study period	8
Scope Undetermined	1,631
NA - No answer	808
BZ - Busy	4
AM - Answering machine	473
LM - Left message	18
CCC - Cannot complete call	4
PM - Privacy manager	34
NQL - Eligibility undetermined because of language problems or deafness	22
RFI - Refused to speak with interviewer (screening incomplete)	92
HRI - Hard refusal *	176
OD - Maximum call attempts reached	0
In-Scope Numbers	1,375
Complete	1,015
Partial Complete	23
CB - Callback	206
CBS - Callback Spanish	10
DL - Deaf/Language	45
RFQ - Respondent refusal	3
UN - Unavailable	50
DR - Respondent deceased prior to completion of interview	0
AC - The area code is changed but not the number	0
HRQ - Hard refusal *	23
CASRO Response Rate	42.72%

** Note: Beginning in March 2002, and for all future months, to more accurately reflect the breadth of cases that fall within the HRI and HRQ categories the words "Hard Refusal" have replaced the words "Requested name be removed from calling list".*

For the Omnibus survey the following is undertaken to maximize the response rate:

1. Matching sample telephone numbers against commercial file against residential directory-listed numbers.
2. Advance letter stating clearly the aims, objectives and importance of the survey, with toll free number to callback. MDAC will collaborate with BTS to create a BTS approved advance letter.
3. Coordination of the mailing of advance letters with the interview calling.
4. Develop answers for the questions and objections that may arise during the interview.
5. Leaving message on answering machine with a toll free number.
6. Having multi-lingual interviewers to reduce language barriers.
7. Elimination of non-residential numbers from sample.
8. Callbacks of respondents who initially refused or broke-off interview.
9. Minimizing turnover of key and non-key personnel.

5.8.3 Reasons for Non-Response

As with any survey, the BTS Omnibus Survey, by design, contains questions that ask respondents to supply the demographic information necessary to categorize their age, gender, and/or education. There will always be some respondents who do not choose to answer some items in the survey. For respondents that did not want to provide this information, the most common reasons for non-responses are: *I don't like giving my age, I would rather not say, I don't like to be labeled, and that is personal information.*

Common reasons for non-responses when asked questions regarding contacts they may have had with any government agencies and/or why they contacted the agencies are: *I don't want to say because I don't trust the government, I don't want to answer because I have an issue pending, and I would rather not say.*

APPENDIX A: FINAL ANNOTATED SURVEY QUESTIONNAIRE

Professional interviewers administer this questionnaire using computer-assisted telephone interviewing (CATI). In addition to the answer categories displayed for each question, the interviewer has the option to enter “don’t know” or “refused” but these categories are not displayed on-screen.

The questionnaire consists of eight sections: an introduction section, followed by six “subject matter” sections and an interviewer close-out section:

Section	Topics	Periodicity
F	Introduction and Respondent Selection Questions	Identical series each month
G	General Transportation Core Questions	Identical series each month
B	BTS Topical Transportation Questions	Change each month to address topical issues. This month: commuting and air travel
SE	Strategic Goal Questions	Rotate three times per year by goal area. Bold type denotes area addressed this month: Month 1 - Safety (SS) Month 2 - Mobility (SM) Month 3 - Environment (SE) Month 4 - National Security (SN)
T	USDOT Services Satisfaction Questions None this month	Identical series each month None this month
M	Operating Administration Modal Questions	Change each month
D	Demographic Questions	Identical series each month
I	Interviewer Close Out Questions	Identical series each month

Formatting conventions for this document:

- **Question/answer text in boldface type** displays verbatim text to read to respondent. Within such text, words or phrases enclosed in brackets [], such as in Question F0080, will change depending upon time frames or respondent responses to previous items. Words or phrases enclosed in parentheses (), such as in Question F0455, are optional and should be read to respondent as part of the question only when needed.
- Answer text in regular type is not read aloud to respondent. Instead, the interviewer will wait for response and categorize it into one of the listed categories.
- **TEXT IN ALL CAPS** displays on-screen instructions to the interviewer or questions that the interviewer answers.
- *Text in italics* provides CATI system instructions or options, such as skips or fills.

Section F – Introduction and Respondent Selection

CATI system will generate and dial telephone number. When someone answers, interviewer begins.

F0054. **Hello, my name is _____, and I’m calling on behalf of the United States Department of Transportation about a national study on transportation issues. In the aftermath of the terrorist attacks on September 11, 2001, transportation has become a more critical issue in our society.**

HIT “RETURN” TO CONTINUE

F0080. **Have I reached [telephone number]?**

- 1) Yes
- 2) No - **Sorry, I must have dialed incorrectly. Goodbye.**

F0065. **Your household has been selected for this study, and we are very interested in your transportation habits and opinions. Please remember that your input will help strengthen our nation’s transportation system.**

HIT “RETURN” TO CONTINUE

F0100. **Is this phone for a home, a business, or both?**

- 1) Home - *go to F0200*
- 2) Business
- 3) Both home and business - *go to F0200*

F0150. **Sorry, I’m trying to reach a residence. Goodbye.**

TERMINATE CALL

F0200. **Are you a household member who is at least 18 years old?**

- 1) Yes - *go to F0351*
- 2) No

F0250. **May I please speak to a household member who is at least 18 years old?**

- 1) Yes - *go to F0351*
- 2) No

F0300. **When would be a good time to call back to speak with someone who is at least 18 years old?**

SCHEDULE CALL BACK

F0351. IF INTERVIEWER IS SPEAKING WITH A NEW RESPONDENT, BEGIN BY REPEATING F0054. THEN SAY...

This study is designed to select one household adult to answer the questions. We choose that person based on birthdays, so I need to talk with the person living there now, aged 18 years or older, who will have a birthday next. What is the first name of that person?

INTERVIEWER INSTRUCTION: PRESS "ESCAPE" KEY AFTER ENTERING INFORMATION

TYPE IN PERSON'S FIRST NAME_____

F0400. **May I please speak with [insert name]?**

- 1) Yes
- 2) No - *go to F0500*

F0455. INTERVIEWER NOTE: READ THE FOLLOWING PARENTHETICAL ONLY IF RESPONDENT ASKS FOR ADDITIONAL DETAILS. REPEAT F0351 IF NECESSARY. THEN SAY...

I have some questions about your transportation use, and about your opinions on important transportation issues such as the environment, commuting and air travel. Your participation in this voluntary study (there is no penalty for refusing to answer any question) will take only about 10 minutes, and your answers will be used only for statistical summaries. The study is authorized by law (Title 49, Section 111c2 of the United States Code).

HIT "RETURN" TO CONTINUE

Skip to F0550

F0500. **When would be a good time to call back to speak to [insert name]?**

SCHEDULE CALL BACK

F0550. ADDRESS QUESTIONS OR USE REFUSAL CONVERSION TECHNIQUES.
IS RESPONDENT WILLING TO CONTINUE?

