

# HANDOUTS

from previous meeting



**December 12, 2006**

## 2004 SOC

### Additional Variables and Crosstabs

Modes Used 1+ = All modes used 1+ days per week (Q15) – Categories:

- Compressed work schedule (response 1)
- Telecommute (2); **NOTE: Need to code TELEALL (Q10) as 5 day TC in Q15**
- DA/MC (3 or 4)
- Carpool (5)
- Casual carpool (6)
- Vanpool (7)
- Bus/buspool (8 or 9)
- Metrorail (10)
- MARC (11)
- VRE (12)
- AMTRAK (13)
- Bike (14)
- Walk (15)

Grouped Modes Used 1+ = All modes used 1+ days per week (Q15) with some mode groupings – Categories:

- Compressed work schedule (response 1)
- Telecommute (2); **NOTE: Need to code TELEALL (Q10) as 5 day TC in Q15**
- DA/MC (3 or 4)
- CP/VP (5, 6, 7)
- Bus/buspool (8 or 9)
- Metrorail (10)
- Commuter rail (11, 12, 13)
- Bike/walk (14 or 15)

Primary Current Mode 3+ days = Mode used 3+ days per week (Q15) – Categories:

- Compressed work schedule (response 1)
- Telecommute (2); **NOTE: Need to code TELEALL (Q10) as 5 day TC in Q15**
- DA/MC (3 or 4)
- CP/VP (5, 6, 7)
- Bus/buspool (8 or 9)
- Metrorail (10)
- Commuter rail (11, 12, 13)
- Bike/walk (14 or 15)

Secondary Commute Mode = Mode used 1-2 days per week IN ADDITION TO primary mode (Q15)

Categories:

- Compressed work schedule (response 1)
- Telecommute (2)
- DA/MC (3 or 4)
- CP/VP (5, 6, 7)
- Bus/buspool (8 or 9)
- Metrorail (10)
- Commuter rail (11, 12, 13)
- Bike/walk (14 or 15)

Alt Mode Days = Total days per week respondent uses ANY combination of alt modes (Q15)

- Count days using responses: 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Most Common Alt Mode = Alt mode used most days per week (Q15) – Categories:

- Compressed work schedule (response 1)
- Telecommute (2)
- Carpool (5 or 6)
- Vanpool (7)
- Bus (8 or 9)
- Metrorail (10)
- Commuter rail (11, 12, 13)
- Bike/walk (14 or 15)

Previous Modes Used 1+ = Previous modes used 1+ days per week (Q19a/Q19b) – Categories:

- Compressed work schedule (response 1)
- Telecommute (2)
- DA/MC (3 or 4)
- CP/CC/VP (5, 6, or 7)
- Bus/buspool (8 or 9)
- Metrorail (10)
- Commuter rail (11, 12, 13)
- Bike/walk (14 or 15)

Previous Alt Mode Days = Total days per week respondent used ANY combination of alt modes (Q19a/Q19b)

- Count days using responses: 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Other Alt Modes = Alt modes used 1+ days per week before current mode (Q19a) and/or in addition to current modes (Q23) – Categories:

- Compressed work schedule (response 1)
- Telecommute (2)
- Carpool (5 or 6)
- Vanpool (7)
- Bus (8 or 9)
- Metrorail (10)
- Commuter rail (11, 12, 13)
- Bike/walk (14 or 15)

### **Combined Variables – multiple questions together**

Telecommuters:

- Q10=1 (TELEALL)
- Q13=1 (Yes to TC)
- Q15=2 (TC last week)

Received info on TC from TRC:

- Q40 = 13
- Q41= 1
- Q42=4 or 7

Transit available – Train or bus companies – combine responses to:

- Q44
- Q45

Advertising messages (combined)

- Q62 – Main question – also add following responses to other questions:
- Q73 (TC ads) – if yes, code Q62=16
- Q79 (GRH ads) – if yes, code Q62=10

## Categories for Continuous Variables

Use the following categories for continuous variables in frequencies and cross tabs. Also compute averages for each variable (except Q7)

Q7 – Work Arrival Time

- 5 am – 6:59 am
- 7 am – 7:59 am
- 8 am – 8:59 am
- 9 am – 9:59 am
- 10 am – 5:59 pm
- 6 pm to 12 midnight
- 12:01 am to 5:59 am

Q16 – Travel Time

- 1-10 minutes
- 11-20 minutes
- 21-30 minutes
- 31-45 minutes
- 46-60 minutes
- 61+ minutes

Q17 – Travel Distance

- 1-4 miles
- 5-9 miles
- 10-14 miles
- 15-19 miles
- 20-29 miles
- 30-39 miles
- 40+ miles