- 1) Yes
- 2) No - THANK RESPONDENT AND TERMINATE

HIT "RETURN" TO CONTINUE

F0601. **For quality purposes, my supervisor may monitor this call.**
ENTER "1" TO PROCEED, OR ENTER "2" TO SCHEDULE CALL BACK

- 1) PROCEED - *go to G0050*
- 2) SCHEDULE CALL BACK

Section G - General Transportation Core Questions

G0051. **First I need to ask about all the kinds of transportation you used either for personal or for business travel last month.**

HIT "RETURN" TO CONTINUE

G0103. **During March, did you drive or ride in a personal vehicle?** (Examples of personal vehicles include a car, van, SUV, pickup truck, RV)

- 1) Yes
- 2) No (*Skip to G0150*)

G0851A. **How many days did you drive or ride?**

ENTER NUMBER_____

G0150. **During March, did you drive or ride in an organized carpool or vanpool?**

- 1) Yes
- 2) No (*Skip to G0302*)

G0851B. **How many days did you drive or ride?**

ENTER NUMBER_____

G0302. **During March, did you ride on any public transit within a city or metropolitan area? Examples of public transit include a bus, rapid rail (subway, surface or elevated), light rail, commuter bus or rail from suburb to city.**

- 1) Yes
- 2) No (*Skip to G0801*)

G0851C. **How many days did you use it?**

ENTER NUMBER_____ (*Skip to G0201*)

G0801. **Is public transportation available in your area?**

- 1) Yes
- 2) No (*Skip to G0201*)

G0810. **Please tell me the main reason you did not use public transit last month.**
(CODE THE FIRST REASON GIVEN. IF RESPONSE IS "I DON'T KNOW",
"I DON'T LIKE IT," OR "I DON'T NEED IT" PROBE FOR A SPECIFIC
REASON. IF RESPONDENT SAYS "I HAVE/USE MY OWN VEHICLE"
PROBE "WHAT IS IT ABOUT PUBLIC TRANSIT THAT CAUSED YOU TO
USE YOUR OWN VEHICLE?")(DO NOT READ LIST)

- 01) Prefer my own vehicle
- 02) I am retired/not working/not in school
- 03) Need to make multiple stops to/from work/school
- 04) Don't understand/know routes and schedules
- 05) Not convenient (doesn't go where I need to)
- 06) Not flexible (doesn't go when I need to)
- 07) Takes too much time
- 08) Distance from home to stops is too great
- 09) Uncomfortable riding with strangers
- 10) Costs too much
- 11) Unreliable
- 12) Unsafe
- 13) Health/disability/physical limitations
- 97) Other - SPECIFY _____

G0201. **During April, did you ride on a city-to-city bus, such as Greyhound?**

- 1) Yes
- 2) No (*Skip to G0251*)

G0851D. **How many days did you ride on it?**

ENTER NUMBER_____

G0902B. **And of these days, how many were for business or work?**

_____ days

G0251. **During April, did you ride on a city-to-city train, such as AMTRAK?**

- 1) Yes
- 2) No (*Skip to G0880*)

G0851E. **How many days did you ride on it?**

ENTER NUMBER_____

G0902C. **And of these days, how many were for business or work?**

_____ days

Skip to G0350

G0880. **In your area, do you have long distance, city-to-city train service such as AMTRAK?**

1) Yes

2) No

G0350. **During April, did you fly on a commercial airline?**

1) Yes

2) No (*Skip to G0401*)

G0851F. **How many days did you fly on a commercial airline?**

ENTER NUMBER_____

G0902D. **And of these days, how many were for business or work?**

_____ days

G0401. **During April, did you fly on a charter, private, or corporate airplane or helicopter?**

1) Yes

2) No (*Skip to G0452*)

G0851G. **How many days did you fly on a charter, private, or corporate airplane or helicopter?**

ENTER NUMBER_____

G0902E. **And of these days, how many were for business or work?**

_____ days

G0452. **During April, did you drive or ride on a motorcycle, including a motorized scooter, or a motorized bicycle (such as a moped) or an ATV?**

1) Yes

2) No (*Skip to G0501*)

G0851H. **How many days did you drive or ride one of these vehicles?**

ENTER NUMBER_____

G0501. **During April, did you ride a bicycle? Please do not include stationary bicycles.**

- 1) Yes
- 2) No (*Skip to G0551*)

G0851I. **How many days did you ride your bicycle?**

ENTER NUMBER_____

G0952. **Primarily for what purpose did you use it? (DO NOT READ LIST)**

- 1) Commuting to work or school,
- 2) Recreation,
- 3) Exercise/for my health,
- 4) Personal errands, (to the store, post office, and so on)
- 5) Required for my job
- 7) Some other purpose - SPECIFY _____

G1001. **And on a typical day that you rode your bicycle, about how much time did you spend bicycling?**

_____ hours and _____ minutes

CATI system must ensure an entry for both hours and minutes

G1051. **Did you bicycle mostly on: (READ LIST)**

- 01) Paved roads, not on shoulder,**
- 02) Shoulders of paved roads,**
- 03) Bike lanes on roads,**
- 04) Sidewalks,**
- 05) Bike paths, walking paths or trails,**
- 06) Unpaved roads (for example dirt, gravel, sand),**
- 07) Grass, or**
- 97) Other - SPECIFY _____**

G0551. **During April, did you walk, run, or jog at least one time outside for 10 minutes or more? (such as to work, to a store or to a park)**

- 1) Yes
- 2) No (*Skip to G0555*)

G0851J. **How many days did you walk, run or jog?**

ENTER NUMBER_____

G1102. **Primarily for what purpose did you walk, run, or jog? (DO NOT READ LIST)**

- 1) Commuting to work or school,
- 2) Recreation,
- 3) Exercise/for my health,
- 4) Personal errands, (to the store, post office, walking the dog, and so on)
- 5) Required for my job
- 7) Some other purpose - SPECIFY

G1151. **And on a typical day that you walked, ran, or jogged, about how much time did you spend walking, running, or jogging?**

_____ hours and _____ minutes

CATI system must ensure entry for both hours and minutes

G1202. **Did you walk, run, or jog mostly on: (READ LIST)**

- 01) **Paved roads, not on shoulder,**
- 02) **Shoulders of paved roads,**
- 03) **Bike lanes on roads,**
- 04) **Sidewalks,**
- 05) **Bike paths, walking paths or trails,**
- 06) **Unpaved roads (for example dirt, gravel, sand),**
- 07) **Track,**
- 08) **Grass, or**
- 97) **Other - SPECIFY _____**

G0555. **During April, did you ride as a passenger on a cruise ship?**

- 1) Yes
- 2) No

G0601. **During April, did you ride on a commercial boat, ship, or ferry?**

- 1) Yes
- 2) No (*Skip to G0652*)

G0851K. **How many days did you ride on a commercial boat, ship, or ferry?**

ENTER NUMBER_____

G0652. **During April, did you operate or ride on a personal watercraft such as a jetski, skidoo or waverunner?**

- 1) Yes
- 2) No (*Skip to G0701*)

G0851L. **How many days did you operate or ride on a personal watercraft?**

ENTER NUMBER_____

G1251. **In total, about how much time did you spend using a personal watercraft last month?**

_____ hours and _____ minutes

CATI system must ensure entry for both hours and minutes

G0701. **During April, did you operate or ride on a recreational boat such as a sailboat, motorboat, or yacht?**

- 1) Yes
- 2) No (*Skip to G0750*)

G0851M. **How many days did you operate or ride on a recreational boat?**

ENTER NUMBER_____

G1258. **In total, about how much time did you spend using a recreational boat last month?**

_____ hours and _____ minutes

CATI system must ensure entry for both hours and minutes

G0750. **During April, did you use any other means of transportation? For example a taxi, limousine, charter or tour bus, hotel or airport shuttle.
(BEFORE CODING, ENSURE THAT ANSWER CANNOT BE INCLUDED IN ONE OF THE OTHER CATEGORIES)**

- 1) Yes
- 2) No (*Skip to B0050*)

G0851N. **How many days did you use other means of transportation?**

ENTER NUMBER_____

If G0103 = 2 and G0302=2 and G0350 = 2 then skip to B0050

G2001. **Now I would like you to compare your perceptions and/or experiences using [CATI system enter number] major modes of transportation in April with your perceptions and/or experiences using those modes a year ago.**

HIT "RETURN" TO CONTINUE

If G0103 = 2 then skip to instruction before G2101

G2011. **You said you drove or rode in a personal vehicle last month. Considering all the costs associated with driving or riding in a personal vehicle, would you say it cost more or less in April than it did a year ago?**

[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Cost less
- 2) Cost the same
- 3) Cost more

G2021. **In terms of security from crime or terrorism, did you feel more secure or less secure driving or riding in a personal vehicle in April than a year ago?**

[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Less secure
- 2) Same
- 3) More secure

G2041. **In terms of safety from accidents, did you feel more safe or less safe driving or riding in a personal vehicle in April than you did a year ago?**

[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Less safe
- 2) Same
- 3) More safe

G2061. **In terms of travel time, would you say you were more likely or less likely to get where you wanted to go in a reasonable length of time in April than a year ago?**

[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Less likely
- 2) Same
- 3) More likely

G2081. **In terms of convenience, would you say it was more convenient or less convenient to drive or ride in a personal vehicle in April than it was a year ago?**

[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Less convenient
- 2) Same
- 3) More convenient

If G0302 = 2 then skip to instruction before G2201

G2101. **Now I would like you to compare your perceptions and/or experiences using public transit in April with your perceptions and/or experiences using public transit a year ago.**

G2111. **Considering the cost of using public transit, would you say it cost more or less in April than it did a year ago?**

[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Cost less
- 2) Cost the same
- 3) Cost more

G2121. **In terms of security from crime or terrorism, did you feel more secure or less secure using public transit in April than a year ago?**

[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Less secure
- 2) Same
- 3) More secure

G2141. **In terms of safety from accidents, did you feel more safe or less safe using public transit in April than you did a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Less safe
- 2) Same
- 3) More safe

G2161. **In terms of travel time, would you say you were more likely or less likely to get where you wanted to go in a reasonable length of time in April than a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Less likely
- 2) Same
- 3) More likely

G2181. **In terms of quality of service, would you say the quality of service you received using public transit in April was better or worse than a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Worse
- 2) Same
- 3) Better

If G0350 = 2 then skip to B0050

G2201. **Finally I would like you to compare your perceptions and/or experiences flying on a commercial airline in April with your perceptions and/or experiences flying on a commercial airline a year ago.**

G2211. **Considering the cost of flying on a commercial airline, would you say it cost more or less in April than it did a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS "THE SAME", ACCEPT RESPONSE.]

- 1) Cost less
- 2) Cost the same
- 3) Cost more

G2221. **In terms of security from crime or terrorism, did you feel more secure or less secure flying on a commercial airline in April than a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS “THE SAME”, ACCEPT RESPONSE.]

- 1) Less secure
- 2) Same
- 3) More secure

G2241. **In terms of safety from accidents, did you feel more safe or less safe flying on a commercial airline in April than a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS “THE SAME”, ACCEPT RESPONSE.]

- 1) Less safe
- 2) Same
- 3) More safe

G2261. **In terms of travel time, would you say you were more likely or less likely to get where you wanted to go in a reasonable length of time in April than a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS “THE SAME”, ACCEPT RESPONSE.]

- 1) Less likely
- 2) Same
- 3) More likely

G2281. **In terms of quality of service, would you say the quality of service you received flying on a commercial airline in April was better or worse than a year ago?**
[DO NOT READ LIST. RECORD ONLY ONE ANSWER. IF THE RESPONDENT SAYS “THE SAME”, ACCEPT RESPONSE.]

- 1) Worse
- 2) Same
- 3) Better

Section B - BTS Topical Transportation Questions

B0050. **The next questions are about commuting.**

HIT "RETURN" TO CONTINUE

B0103. **Last month did you commute, that is, travel routinely from home to work? (EXCLUDE TELECOMMUTING; COMMUTING MAY INCLUDE ANY TYPE OF TRANSPORTATION.)**

- 1) Yes
- 2) No (*Skip to B2300*)

B0152. **Altogether, about how many days did you commute last month? (DO NOT READ LIST)**

- 1) 29-31 days/month
- 2) 22-28 days/month
- 3) 15-21 days/month
- 4) 8-14 days/month
- 5) 1-7 days/month

B0310. **Did you work at the same location on most days?**

- 1) Yes (*Skip to B0352*)
- 2) No

B0315. **Did you work at more than one location on a typical day?**

- 1) Yes
- 2) No (*Skip to B0352*)

B0320. **On a typical day, how much time did you spend traveling from worksite to worksite?**

_____ hours and _____ minutes - *go to B2300*

CATI system must ensure entry for both hours and minutes

B0352. **On a typical day, how much time did a one-way, door-to-door trip from home to work take?**

THE TIME RECORDED FOR COMMUTING TO WORK ON A TYPICAL DAY SHOULD BE THE TIME IT TOOK TO COMMUTE USING THE MODES OF TRANSPORTATION USED ON A TYPICAL DAY.

_____ hours and _____ minutes

CATI system must ensure entry for both hours and minutes

B2300. **My next group of questions is about commercial air travel.**

HIT "RETURN" TO CONTINUE

If G0350 = 1 then skip to B2314

B2311. **What month and year was your most recent commercial airline flight?**
(INTERVIEWER: PLEASE PROMPT FOR MONTH AND YEAR. IF RESPONDENT CANNOT RECALL THEN READ LIST OF CATEGORIES)

- 1) Enter month and year
- 5) Have never flown on a commercial airline (*Skip to B3000*)

B2314. **What airport did you depart from on your most recent flight?**
(INTERVIEWER: IF RESPONDENT CANNOT RECALL AIRPORT NAME PLEASE PROMPT FOR CITY AND STATE.)

B2320. **Now, I'd like you to think of your most recent commercial airline flight. Was the primary purpose of your trip business or job related? (IF NECESSARY, GIVE EXAMPLES SUCH AS PROFESSIONAL CONFERENCE, MEETING WITH CLIENTS.)**

- 1) Yes, business/job related
- 2) No

B2332. **Still thinking of your most recent flight, which may have been a return flight on a round-trip ticket, in which of the following sections was your seat located: (READ ENTIRE LIST EXCEPT DON'T KNOW)**

- 1) **Economy or coach section (also sometimes called the main cabin)**
- 2) **First class section**
- 3) **There were no sections in the plane; all seats were in the same section**
- 7) **Other - SPECIFY _____**

B2341. **Did the price paid for the airline ticket carry any restrictions? For example, did you have to book your trip two weeks in advance, were you required to stay overnight on a Friday or Saturday, or were you prohibited from changing your ticket without paying a penalty?**

- 1) Yes
- 2) No

B2401. **Once more, think about your most recent flight. Did you check any baggage on this flight? Baggage may include suitcases, laptop computers, bicycles, golf clubs, or any package too large to carry on to the plane.**

- 1) Yes
- 2) No (*Skip go B2430*)

B2421. **How many items did you yourself check on this flight?**

ENTER NUMBER_____

INTERVIEWER NOTE: REPEAT ANSWER TO RESPONDENT: **So, on your most recent flight, you checked a total of _____ items that were just for you?**

B2430. **Did you carry any baggage on to this flight? Carry-on baggage may include purses, briefcases, laptop computers, overnight bags, or any thing else that you did not check.**

- 1) Yes
- 2) No (*Skip go instruction before B2600*)

B2441. **How many items did you yourself carry on to the plane on your most recent flight?**

ENTER NUMBER_____

INTERVIEWER NOTE: REPEAT ANSWER TO RESPONDENT: **So, on your most recent flight, you carried on a total of _____ items that were just for you?**

B2600. **How soon before your most recent flight did you arrive at the airport? Did you arrive at the airport (READ LIST UNTIL RESPONDENT STOPS YOU TO SELECT A CATEGORY)**

- 1) **Less than 30 minutes before your flight**
- 2) **30 minutes to less than 60 minutes**
- 3) **60 minutes to less than 90 minutes**
- 4) **90 minutes to less than two hours before your flight**
- 5) **Two hours to less than three hours**
- 6) **Three hours or more before your flight**

B2650. **How long did you wait in line to check in at the ticket counter for your most recent flight? Did you wait (READ LIST UNTIL RESPONDENT STOPS YOU TO SELECT A CATEGORY)**

- 01) **Less than 15 minutes to check in**
- 02) **15 minutes to less than 30 minutes**
- 03) **30 minutes to less than 60 minutes**
- 04) **60 minutes to less than 90 minutes to check in**
- 05) **90 minutes to less than two hours**
- 06) **Two hours to less than three hours**
- 07) **Three hours or more to check in**
- 08) **Did not check in at the ticket counter**