Q18 – Alt Mode Duration

- 1-11 months
- 12-23 months
- 24-35 months
- 36-47 months
- 48-59 months
- 60+ months

Q24 – Other Alt Mode Duration

- 1-11 months

- 12-23 months
- 24-35 months
- 36-47 months
- 48-59 months
- 60+ months

Q30 – Alt Mode Access Distance

- 1 mile
- 2 miles
- 3 miles
- 4-5 miles
- 6-10 miles
- 11-15 miles
- 16+ miles

Q34 – Telecommute Duration

- 1-11 months
- 12-23 months
- 24-35 months
- 36-47 months
- 48-59 months
- 60+ months

Q38 – Travel Distance to telecenter

- 1-4 miles
- 5-9 miles
- 10-14 miles
- 15-19 miles
- 20-29 miles
- 30-39 miles
- 40+ miles

Q50 – HOV Travel Time Saving

- 1-10 minutes
- 11-20 minutes
- 21-30 minutes
- 31-40 minutes
- 41+ minutes

Q84 – Numbers/websites used – group into the following categories:

- Commuter Connections = Response 1 and 6
- WMATA = 5 and 11
- VRE/MTA = 7 and 10
- Other = 2, 3, 4, 8, 9, 12, and 13

## **Other SOC Frequency Runs and Sub-Population Files - 2004**

### **Mode Use Tables**

Run table of current modes (Q15, all modes individually) by number of days mode is used – e.g., ‘

	0	1	2	3	4	5
CWS						
TC						
DA/MC						
CP						
Casual CP						
Etc.						

### **State Frequency Tables**

Run all original frequencies by state of residence (Q2) and state of employment (Q3) – i.e., six sets of frequencies – 3 states of residence and 3 states of employment.

### **Sub-population File**

Separate files of the following subpopulations for TERM analysis:

- Kiosk users - Respondents who answer yes to Q106
- GRH - Respondents who are aware of or have used GRH (answer yes to Q67 or Q68-recoded)
- Telecommuters –includes all the following respondents: Q10=1 (TELEALL), Q13=1, Q15=2)

## **SOC Cross-Tabs – 2004**

### **Cross tab #1 – Traveler and Travel Pattern Characteristics**

Primary current mode 3+ by:

- Number of vehicles available (Q113)
- Employer size (Q118)
- Occupation (Q119)
- Employer type (Q120)
- Age (Q121)
- Racial/Hispanic background(Q122/Q1223)
- Income (Q124)
- Sex (observed)

Primary current mode 3+ by:

- Travel time (Q16)
- Travel distance (Q17)
- Work non-standard schedule (Q11//Q12)

Most common alt mode by:

- Previous modes 1+ (Q19/Q19a)
- Other alt modes (Q19a/Q23)
- Duration of alt mode use (Q18)
- Reasons for using alt mode (Q20)

Other alt mode tried – 2 years (Q23) by:

- Reasons for using other alt modes – 2 years (Q26)
- Reason for not continuing use (Q27)

Work non-standard schedule (Q11/Q12) by:

- Duration of current alt mode use (Q18)
- Travel time (Q16)
- Travel distance (Q17)

Primary commute mode 3+ by:

- Access to alt mode (Q29)
- Access distance to alt modes (Q30)

Secondary commute mode by:

- Primary current mode 3+

Most common Alt mode by:

- Access mode to alt mode (Q29)

## **Cross Tab #2 – Telecommute Characteristics**

Responsibilities allow telecommuting (Q31) by:

- Employer size (Q118)
- Occupation (Q119)
- Employer type (Q120)

Interest in telecommuting (Q32) by:

- Employer size (Q118)
- Occupation (Q119)
- Employer type (Q120)
- Age (Q121)
- Racial/ethnic background (Q122/Q123)
- Income (Q124)
- Sex (observed)
- Travel time (Q16)
- Travel distance (Q17)
- Primary current mode 3+

Frequency of telecommuting (from Q10-TELEALL, Q14, Q15-response 2) by:

- Employer size (Q118)
- Occupation (Q119)
- Employer type (Q120)
- Age (Q121)
- Racial/Ethnic background (Q122/Q123)
- Income (Q124)
- Sex (observed)
- Travel time (Q16)
- Travel distance (Q17)
- Primary current mode 3+
- Formal/informal program – TC only (Q35)
- Telecommute location (Q36)

Access mode to telecenters (Q39) by:

- Primary current mode 3+

Duration of telecommuting (Q34) by:

- Employer size (Q118)
- Employer type (Q120)
- Travel time (Q16)
- Primary commute mode 3+
- Telecommute locations (Q36)

Employer type (Q120) by:

- Formal/informal TC program – both TC and non-TC (Q33/Q35)
- Frequency of TC (from Q10, Q14, Q15)

Distance to TC center (Q38) by:



- Telecommute locations (Q36)
- Travel distance to (non-TC) work location (Q17)

Info on TC from TRC (combination of Q40 (resp 13) Q41 (1), and Q42 (4, 7)) by:

- Duration of TC (Q34)
- Formal or informal TC program – TC only (Q35)
- Source of TC info (Q42, NOTE: if Q40=13, add respondent to Q42=4)

Duration of telecommuting (Q34) by:

- Formal/informal TC program – TC only (Q35)
- Travel distance (Q17)

Telecommute location (Q36) by:

- Access mode to telecenter (Q39)
- Distance to telecommute location outside the home (Q38)

### **Cross-Tab # 3 – Mode Availability, Attitudes, Marketing**

Primary current mode 3+ by:

- HOV lane availability (Q46)
- HOV lane use (Q47)
- Know P&R locations (Q52)
- Commute easier/more difficult compared to last year (Q57)

Likely to use alt mode after hearing ad (Q65) by:

- Advertising message (Q62/Q73/Q79 combined)
- Primary current mode 3+

Used commute info number/website (Q84 grouped) by:

- Primary current mode 3+
- Secondary commute mode
- Other alt modes used – 2 years (Q23)

Made change in work location or residence (Q60) by:

- Commute easier/more difficult compared to last year (Q57)

Commute distance (Q17) by:

- Why not use bus (Q54)
- Why not use train (Q55)
- Why not use CP/VP (Q56)

Primary commute mode (3+ days) by:

- Why not use bus (Q54)
- Why not use train (Q55)
- Why not use CP/VP (Q56)

Transportation companies (Q44/Q45) by:

- Why not use bus (Q54)

- Why not use train (Q55)

Grouped modes used 1+ by:

- HOV lane availability (Q46)
- HOV lane use (Q47)
- Know P&R locations (Q52)
- Advertising message (Q62/Q73/Q79 combined)

Advertising message (Q62/Q73/Q79 combined) by:

- Used commute info number/website (Q84)
- Other alt modes used – 2 years (Q23)
- Commute easier/more difficult compared to last year (Q57)
- Primary current mode 3+
- Who sponsored ad (Q63)
- Where heard ad (Q64)

Heard advertising (Q61) by:

- Other alt modes tried – 2 years (Q23)
- Commute easier/more difficult compared to last year (Q57)
- Primary current mode 3+

Used commute info number/website (Q84) by:

- Heard advertising (Q61)
- Info number/website (Q83)

Take action to change commute (Q66 – grouped as “no action” (resp 1), “sought information” (2-10), “used commute service” (11-13), “changed personal situation” (14-17), “changed mode” (18- 24), “other” (25), by:

- Primary current mode 3+
- Travel time (Q16)
- Travel distance (Q17)
- Commute easier/more difficult compared to last year (Q57)
- Advertising message (Q62/Q73/Q79 combined)
- Reasons for taking actions (Q67 – grouped as: personal circumstances (res 1-20), commute services (21-29), info/promotion (30-38))

Work arrival time (Q7 - grouped) by:

- Use HOV lane (Q47)
- DA and use HOV lane (Q48) by

Heard of Commuter Connections (Q86) by:

- Primary current mode 3+
- Grouped modes used 1+
- Travel distance (Q17)
- Heard, seen, read advertising (Q61)
- Home location (Q2)
- Work location (Q3)
- Employer size (Q118)
- Employer type (Q120)
- Employer offers TDM services (Q89, Q92, Q93, Q94, Q95, Q96, Q97)

- Know about regional GRH (Q102)
- Used kiosks (Q106)

Commuter Connections services (Q88) by:

- Primary current mode 3+
- Grouped modes used 1+
- Heard, seen, read advertising (Q61)
- Know about regional GRH (Q102)
- Used kiosks (Q106)

Likely to try another type of transportation in next year (Q70) by:

- Primary current mode 3+

Use P&R lots (Q53) by:

- Primary current mode 3+

#### **Cross-Tab # 4 – Employer Services**

Employer offers Metrochek (Q94) by:

- Other services offered by employer (Q89, Q90, Q91, Q92, Q93, Q94, Q95, Q96, Q97)
- Days using transit or vanpool per week (from Q15 – responses 7-13)

Employee uses Metrochek (Q94a) by:

- Days using transit or vanpool per week (from Q15– responses 7-13)
- Length of time using transit or vanpooling (need to use both Q18 and Q15 – responses 7-13 – for this variable)

Work location (Q3) by:

- Free parking available (Q90)
- Who pays parking fees (Q91)
- Employer offer transit subsidy (Q94)