B2700. **How long did you wait in line to go through the passenger screening checkpoint for your most recent flight? The checkpoint we are referring to is the only one where you must walk through a metal detector and your carry-on items are x-rayed. Did you wait (READ LIST UNTIL RESPONDENT STOPS YOU TO SELECT A CATEGORY)**

- 1) **Less than 15 minutes to go through the checkpoint**
- 2) **15 minutes to less than 30 minutes**
- 3) **30 minutes to less than 60 minutes**
- 4) **60 minutes to less than 90 minutes to go through the checkpoint**
- 5) **90 minutes to less than two hours**
- 6) **Two hours to less than three hours**
- 7) **Three hours or more to go through the checkpoint**

B2750. **How satisfied were you with the time that you waited in line at the passenger screening checkpoint? Were you (READ LIST)**

- 1) Very unsatisfied**
- 2) Somewhat unsatisfied**
- 3) Neither unsatisfied nor satisfied**
- 4) Somewhat satisfied**
- 5) Very satisfied**

B2800. **How would you rate the intensity of screening that you received? Would you rate it (READ LIST)**

- 1) Inadequate**
- 2) Adequate**
- 3) Excessive**

B2850. **How confident were you in the ability of the screeners to keep air travel secure from individuals with hostile intentions? Were you (READ LIST)**

- 1) Very confident**
- 2) Somewhat confident**
- 3) Very confident**

B2900. **How satisfied were you with the courtesy of the screeners at the passenger screening checkpoint? Were you (READ LIST)**

- 1) Very unsatisfied**
- 2) Somewhat unsatisfied**
- 3) Neither unsatisfied nor satisfied**
- 4) Somewhat satisfied**
- 5) Very satisfied**

B2950. **How satisfied were you overall with your experience at the passenger screening checkpoint? Were you (READ LIST)**

- 1) Very unsatisfied**
- 2) Somewhat unsatisfied**
- 3) Neither unsatisfied nor satisfied**
- 4) Somewhat satisfied**
- 5) Very satisfied**

(Skip to SE0050)

B3000. **On a scale from 1 to 5 where 1 means “Not Confident” and 5 means “Very Confident”, how confident are you in the ability of the passenger screeners to keep air travel secure from individuals with hostile intentions?**

- 1) Not confident
- 2)
- 3)
- 4)
- 5) Very confident

Section SE - Strategic Goal Questions

SE0050. **Now I want to ask your opinion on some transportation issues related to the environment.**

HIT "RETURN" TO CONTINUE.

SE0100. **Was transportation an important factor in choosing where you live?**

- 1) Yes
- 2) No

SE0150. **When thinking about your community in terms of the environment,**

		Yes	No
SE0160	Do you notice air pollution in your community that is caused by vehicle emissions?	1	2
SE0165	Do the sounds of traffic, trains, and/or airplanes cause noise pollution in your community?	1	2
SE0170	Is water pollution from transportation sources a problem in your community?	1	2
SE0175	Is traffic congestion a problem in your community?	1	2
SE0180	Are hazardous material incidents from transportation sources a problem in your community?	1	2

SE0300. **In your own words, what do you think is the primary cause of air pollution in your community? (DO NOT READ. CODE ONLY ONE)**

- 01) Power Plants
- 02) SEMIS/LARGE Trucks
- 03) Dust
- 04) Cars/SUVS/Pickups/Vans
- 05) Pollen
- 06) Factories
- 07) Commercial Planes
- 08) Trains
- 09) Buses
- 10) Don't have air pollution where I live
- 97) Other - SPECIFY _____

SE0202. **Now I have a couple of questions about motor oil. In the past year, did you yourself ever change the motor oil in any of your own vehicles, including an RV, private airplane, motorcycle, or recreational boat?**

- 1) Yes
- 2) No (*Skip to M0050*)

SE0205. **In thinking about the vehicle on which you did this the most frequently, how many times did you change the motor oil this past year?**

INTERVIEWER NOTE: IF RESPONDENT SAYS OIL WAS CHANGED AT SPECIFIC MILEAGE OR HOUR INTERVALS, FOR EXAMPLE ONCE EVERY 3,000 MILES OR ONCE EVERY 100 HOURS USED, PROBE TO FIND OUT THE NUMBER OF TIMES CHANGED THIS PAST YEAR. IF RESPONDENT SAYS MORE THAN 12 OIL CHANGES, ENTER "12".

CATI system range limit should be 1-12, 98, or 99

SE0210. **How did you usually dispose of the used oil?**
(DO NOT READ LIST)(RECORD ONLY ONE)

- 1) Took to an oil recycling collection center, gas or service station
- 2) Poured down a drain outdoors (storm drain, backyard drain)
- 3) Poured down a drain indoors (workshop drain, sink, garbage disposal)
- 4) Put in with the garbage/trash
- 5) Poured it on the ground
- 6) Released it in the water
- 7) Other - SPECIFY _____

If SE0210=1, skip to next section

SE0215. **What was the main reason you did not take the used oil to a recycling collection center?** (DO NOT READ LIST)(RECORD ONLY ONE)

- 1) Never heard of recycling used oil
- 2) No recycling center in my town/area
- 3) Don't know where a recycling center is
- 4) Recycling location not convenient
- 5) Recycling hours not convenient
- 6) Recycling center charges to dispose of used oil
- 7) Other - SPECIFY _____

Section M - Operating Administration Modal Questions

MNH0500. **My next group of questions is of interest to the National Highway Transportation Safety Administration.**

HIT "RETURN" TO CONTINUE

MNH0510. **Have you driven a vehicle in the last twelve months?**

- 1) Yes
- 2) No (*Skip to D0050*)

MNH0515. **Do you drive at night?**

- 1) Yes
- 2) No (*Skip to MNH0560*)

MNH0520. **In the last 12 months, while driving at night, has the glare from the headlights of an oncoming vehicle been not noticeable, barely noticeable, noticeable but acceptable, disturbing, or did it cause a crash or near miss?**

- 1) Not noticeable - none
- 2) Barely noticeable
- 3) Noticeable but acceptable
- 4) Disturbing
- 5) Caused crash or near miss

MNH0540. **In the last 12 months, while driving at night, has the glare from the headlights of a vehicle behind you been not noticeable, barely noticeable, noticeable but acceptable, disturbing, or did it cause a crash or near miss?**

- 1) Not noticeable - none
- 2) Barely noticeable
- 3) Noticeable but acceptable
- 4) Disturbing
- 5) Caused crash or near miss

MNH0560. In the last 12 months, while driving during the day, has the glare from the daytime running lights on other vehicles been not noticeable, barely noticeable, noticeable but acceptable, disturbing, or did it cause a crash or near miss?

- 1) Not noticeable - none
- 2) Barely noticeable
- 3) Noticeable but acceptable
- 4) Disturbing
- 5) Caused crash or near miss

MNH0580. In the last 12 months, have you been involved in a crash in a vehicle where you were the driver?

- 1) Yes
- 2) No

MNH0600. In the last 12 months, have you been involved in a near miss in a vehicle where you were the driver?

- 1) Yes
- 2) No

Section D - Demographic Questions

D0050. **This final section asks for information to help us summarize the study results. No identifying information about you or your household will ever be released or published.**

HIT "RETURN" TO CONTINUE

D0061. **How many registered road vehicles are available for regular use by members of your household?**

ENTER NUMBER _____

D0101. **Do you have any kind of disability or health impairment?**

- 1) Yes
- 2) No

D0103. **Does anyone else currently living there, including children, have any kind of disability or health impairment?**

- 1) Yes
- 2) No

If D0101 = 2 and D0103 = 2 go to D0251. If D0101 = 1 and D0103 = 2 go to D0106.