Does employer offer any TDM services (Q89, Q92, Q93, Q94, Q95, Q96, Q97) – just yes or no, no breakdown by service type – by:

- Employer size (Q118)
- Employer type (Q120)
- Employer location (Q3)
- Primary commute mode 3+
- Grouped modes used 1+
- Secondary commute mode
- Other alt modes (Q19a/Q23)

Commute distance (Q17) by:

- Work location (Q3)
- Employer size (Q118)
- Employer type (Q120)

Employer services offered (yes to Q89, Q90, Q91, Q92, Q93, Q94, Q95, Q96, Q97) by:

- Employer services offered (yes to Q89, Q90, Q91, Q92, Q93, Q94, Q95, Q96, Q97)

TDM Services offered by employer (yes to Q89, Q92, Q93, Q94, Q95, Q96, Q97)

- Employer size (Q118)
- Employer type (Q120)
- Employer location (state – from Q3)
- Primary current mode 3+
- Grouped modes used 1+
- Secondary commute mode
- Other alt modes (Q19a/Q23)

Parking service offered by employer (Q90, Q91) by:

- Employer size (Q118)
- Employer type (Q120)
- Work location (state – Q3)
- Primary current mode 3+
- Grouped modes used 1+
- Secondary commute mode
- Other alt modes (Q19a/Q23)

Number of TDM services offered (count of employers offering 0, 1, 2, etc. services in Q89, Q92, Q93, Q94, Q95, Q96, Q97)

Employer TDM services used (Q89a, Q92a, Q93a, Q94a, Q95a, Q96a, Q97a)

- Primary current mode 3+
- Grouped modes used 1+
- Other alt modes (Q19a/Q23)

### **Cross Tab #5 – GRH**

Primary current mode 3+ by:

- Awareness of GRH (Q102)

Registration in GRH (Q103) by:

- Primary current mode 3+
- Other alt modes tried – 2 years (Q23)
- Duration of alt mode use (Q18)
- Secondary commute mode

### **Cross Tab #6 – Kiosks**

Used kiosk (Q106) by:

- Primary current mode 3+
- Pre-kiosk travel mode (Q112)

Other transportation tried after using kiosk (Q110) by:

- Duration of other mode use (Q111)
- Pre-kiosk travel mode (Q112)

Other transportation tried after using kiosk (Q110) by:

- Primary commute mode 3+
- Grouped modes used 1+ days

- Information obtained from kiosk (Q108)

Primary commute mode 3+ by:

- Pre-kiosk mode used (Q112)

### **Cross Tab #7 – County and State Comparisons**

#### **Traveler and Travel Pattern Characteristics – County/State**

County of residence (Q2) by:

- County of employment (Q3)
- Primary current mode 3+
- Grouped modes used 1+
- Travel distance (Q17)
- Travel time (Q16)
- Access to alt mode (Q29)
- Access distance to alt mode (Q30)

State of residence (groups from Q2) by:

- Primary current mode 3+
- Grouped modes used 1+
- Travel distance (Q17)
- Travel time (Q16)
- Access to alt mode (Q29)
- Access distance to alt mode (Q30)

County of employment (Q3) by:

- Primary current mode 3+
- Grouped modes used 1+
- Travel distance (Q17)
- Travel time (Q16)

State of employment (group from Q3) by:

- Grouped modes used 1+
- Primary current mode 3+
- Travel distance (Q17)
- Travel time (Q16)

#### **Telecommute Characteristics – County/State**

State of residence (Q2) by:

- Frequency of TC (from Q10, Q14, Q15))
- Job responsibilities allow TC (Q31)
- Interest in TC (Q32)
- Duration of TC (Q34)

State of employment (Q3) by:

- Frequency of TC (from Q10, Q14, Q15))
- Interest in TC (Q32)
- Duration of TC (Q34)

- Formal TC program – both TC and non-TC (Q33/Q35)
- Commute easier/more difficult compared to last year (Q57)

Mode Availability, Attitudes, and Marketing – County/State

County of residence (Q2) by:

- Availability of public transit (Q43; Note: need to code as “yes” respondents who use public transit (Q15, responses 8-14) and skipped Q43)
- Transit companies near residence (Q44/Q45)
- HOV lane availability (Q46)
- HOV lane use (Q47)
- Know P&R locations (Q52)
- Commute easier/more difficult compared to last year (Q57)

State of residence (groups from Q2) by:

- HOV lane availability (Q46)
- HOV lane use (Q47)
- Know P&R locations (Q52)
- Commute easier/more difficult compared to last year (Q57)
- Heard/seen advertising messages (Q61)
- Ad messages recalled (Q62)
- Aware of commute phone number/website (Q81)

Employer Services – County/State

State of employment (groups from Q3) by:

- Employer offers TDM services (yes to: Q89, Q92, Q93, Q94, Q95, Q96, Q97)
- Employer offers parking services (Q90, Q91)

GRH – County/State

State of residence by:

- Awareness of GRH (Q102)
- Registration in GRH (Q103)

Kiosks – County/State

State of residence by:

- Awareness of kiosks (Q105)
- Used kiosk (Q106)

**COMMUTER CONNECTIONS  
RESPONSE TO COMMENTS ON STATE OF THE COMMUTE SURVEY  
December 12, 2006**

This document summarizes comments received by Commuter Connections on the draft 2007 State of the Commute survey and Commuter Connections' response to the comments. The comments are organized into the following categories:

- Survey purpose
- Survey method – sampling
- Recommendations for additional analysis
- Comments on specific questions

**Survey Purpose**

Comment: Please clarify the purpose of the survey.

Response: The SOC survey serves several purposes. First, it documents trends in commuting behavior, such as commute mode shares and distance traveled, and prevalent attitudes about specific transportation services, such as public transportation, that are available to commuters in the region. For this reason, it is desirable to maintain consistency in lines of questions and question wording to enable trend analysis. The 2007 survey is the third SOC survey, thus will provide data for a six-year trend.

Second, the SOC survey is used to help estimate the impacts of some TERMS, such as the Telework Resource Center and the InfoExpress Kiosk portion of Integrated Rideshare, two TERMS that might influence on the population-at-large as well as on commuters who directly participate in the TERMS. Finally, by querying commuters about sources of information on alternative modes and their reasons for choosing alternative modes for commuting, the survey examines how other commute alternative programs and marketing efforts might influence commuting behavior in the region.

Comment:

If the purpose of this design is to achieve statistically accurate results in each jurisdiction, it would be useful to examine these results at the jurisdictional level, including the confidence levels achieved. If this information has not been prepared in conjunction with past surveys, the need for it in future surveys should be re-examined.

Response: The purpose of sampling across jurisdictions is to provide a balance of opportunity to explore results at the regional level and at the jurisdictional level. A substantial number of crosstabs were examined at the county/jurisdiction level and at the state level for the 2004 survey. In some cases, these analyses produced significant results that have been reported (e.g., HOV lane availability and use by resident county). Additionally, several counties requested and have received jurisdiction-level data from the 2004 SOC survey. The confidence level for data for a county/jurisdiction, each of which has a sample of 600 respondents, is 95% ± 4.0%. For the 2007 SOC, the confidence level for the five Maryland jurisdictions combined and the five Virginia jurisdictions combined will be 95% ± 1.8%.

## **Survey Method – Sampling**

### **Comment:**

The rationale for obtaining a constant number of surveys in each jurisdiction should be clarified, since this will result in a wide variation in sampling rates among the various localities.

**Response:** Attachment 1 provides a detailed explanation of the choice to use a non-proportional sampling method. In short, this was done to ensure a reasonable statistical reliability in each of the jurisdictions.

### **Comment:**

If this survey design is retained, the methodology used to expand the survey data to reflect the distribution of working residents within the region should be more clearly explained. It is not clear how a sample of 600 workers who reside in Fairfax (population over 1 million) can be combined with a sample of 600 workers who reside in Arlington (population approx. 200,000). Were the responses simply factored on a pro-rata basis (based on number of employed residents)? Is this a statistically valid method for consolidating survey data?

**Response:** Yes, the responses for individual jurisdictions were “expanded” so that the 600 respondents in a jurisdiction represented the total number of employed residents in each jurisdiction. The effective weight assigned to the responses of each respondent was determined by his or her home jurisdiction. So the responses for a respondent from Montgomery County (employed population = 498,563) represented 831 workers ( $498,563 / 600$ ), while a respondents from Alexandria (employed population = 82,418) were counted as 137 workers ( $82,418 / 600$ ). This is a statistically valid method for sampling and data expansion. Attachment 2 provides a detailed explanation of the data expansion method that expands the sample to the regional population of workers.

## **Recommendations for Additional Analysis**

**Comment:** It is essential to identify specific outputs (e.g. summary tables, cross-tabulations, etc.) that are desired in order to properly frame the survey questions. Previous survey reports do provide a number of such cross-tabulations, but there are several other stratifications of the survey data that would be useful in analyzing the results. My detailed comments identify several additional tables that I believe would be helpful in analyzing the survey data. I would suggest that the tables that have been produced for previous surveys be critically re-examined to ensure that they provide useful information, and that possible additional cross-tabulations be identified at this time.