D0105. **How many other people (beside yourself)?**

D0106. **Does anyone in the household use adaptive equipment in any motor vehicle (for example hand controls, modified foot pedals, or a wheelchair lift)?**

- 1) Yes
- 2) No

D0107. **We may conduct another study soon that focuses on transportation use among persons with disabilities or health impairments. Your household's experience and opinions on this critically important topic would be of great value. May we contact your household for this study?**

- 1) Yes
- 2) No

D0251. **How many people aged 18 or older live in your household, including yourself?**

INTERVIEWER NOTE: REPEAT ANSWER TO RESPONDENT: **Including yourself, _____ people aged 18 or older live in your household? (ENTER NUMBER)**

_____ people

D0300. **Please stop me when I reach the category that includes your age: (READ LIST UNTIL RESPONDENT STOPS YOU TO SELECT A CATEGORY)**

- 1) **18 to 24 years**
- 2) **25 to 34**
- 3) **35 to 44**
- 4) **45 to 54**
- 5) **55 to 64**
- 6) **65 to 74**
- 7) **75 or older**

D0350. (RECORD GENDER; ASK ONLY IF NECESSARY) **Are you male or female?**

- 1) Male
- 2) Female

D0401. **Is the racial or ethnic group that best describes you... (READ ENTIRE LIST. READ PARENTHETICAL ONLY IF RESPONDENT ASKS FOR CLARIFICATION.) (RECORD ALL THAT APPLY)**

- 1) **American Indian (Native American) or Alaska Native,**
- 2) **Asian (e.g., Chinese, Filipino, Japanese, Korean, Vietnamese),**
- 3) **Black or African-American,**
- 4) **Hispanic or Latino,**
- 5) **Native Hawaiian or other Pacific Islander (e.g., Samoan or Chamorro),**
- 6) **White (Caucasian, Anglo), or**
- 7) **Other - SPECIFY _____**

D0450. **What is the highest level of education you've completed? (DO NOT READ LIST)**

- 1) Less than high school graduate
- 2) High school graduate (or GED)
- 3) Some college (or technical vocational school/professional business school)
- 4) Two-year college degree (AA: Associate in Arts)
- 5) Four-year college degree (BA or BS: Bachelor of Arts or Science degree)
- 6) Graduate degree (Master's, Ph.D., Lawyer, Medical Doctor)

D0501. **Please stop me when I reach the category that includes your household's total annual income for last calendar year, that is, 2001: (READ LIST UNTIL RESPONDENT STOPS YOU TO SELECT A CATEGORY)**

- 1) **Under \$15,000**
- 2) **From \$15,000 to less than \$30,000**
- 3) **From \$30,000 to less than \$50,000**
- 4) **From \$50,000 to less than \$75,000**
- 5) **From \$75,000 to less than \$100,000**
- 6) **\$100,000 or more**

D0900. **Last month, did you do any work for pay or profit?**

- 1) Yes
- 2) No

D0552. **Not including the telephone number which I called you on, how many additional phone numbers do you have in your household? Please do not count numbers for cellular phones, or phone lines that are exclusively for computer or fax use.**

INTERVIEWER NOTE: REPEAT ANSWER TO RESPONDENT: So, you have a total of _____ phone numbers that are not used exclusively for fax machine, computer or cellular phone?

- 0) None (*Skip to D0800*)
- 1) One
- 2) Two
- 3) Three
- 4) Four or more

D0751. **Is the primary use of the additional phone number(s) for household use, business use, or both?**

- 1) Household use only
- 2) Business use only
- 3) Both household and business use

D0800. **Finally, in order to classify your household for statistical purposes, what is your ZIP code?**

ENTER NUMBER_____

D0850. **This concludes the study questions. On behalf of the Department of Transportation, I thank you for your time. Goodbye.**

HIT "RETURN" TO CONTINUE

Section I - Interviewer Close Out Questions

I0050. THESE QUESTIONS ARE ANSWERED BY THE INTERVIEWER AFTER THE RESPONDENT HANGS UP.

HOW WELL DID THE RESPONDENT UNDERSTAND THE QUESTIONS?

- 1) Not at all
- 2) Not very well
- 3) Well
- 4) Very well

I0100. HOW COOPERATIVE WAS THE RESPONDENT IN ANSWERING THE QUESTIONS?

- 1) Not at all cooperative
- 2) Not very cooperative
- 3) Cooperative
- 4) Very cooperative

I0150. IN WHAT LANGUAGE WAS THE INTERVIEW CONDUCTED?

- 1) English
- 2) Spanish
- 3) Both English and Spanish
- 7) Other - SPECIFY _____

I0200. PLEASE NOTE ANYTHING ELSE YOU FEEL IS HELPFUL OR IMPORTANT ABOUT THIS INTERVIEW.