**Response:** We agree that it is important to consider the purpose of the survey, the desired analysis objectives, and likely lines of inquiry as a preparation for developing a survey questionnaire. We also welcome suggestions for possible analyses for the 2007 SOC survey. We do not believe it is necessary, however, to define all specific output formats in advance, particularly for a repeated survey, unless the proposed inquiries are not covered by existing questions. Indeed, it is generally very useful to examine unweighted frequencies, and sometimes raw data, prior to defining specific analysis steps. For example, if the sample size for a particular question is very small or the distribution very skewed toward one response, a crosstab using this question likely would not produce results that were statistically reliable.

We agree that it is also useful to examine the value of a previous line of analysis inquiry. In the 2004 SOC survey, some crosstabs and analysis steps that had been used in 2001 were not repeated, because



they did not yield useful information and the 2004 sample sizes for the questions suggested they again would not be helpful. We will review the 2004 crosstab list and analysis activity prior to conducting the 2007 analysis and eliminate those that were not productive.

Comment: Can the survey include questions about awareness and/or use of commute assistance services other than Commuter Connections?

Response: The survey is designed primarily to capture data on regional services and regional awareness of local programs is likely to be low. However, it is possible to add a few questions that would be asked of local subsets of respondents, for example, respondents who live or work in Arlington. We have added three questions of this type for each of the 11 survey jurisdictions. These questions are:

Q88b – Have you heard of an organization called \_\_\_?

Q88c – Have you contacted \_\_\_ in the past year or visited a website sponsored by this organization?

Q88d – What information or services were you seeking from \_\_\_ or website?

Comment – It would be very helpful to prepare a set of tables displaying desired cross-tabulations of the survey responses in advance of conducting the survey. Such tables would be useful in identifying key relationships that the survey is intended to measure, as well as to possibly eliminate unnecessary questions. An example of such a desired cross-tabulation is provided below.

Response: Following is a compilation of crosstabs suggested for the 2007 analysis. Many of these crosstabs were examined in the 2004 SOC analysis and would be again, if they were expected to be useful. Suggested crosstabs that were not included in 2004 will be added for 2007 as possible crosstabs. COG staff can provide a list of analysis activities and crosstabs run for the 2004 SOC to any Evaluation Group member who is interested.

- Commute mode by Commute distance – This was performed in the 2004 analysis and will be done in 2007
- GRH awareness vs Time in alt modes – The 2004 analysis included GRH registration by Alt mode duration.
- Primary commute mode by Home jurisdiction – This was performed in the 2004 analysis and will be done in 2007
- Commute compared to last year by Home jurisdiction for respondents who moved only home location, by moved only work location, and by moved both home and work – We can add these to the list of analyses, but we anticipate that the sample sizes for individual cells would be very small. In 2004, only 24% of respondents moved either home or work locations, thus the likely total sample by jurisdiction would be less than 150. When we divide this sample further, into moved home, moved work, moved both, we are likely to have extremely small cell samples.
- Changed mode in past year by Moved work location and by moved home location – Again, we are willing to try this crosstab, but note that only 22% of respondents tried a new alt mode and only 24% changed work/home location. Thus, we are likely to have small cell samples.

- Why stopped using alt modes by Moved home/work location and Why shifted between alt modes by Moved home/work location – In 2004, only 24% of total respondents changed work or home location, thus, when combined with another question answered by a subset of respondents, this might not prove useful. However, we have modified several questions to capture recent shifting away from alt modes and from one alt mode to another.
- Primary commute mode by Employer services offered – This was performed in the 2004 analysis and will be done in 2007
- Employer services offered by Home/Work jurisdiction – This was performed in the 2004 analysis and will be done in 2007
- Awareness/availability of employer services by Changed mode – This was performed in the 2004 analysis and will be done in 2007
- Primary employer service by Changed mode – Only one employer service was offered by more than 20% of employers and only about 22% of respondents changed mode. Thus we could be cutting the data to finely. However, we can include it as a possible crosstab.

### **Comments on Specific Questions**

Comment: *Q S3 – In what county (or Independent City) do you live now? (DO NOT READ) In what county (or independent city) do you work?*

Caution should be used in interpreting the residence and work locations that respondents report by jurisdiction. Many people erroneously associate their Post Office address with their jurisdiction of residence or work. For example, many residents of the Mount Vernon area of Fairfax County believe they live in Alexandria, because they have an Alexandria mailing address. This situation exists in many locations in Fairfax County with Alexandria and Falls Church postal addresses. A preferable approach would be to obtain Zip codes for residence and work locations.

Response: Please see the new question Q2a – *What is your home zip code?* This will be asked of all respondents. Respondents whose county/jurisdiction could be incorrectly coded, due to mistaken jurisdiction reporting, will be checked at this point. If the zip code is not in the originally reported jurisdiction, Q2 (jurisdiction) will be recoded.

Comment: *Q13a – Does your employer have a formal telecommuting program at your workplace or do you telecommute under an informal arrangement between you and your supervisor?*

Why do we care whether a telecommuter has a formal arrangement? Have we done any cross-tabulations to attempt to measure different rates of telecommuting between formal and informal telecommuters?

Response: Yes, the 2004 SOC analysis examined the incidence of telecommuting when a formal program was in place and when telecommuting was permitted under an informal arrangement. These results were included in the SOC report. Both the incidence of telecommuting and the average telecommute frequency were examined.

*Comment: Q15 – Now thinking about LAST week, how did you get to work each day. Let's start with Monday? ... How about Tuesday? ... Wednesday? .... Thursday? .... Friday?*

Why do we care what mode people used on different days, especially since we are asking them separately about the frequency with which they use alternate modes?

Response: This question asks about specific days last week not to distinguish mode use by day (although some variation does exist in mode use by day of week – e.g., telecommuting is more common on Mondays and Fridays than on other days). Rather, this format is used to assist respondent recall by asking them to report about a specific time period. It is a common survey “memory aid” technique used to collect accurate retrospective data. This format also enables us to collect data on sick days and vacation days that would not otherwise be collected.

*Comment: Q20 – What were the reasons you began using <ALT MODE Q15>? (DO NOT READ; CHECK ALL THAT APPLY) (Probe for the 3 most important and only record 3)*

There are 43 specific possible responses to this question. Some of these are redundant (“save money,” “gas prices too high”). Others are too inclusive (the response: “no parking, parking expense” measures two different things – parking availability and cost). In addition, the questions overlap, so that it is not possible to isolate the primary reason for changing mode (“save money” could actually include “parking expense.”) In the 2004 survey, only 11 reasons were cited by more than 2% of respondents. This question should be restructured to eliminate redundancies and clarify the actual reasons for changing modes.

Response – The responses for this question are not read to the respondent. The list of responses is extensive to ensure the most accurate data are captured. Including many distinct categories minimizes the need for interviewers to guess at the best response category and reduces the need for interviewers who do not find an appropriate response to write verbatim responses in the “other” category, which lengthens the interview time.

Typically, we report results that were mentioned by one percent or more of respondents. The list shown includes some response categories that were added in 2001 and /or 2004 because they met the 1% test. In reporting, we sometimes group responses into “related categories,” for example “personal preference reasons,” but we prefer to keep the list discrete at this stage to ensure that notable responses can be distinguished. We are, however, willing to separate response categories that seem too inclusive.

*Comment: Q36 – Where do you work when you telecommute? Do you work at home, in a telework center, a satellite office provided by your employer, or someplace else?*

In 2004, less than 1% of respondents reported using a telework center. Therefore, the specific location of the telework center used is not needed in this question.

Response: In the 2004 survey, we asked about the specific telecenter to facilitate separating telecenter users, who were counted separately in the Telework Resource Center analysis, from other regional telecommuters. In the upcoming TERM analysis, the telecenter component of the TRC TERM has been eliminated, thus we agree that this additional detail is no longer necessary and has been removed from the revised SOC questionnaire (12/6/06)

It is still important, however, to identify the general telecommute location to distinguish home-based from non-home based telecommuting. Further, it is useful to separate telecenter-based telecommuting from other non-home-based telecommuting (e.g., client sites, satellite offices). In the 2001 SOC survey, we found that a sizeable number of respondents said they were telecommuting when they actually appeared to be traveling to client or customer sites (e.g., repair personnel, sales staff). In the 2004 SOC survey, we clarified the telecommute definition to eliminate these cases, but obtaining some detail on the location offers a further check on the accuracy of the telecommute information.

Comment: Q43 – *Regardless of whether or not you use it, can you tell me if public transportation such as buses or trains provide service from the area where you live to the area where you work?*

This question is overly vague with respect to “the area” where respondents live and work and can lead to questionable results. The term “the area” should be refined in some fashion so as to allow for a more useful interpretation of the results of this question.

Table 1 (page 19) indicates that at least 55% of the respondents report that rail service is available for their commute. If the percentage that “don’t know specific company name” (9%) is also included, this value could increase to 64%. In itself, this is a surprising statistic; it is difficult to believe that rail service is available for 55% of the commuting trips in the region (and that 46% of commuting trips can be served by Metrorail).

Table 4 (page 22) provides data about those commuters who do not ride a rail mode. Of these commuters, only 37% report that rail service is not available (40% if “don’t know” is also included). Thus 60-63% of respondents report that rail IS available. As with the prior finding, this is a surprising statistic.