- 11) CONTINUE TO ENTER TEXT OF RESPONSE
- 99) No notes to add

APPENDIX B: DATA DICTIONARY

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
	CASEID	Case Identification Number			Char	6	\$TEXTVAR
	STATE	State			Char	2	\$TEXTVAR
	METRO	MSA Inside Outside	1	Inside an MSA	Num	8	MSAINOUT
			2	Outside an MSA			
	CENDIV	Census Region	1	Northeast	Num	8	CENSREG
			2	Midwest			
			3	South			
			4	West			
	CREGION	Census Division	1	New England	Num	8	CENSDIV
			2	Middle Atlantic			
			3	East North Central			
			4	West North Central			
			5	South Atlantic			
			6	East South Central			
			7	West South Central			
			8	Mountain			
			9	Pacific			
	DVERSION	Database Version		Year - Quarter	Char	6	\$TEXTVAR
	STARTIM	Interview Start Time			Char	8	\$TEXTVAR
	ENDTIME	Interview End Time			Char	8	\$TEXTVAR
	INLNGTH	Interview Length			Num	8	BEST
	TIMEZONE	Time Zone	C	Central time	Char	1	\$TZONE
			E	Eastern time			
			M	Mountain time			
			P	Pacific time			
			A	Alaska time			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			H	Hawaii time			
G0103	G0103	Use - Personal Vehicle	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851A	G0851A	Personal Vehicle - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0150	G0150	Use - Carpool/Vanpool	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851B	G0851B	Carpool/Vanpool - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0302	G0302	Use - Public Transit	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851C	G0851C	Public Transit - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0801	G0801	Public Trans - Available	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			.S	Appropriate skip			
G0810	G0810A	Public Transit - Reason for Not Using	1	Prefer my own vehicle	Num	8	NOPTWHY
			2	I am retired/not working/not in school			
			3	Need to make multiple stops to/from work/school			
			4	Don't understand/know routes and schedules			
			5	Not convenient (doesn't go where I need to)			
			6	Not flexible (doesn't go when I need to)			
			7	Takes too much time			
			8	Distance from home to stops is too great			
			9	Uncomfortable riding with strangers			
			10	Costs too much			
			11	Unreliable			
			12	Unsafe			
			13	Health/disability/physical limitations			
			97	Other			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0810	G0810B	Public Transit - Other Reason for Not Using	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
G0201	G0201	Use - Bus	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851D	G0851D	Bus - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0902B	G0902B	Bus - Days - Business		_____ days	Num	8	BEST
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			.S	Appropriate skip			
G0251	G0251	Use - Train	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851E	G0851E	Train - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0902C	G0902C	Train - Days - Business		_____ days	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0880	G0880	AMTRAK - Available	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0350	G0350	Use - Commercial Airline	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851F	G0851F	Commercial Airline - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0902D	G0902D	Com Airline - Days - Business		_____ days	Num	8	BEST
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			.S	Appropriate skip			
G0401	G0401	Use - Other Aircraft	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851G	G0851G	Other Aircraft - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0902E	G0902E	Other Aircraft - Days - Business		_____ days	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0452	G0452	Use - Motorcycle	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851H	G0851H	Motorcycle - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0501	G0501	Use - Bicycle	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851I	G0851I	Bicycle - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
G0952	G0952A	Bicycle - Purpose	1	Commuting to work or school	Num	8	COMUWYA
			2	Recreation			
			3	Exercise/for my health			
			4	Personal errands (to the store, post office, and so on)			
			5	Required for my job			
			7	Some other purpose			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0952	G0952B	Bicycle - Other Purpose	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
G1001	G1001A	Bicycle - Time Spent - Hours		_____ hours	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1001	G1001B	Bicycle - Time Spent - Minutes		_____ minutes	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1001	G1001C	Bicycle - Time Spent - Decimal Hours		Calculated	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1051	G1051A	Bicycle - Type of Road	01	Paved roads, not on shoulder	Num	8	ROADTYPA
			02	Shoulders of paved roads			
			03	Bike lanes on roads			
			04	Sidewalks			
			05	Bike paths, walking paths or trails			
			06	Unpaved roads (for example dirt, gravel, sand)			
			07	Grass			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			97	Other			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1051	G1051B	Bicycle - Other Type of Road	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
G0551	G0551	Use - Walk	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851J	G0851J	Walk - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1102	G1102A	Walk - Purpose	1	Commuting to work or school	Num	8	COMUWYA
			2	Recreation			
			3	Exercise/for my health			
			4	Personal errands (to the store, post office, walking the dog, and so on)			
			5	Required for my job			
			7	Some other purpose			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1102	G1102B	Walk - Other Purpose	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
G1151	G1151A	Walk - Time Spent - Hours		_____ hours	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
G1151	G1151B	Walk - Time Spent - Minutes		_____ minutes	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1151	G1151C	Walk - Time Spent - Decimal Hours		Calculated	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1202	G1202A	Walk - Type of Road	01	Paved roads, not on shoulder	Num	8	ROADTYPB
			02	Shoulders of paved roads			
			03	Bike lanes on roads			
			04	Sidewalks			
			05	Bike paths, walking paths or trails			
			06	Unpaved roads (for example dirt, gravel, sand)			
			07	Track			
			08	Grass			
			97	Other			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1202	G1202B	Walk - Other Type of Road	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
G0555	G0555	Use - Cruise Ship	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0601	G0601	Use - Commercial Boat	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
G0851K	G0851K	Commercial Boat - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0652	G0652	Use - Watercraft	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851L	G0851L	Watercraft - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1251	G1251A	Watercraft - Time Spent - Hours		_____ hours	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1251	G1251B	Watercraft - Time Spent - Minutes		_____ minutes	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1251	G1251C	Watercraft - Time Spent - Decimal Hours		Calculated	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0701	G0701	Use - Recreational Boat	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
G0851M	G0851M	Recreational Boat - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1258	G1258A	Recreational Boat - Time Spent - Hours		_____ hours	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1258	G1258B	Recreational Boat - Time Spent - Minutes		_____ minutes	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G1258	G1258C	Recreational Boat - Time Spent - Decimal Hours		Calculated	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G0750	G0750	Use - Other Means of Transportation	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
G0851N	G0851N	Other Means of Transportation - Days		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2011	G2011	Personal Vehicle - Costs	1	Cost less	Num	8	TRANCOST
			2	Cost the same			
			3	Cost more			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
G2021	G2021	Personal Vehicle - Security	1	Less secure	Num	8	TRANSEC
			2	Same			
			3	More secure			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2041	G2041	Personal Vehicle - Safety	1	Less safe	Num	8	TRANSAFE
			2	Same			
			3	More safe			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2061	G2061	Personal Vehicle - Travel Time	1	Less likely	Num	8	TRANTIME
			2	Same			
			3	More likely			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2081	G2081	Personal Vehicle - Convenient	1	Less convenient	Num	8	TRANCONV
			2	Same			
			3	More convenient			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2111	G2111	Transit - Costs	1	Cost less	Num	8	TRANCOST
			2	Cost the same			
			3	Cost more			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
G2121	G2121	Transit - Security	1	Less secure	Num	8	TRANSEC
			2	Same			
			3	More secure			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2141	G2141	Transit - Safety	1	Less safe	Num	8	TRANSAFE
			2	Same			
			3	More safe			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2161	G2161	Transit - Travel Time	1	Less likely	Num	8	TRANTIME
			2	Same			
			3	More likely			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2181	G2181	Transit - Quality of Service	1	Worse	Num	8	TRANQUAL
			2	Same			
			3	Better			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2211	G2211	Com Airlines - Costs	1	Cost less	Num	8	TRANCOST
			2	Cost the same			
			3	Cost more			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2221	G2221	Com Airlines - Security	1	Less secure	Num	8	TRANSEC

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			2	Same			
			3	More secure			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2241	G2241	Com Airlines - Safety	1	Less safe	Num	8	TRANSAFE
			2	Same			
			3	More safe			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2261	G2261	Com Airlines - Travel Time	1	Less likely	Num	8	TRANTIME
			2	Same			
			3	More likely			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
G2281	G2281	Com Airlines - Quality of Service	1	Worse	Num	8	TRANQUAL
			2	Same			
			3	Better			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0103	B0103	Commute	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
B0152	B0152	Commute - Days	1	29-31 days/month	Num	8	DAYSCOMU
			2	22-28 days/month			
			3	15-21 days/month			
			4	8-14 days/month			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			5	1-7 days/month			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0310	B0310	Commute to Work - Same Location	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0315	B0315	Commute to Work - Several Locations	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0320	B0320A	Commute to Work - Svrl Loc - Time Spent - Hours		_____ hours	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0320	B0320B	Commute to Work - Svrl Loc - Time Spent - Minutes		_____ minutes	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0320	B0320C	Commute to Work - Svrl Loc - Time Spent - Decimal Hours		Calculated	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0352	B0352A	Commute to Work - Trip Time - Hours		_____ hours	Num	8	BEST
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			.S	Appropriate skip			
B0352	B0352B	Commute to Work - Trip Time - Minutes		_____ minutes	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B0352	B0352C	Commute to Work - Trip Time - Decimal Hours		Calculated	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2311	B2311A	Com Airline - Most Recent Flight - When	1	Enter month and year	Num	8	TRIPTIME
			2	Less than three months ago			
			3	More than three months ago but less than one year ago			
			4	More than one year ago			
			5	Have never flown on a commercial airline			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2311	B2311B	Com Airline - Most Recent Flight - Month		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2311	B2311C	Com Airline - Most Recent Flight - Year		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2314	B2314	Com Airline - Most Recent Flight - Airport		_____	Char	250	\$TEXTVAR
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
B2320	B2320	Com Airline - Most Recent Flight - Purpose	1	Yes, business/job related	Num	8	TRIPURP
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2332	B2332A	Com Airline - Most Recent Flight - Section	1	Economy or coach section (also sometimes called the main cabin)	Num	8	TRIPSECT
			2	First class section			
			3	There were no sections in the plane; all seats were in the same section			
			7	Other			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2332	B2332B	Com Airline - Most Recent Flight - Other Section		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2341	B2341	Com Airline - Most Recent Flight - Price Restrictions	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2401	B2401	Com Airline - Most Recent Flight - Check Baggage	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2421	B2421	Com Airline - Most Recent Flight - Number of Baggage Checked		_____	Num	8	BEST
			.D	Don't know			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			.R	Refused			
			.S	Appropriate skip			
B2430	B2430	Com Airline - Most Recent Flight - Carry-on Baggage	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2441	B2441	Com Airline - Most Recent Flight - Number of Carry-on Baggage		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2600	B2600	Com Airline - Most Recent Flight - Time Before Flight	1	Less than 30 minutes before your flight	Num	8	TRIPARR
			2	30 minutes to less than 60 minutes			
			3	60 minutes to less than 90 minutes			
			4	90 minutes to less than two hours before your flight			
			5	Two hours to less than three hours			
			6	Three hours or more before your flight			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2650	B2650	Com Airline - Most Recent Flight - Ticket Counter	01	Less than 15 minutes to check in	Num	8	CHECTIME
			02	15 minutes to less than 30 minutes			
			03	30 minutes to less than 60 minutes			
			04	60 minutes to less than 90 minutes to check in			
			05	90 minutes to less than two hours			
			06	Two hours to less than three hours			
			07	Three hours or more to check in			
			08	Did not check in at the ticket counter			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
B2700	B2700	Com Airline - Most Recent Flight - Screening - Time	1	Less than 15 minutes to go through the checkpoint	Num	8	SCRETIME
			2	15 minutes to less than 30 minutes			
			3	30 minutes to less than 60 minutes			
			4	60 minutes to less than 90 minutes to go through the checkpoint			
			5	90 minutes to less than two hours			
			6	Two hours to less than three hours			
			7	Three hours or more to go through the checkpoint			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2750	B2750	Com Airline - Most Recent Flight - Screening - Time - Satisfaction	1	Very unsatisfied	Num	8	SCRESATI
			2	Somewhat unsatisfied			
			3	Neither unsatisfied nor satisfied			
			4	Somewhat satisfied			
			5	Very satisfied			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2800	B2800	Com Airline - Most Recent Flight - Screening - Intensity	1	Inadequate	Num	8	SCREINTE
			2	Adequate			
			3	Excessive			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2850	B2850	Com Airline - Most Recent Flight - Screening - Confidence	1	Not confident	Num	8	SCRECNFA
			2	Somewhat confident			
			3	Very confident			
			.D	Don't know			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			.R	Refused			
			.S	Appropriate skip			
B2900	B2900	Com Airline - Most Recent Flight - Screening - Courtesy - Satisfaction	1	Very unsatisfied	Num	8	SCRESATI
			2	Somewhat unsatisfied			
			3	Neither unsatisfied nor satisfied			
			4	Somewhat satisfied			
			5	Very satisfied			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B2950	B2950	Com Airline - Most Recent Flight - Screening - Satisfaction	1	Very unsatisfied	Num	8	SCRESATI
			2	Somewhat unsatisfied			
			3	Neither unsatisfied nor satisfied			
			4	Somewhat satisfied			
			5	Very satisfied			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
B3000	B3000	Com Airline - Screening - Confidence	1	Not confident	Num	8	SCRECNEFB
			2				
			3				
			4				
			5	Very confident			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
SE0100	SE0100	Environment	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
SE0160	SE0160	Environment - Air Pollution	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
SE0165	SE0165	Environment - Noise Pollution	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
SE0170	SE0170	Environment - Water Pollution	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
SE0175	SE0175	Environment - Congestion	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
SE0180	SE0180	Environment - HAZMAT	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
SE0300	SE0300A	Environment - Primary Cause of Air Pollution	01	Power plants	Num	8	POLCAUSE
			02	SEMS/LARGE trucks			
			03	Dust			
			04	Cars/SUVs/Pickups/Vans			
			05	Pollen			
			06	Factories			
			07	Commercial planes			
			08	Trains			
			09	Buses			
			10	Don't have air pollution where I live			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			97	Other			
			.D	Don't know			
			.R	Refused			
SE0300	SE0300B	Environment - Other Primary Cause of Air Pollution	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
SE0202	SE0202	Environment - Change Motor Oil	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
SE0205	SE0205	Environment - Change Motor Oil - Frequency			Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
SE0210	SE0210A	Environment - Dispose of Used Oil	1	Took to an oil recycling collection center, gas or service station	Num	8	OILDISP
			2	Poured down a drain outdoors (storm drain, backyard drain)			
			3	Poured down a drain indoors (workshop drain, sink, garbage disposal)			
			4	Put in with the garbage/trash			
			5	Poured it on the ground			
			6	Released it in the water			
			7	Other			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
SE0210	SE0210B	Environment - Dispose of Used Oil - Other	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
SE0215	SE0215A	Environment - Recycling Collection Center	1	Never heard of recycling used oil	Num	8	RECYCLE
			2	No recycling center in my town/area			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			3	Don't know where a recycling center is			
			4	Recycling location not convenient			
			5	Recycling hours not convenient			
			6	Recycling center charges to dispose of used oil			
			7	Other			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
SE0215	SE0215B	Environment - Recycling Collection Center - Other	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
MNH0510	MNH0510	Driving	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
MNH0515	MNH0515	Driving at Night	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
MNH0520	MNH0520	Driving at Night - Glare - Oncoming Vehicle	1	Not noticeable - none	Num	8	GLARE
			2	Barely noticeable			
			3	Noticeable but acceptable			
			4	Disturbing			
			5	Caused crash or near miss			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
MNH0540	MNH0540	Driving at Night - Glare - Vehicle Behind	1	Not noticeable - none	Num	8	GLARE
			2	Barely noticeable			
			3	Noticeable but acceptable			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			4	Disturbing			
			5	Caused crash or near miss			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
MNH0560	MNH0560	Driving During the Day - Glare - Other Vehicles	1	Not noticeable - none	Num	8	GLARE
			2	Barely noticeable			
			3	Noticeable but acceptable			
			4	Disturbing			
			5	Caused crash or near miss			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
MNH0580	MNH0580	Driving - Crash	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
MNH0600	MNH0600	Driving - Near Miss	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
D0061	D0061	Registered Vehicles		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
D0101	D0101	Disability	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
D0103	D0103	Disability - Other HH Members	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0105	D0105	Disability - Nb of HH Members		_____	Num	8	BEST
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
D0106	D0106	Disability - Adaptive Equipment	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
D0107	D0107	Disability - Contact Again	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
D0251	D0251	Nb of People 18+ in HH		_____ people	Num	8	BEST
			.D	Don't know			
			.R	Refused			
D0300	D0300	Age Category	1	18 to 24 years	Num	8	AGE
			2	25 to 34			
			3	35 to 44			
			4	45 to 54			
			5	55 to 64			
			6	65 to 74			
			7	75 or older			
			.D	Don't know			
			.R	Refused			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
D0350	D0350	Gender	1	Male	Num	8	GENDER
			2	Female			
			.D	Don't know			
			.R	Refused			
D0401	D0401A	Group - American Indian or Alaska Native	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0401	D0401B	Group - Asian	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0401	D0401C	Group - Black or African-American	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0401	D0401D	Group - Hispanic or Latino	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0401	D0401E	Group - Native Hawaiian or other Pacific Islander	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0401	D0401F	Group - White	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0401	D0401G	Group - Other	1	Yes	Num	8	YESNO

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			2	No			
			.D	Don't know			
			.R	Refused			
D0401	D0401H	Group - Other - Specify	Text	Verbatim response	Char	250	\$TEXTVAR
			.S	Appropriate skip			
D0450	D0450	Education Level	1	Less than high school graduate	Num	8	EDUC
			2	High school graduate (or GED)			
			3	Some college (or technical vocational school/professional business school)			
			4	Two-year college degree (AA: Associate in Arts)			
			5	Four-year college degree (BA or BS: Bachelor of Arts of Science degree)			
			6	Graduate degree (Master's, Ph.D., Lawyer, Medical Doctor)			
			.D	Don't know			
			.R	Refused			
D0501	D0501	HH Income	1	Under \$15,000	Num	8	INCOME
			2	From \$15,000 to less than \$30,000			
			3	From \$30,000 to less than \$50,000			
			4	From \$50,000 to less than \$75,000			
			5	From \$75,000 to less than \$100,000			
			6	\$100,000 or more			
			.D	Don't know			
			.R	Refused			
D0900	D0900	Work	1	Yes	Num	8	YESNO
			2	No			
			.D	Don't know			
			.R	Refused			
D0552	D0552	Additional Phone Lines - Number	0	None	Num	8	ADPHONE
			1	One			
			2	Two			
			3	Three			

Question Code	Variable Name	Variable Label	Response Category	Response Category Description	Type	Length	Format
			4	Four or more			
			.D	Don't know			
			.R	Refused			
D0751	D0751	Additional Phone Lines - Primary Use	1	Household use only	Num	8	ADPHOUSE
			2	Business use only			
			3	Both household and business use			
			.D	Don't know			
			.R	Refused			
			.S	Appropriate skip			
	BASEWGT	Base Weight			Num	8	BEST
	NR_FACT	Nonresponse Adjustment Factor			Num	8	BEST
	PER_FACT	Adjustment for Nb of Eligible HH Members			Num	8	BEST
	PHN_FACT	Multiple Phone Lines Adjustment Factor			Num	8	BEST
	CEN_FACT	Census Population Adjustment Factor			Num	8	BEST
	WD_FACT	Weighted Deflation Adjustment Factor			Num	8	BEST
	FNLWGT	Final Weight			Num	8	BEST

APPENDIX C: SAS FORMATS LIBRARY

```
PROC FORMAT cntlout=fmtout;

  value msainout
    1 = 'Inside an MSA'
    2 = 'Outside an MSA';

  value censreg
    1 = 'Northeast'
    2 = 'Midwest'
    3 = 'South'
    4 = 'West';

  value censdiv
    1 = 'New England'
    2 = 'Middle Atlantic'
    3 = 'East North Central'
    4 = 'West North Central'
    5 = 'South Atlantic'
    6 = 'East South Central'
    7 = 'West South Central'
    8 = 'Mountain'
    9 = 'Pacific';

  value $tzone
    'C' = 'Central time'
    'E' = 'Eastern time'
    'M' = 'Mountain time'
    'P' = 'Pacific time'
    'A' = 'Alaska time'
    'H' = 'Hawaii time';

  value fornum
    .d='Do not know'
    .r='Refused'
    .s='Skip';

  value yesno
    1='Yes'
    2='No'
    .d='Do not know'
    .r='Refused'
    .s='Skip';
```

```

value noptwhy
1='Prefer my own vehicle'
2='I am retired/not working/not in school'
3='Need to make multiple stops to/from work/school'
4='Do not understand/know routes and schedules'
5='Not convenient'
6='Not flexible'
7='Takes too much time'
8='Distance from home to stops is too great'
9='Uncomfortable riding with strangers'
10='Costs too much'
11='Unreliable'
12='Unsafe'
13='Health/disability/physical limitations'
97='Other'
.d='Do not know'
.r='Refused'
.s='Skip';

```

```

value comuwya
1='Commuting to work or school'
2='Recreation'
3='Exercise/for my health'
4='Personal errands'
5='Required for my job'
7='Some other purpose'
.d='Do not know'
.r='Refused'
.s='Skip';

```

```

value roadtypa
1='Paved roads, not on shoulder'
2='Shoulders of paved roads'
3='Bike lanes on roads'
4='Sidewalks'
5='Bike paths, walking paths or trails'
6='Unpaved roads'
7='Grass'
97='Other'
.d='Do not know'
.r='Refused'
.s='Skip';

```

```

value roadtypb
1='Paved roads, not on shoulder'
2='Shoulders of paved roads'
3='Bike lanes on roads'
4='Sidewalks'
5='Bike paths, walking paths or trails'
6='Unpaved roads'
7='Track'
8='Grass'
97='Other'
.d='Do not know'
.r='Refused'
.s='Skip';

```

```

value trancost
  1='Cost less'
  2='Cost the same'
  3='Cost more'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

value transec
  1='Less secure'
  2='Same'
  3='More secure'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

value transafe
  1='Less safe'
  2='Same'
  3='More safe'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

value trantime
  1='Less likely'
  2='Same'
  3='More likely'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

value tranconv
  1='Less convenient'
  2='Same'
  3='More convenient'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

value tranqual
  1='Worse'
  2='Same'
  3='Better'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

value dayscomu
  1='29-31 days/month'
  2='22-28 days/month'
  3='15-21 days/month'
  4='8-14 days/month'
  5='1-7 days/month'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

```

```

value triptime
1='Enter month and year'
2='Less than three months ago'
3='More than three months ago but less than one year ago'
4='More than one year ago'
5='Have never flown on a commercial airline'
.d='Do not know'
.r='Refused'
.s='Skip';

value tripurp
1='Yes, business/job related'
2='No'
.d='Do not know'
.r='Refused'
.s='Skip';

value tripsect
1='Economy or coach section'
2='First class section'
3='There were no sections in the plane; all seats were in the
same section'
7='Other'
.d='Do not know'
.r='Refused'
.s='Skip';

value triparr
1='Less than 30 minutes before your flight'
2='30 minutes to less than 60 minutes'
3='60 minutes to less than 90 minutes'
4='90 minutes to less than two hours before your flight'
5='Two hours to less than three hours'
6='Three hours or more before your flight'
.d='Do not know'
.r='Refused'
.s='Skip';

value chectime
1='Less than 15 minutes to check in'
2='15 minutes to less than 30 minutes'
3='30 minutes to less than 60 minutes'
4='60 minutes to less than 90 minutes to check in'
5='90 minutes to less than two hours'
6='Two hours to less than three hours'
7='Three hours or more to check in'
8='Did not check in at the ticket counter'
.d='Do not know'
.r='Refused'
.s='Skip';

```

```

value scretime
1='Less than 15 minutes to go through the checkpoint'
2='15 minutes to less than 30 minutes'
3='30 minutes to less than 60 minutes'
4='60 minutes to less than 90 minutes to go through the
checkpoint'
5='90 minutes to less than two hours'
6='Two hours to less than three hours'
7='Three hours or more to go through the checkpoint'
.d='Do not know'
.r='Refused'
.s='Skip';

value scresati
1='Very unsatisfied'
2='Somewhat unsatisfied'
3='Neither unsatisfied nor satisfied'
4='Somewhat satisfied'
5='Very satisfied'
.d='Do not know'
.r='Refused'
.s='Skip';

value screinte
1='Inadequate'
2='Adequate'
3='Excessive'
.d='Do not know'
.r='Refused'
.s='Skip';

value screcnfa
1='Not confident'
2='Somewhat confident'
3='Very confident'
.d='Do not know'
.r='Refused'
.s='Skip';

value screcnfb
1='Not confident'
2='Somewhat unconfident'
3='Neither unconfident nor confident'
4='Somewhat confident'
5='Very confident'
.d='Do not know'
.r='Refused'
.s='Skip';

```

```

value polcause
1='Power plants'
2='SEMIS/LARGE trucks'
3='Dust'
4='Cars/SUVS/Pickups/Vans'
5='Pollen'
6='Factories'
7='Commercial planes'
8='Trains'
9='Buses'
10='Do not have air pollution where I live'
97='Other'
.d='Do not know'
.r='Refused';

value oildisp
1='Took to an oil recycling collection center, gas or service
station'
2='Poured down a drain outdoors'
3='Poured down a drain indoors'
4='Put in with the garbage/trash'
5='Poured it on the ground'
6='Released it in the water'
7='Other'
.d='Do not know'
.r='Refused'
.s='Skip';

value recycle
1='Never heard of recycling used oil'
2='No recycling center in my town/area'
3='Do not know where a recycling center is'
4='Recycling location not convenient'
5='Recycling hours not convenient'
6='Recycling center charges to dispose of used oil'
7='Other'
.d='Do not know'
.r='Refused'
.s='Skip';

value glare
1='Not noticeable - none'
2='Barely noticeable'
3='Noticeable but acceptable'
4='Disturbing'
5='Caused crash or near miss'
.d='Do not know'
.r='Refused'
.s='Skip';

```

```

value age
  1='18 to 24 years'
  2='25 to 34'
  3='35 to 44'
  4='45 to 54'
  5='55 to 64'
  6='65 to 74'
  7='75 or older'
  .d='Do not know'
  .r='Refused';

value gender
  1='Male'
  2='Female'
  .d='Do not know'
  .r='Refused';

value educ
  1='Less than high school graduate'
  2='High school graduate'
  3='Some college'
  4='Two-year college degree'
  5='Four-year college degree'
  6='Graduate degree'
  .d='Do not know'
  .r='Refused';

value income
  1='Under $15,000'
  2='From $15,000 to less than $30,000'
  3='From $30,000 to less than $50,000'
  4='From $50,000 to less than $75,000'
  5='From $75,000 to less than $100,000'
  6='$100,000 or more'
  .d='Do not know'
  .r='Refused';

value adphone
  0='None'
  1='One'
  2='Two'
  3='Three'
  4='Four or more'
  .d='Do not know'
  .r='Refused';

value adphouse
  1='Household use only'
  2='Business use only'
  3='Both household and business use'
  .d='Do not know'
  .r='Refused'
  .s='Skip';

```

```
RUN;
```

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