However, these two tables taken together seem to be saying that commuters who do NOT use rail have about the same accessibility to rail service as all commuters in the region (i.e. rail is “available” to 55-64% of all commuters, and to 60-63% of non-rail users). This finding is counter-intuitive and if taken literally could be used as an argument against the further expansion of rail service (since usage does not seem to relate to availability). The most likely explanation for this anomaly is the vague nature of the question about the availability of public transportation service.

Response: We agree that this question could be improved and have split the question into two. One asks about “public transportation in the area where you live” and a second asks about “public transportation in the area where you work.” This should help to clarify the availability of services in these two distinct areas. With respect to the term “area,” we considered giving respondents a more constrained definition, such as was service available within a specific distance from the home. Instead, we decided to keep the initial question more open and ask instead about the distance from the home to the nearest bus stop and nearest rail station. This will be asked of all respondents, including those who say that “no service is available” in the home area. With this combination of questions, we will know how the respondent defines “area.” For example, it is possible one respondent would say no service was available, even though the nearest stop was 5 blocks away, while another, who is more willing to walk, could say service is available within 2 miles.

Regarding the issue of the responses in the 2004 survey, we have several points. First, respondents were permitted to name multiple transit operators, thus the individual results for bus and train companies are not necessarily additive. Some respondents who had access to Metrorail also had access to another train service (MARC, VRE, Amtrak). The results for bus would be similar.

Second, this question reflects respondents' perception of transit availability for a specific trip. So a respondent who could drive to a Metrorail station and use the train for the balance of the trip likely would say that Metrorail was "available." Third, we note that 39% of respondents reported their work location as DC, Alexandria, or Arlington, and an additional 16% said they worked in Montgomery County. So 56% of respondents work in jurisdictions with relatively high Metrorail access.

Regarding the question about possible inconsistencies with the data on reasons commuters do not ride a rail mode, the percentage of respondents for whom train was not accessible should include "not available," "didn't know if available," or was "too far away." This totals to 46%. Second, nearly all of the "rail service is not available" response would have been autocoded for respondents who said in an earlier question that transit was not available to them. In essence, this question is asking respondents who said they could use a train for commuting why they do not.

Comment: Q44/Q45 – *What train or bus companies are those? (DO NOT READ; PROBE WELL; ACCEPT MULTIPLE RESPONSES)*

In addition to the vague nature of question 43 described above, the purpose of obtaining the name of the specific transit system that is available for the commute trip is not clear, especially when multiple responses are allowed. What is done with this information?

Response: This information was collected for two reasons. First, it is a check of respondents' actual awareness of specific services that might be available. Being able to name a transportation company is a higher level of awareness than is just saying "yes there is bus service." Second, the responses to this question could be useful to local jurisdictions to assess local resident awareness of their services.

Comment: Q52 – *Do you know the locations of Park 'n Ride lots along the route that you take to work?*

Presumably the purpose of this question is to obtain insight regarding public awareness of Park-and-Ride lots. In the 2004 survey, 34% of respondents indicated that they were not aware of these locations. However, such facilities are probably not relevant for residents of areas inside the Beltway. Has this data been stratified along geographic lines? What use has been made of the information obtained from prior surveys? If this question is to be retained, it may be useful to prepare cross-tabulations along the following lines: "Know P&R lot by commute distance" and "Know P&R lot by home jurisdiction."

Response: Yes, the 2004 SOC analysis included a crosstab of Park & Ride awareness by home jurisdiction. And yes, the awareness/availability of P&R lots was higher among respondents who lived outside the Beltway. Not all results of the analysis were included in the SOC report. However, COG staff have copies of the results of these analyses and provide additional information as requested.

Comment: Q60 – *Have you changed your work or home location in the last year?*

This question seems to lead me along a path towards more questions. Is there any value to asking if home location was changed, did available transportation options or a change in commute play any role in the selection of the new location? Did they research transportation options prior to the move? How does their actual commute measure against their anticipated commute? Did their commute behavior change again due to the difference between actual and anticipated commute?

Further, this question should be modified to differentiate those residents who changed their home location from those who changed their work location, in order to begin to assess the reasons for longer commutes and the possible impacts of housing promotions.

Response: We agree that additional information could be gleaned from further details about moves and impact of travel on the decision-making process. We have modified this question to distinguish between home and work moves. We also added questions to ask what factors respondents considered and how important transportation/commuting was to their decision process.

**Attachment 1**  
**METROPOLITAN WASHINGTON – STATE OF THE COMMUTE**  
**SAMPLING METHODOLOGY 2004**

The sampling universe for the Washington Council of Government’s region for a 2004 random telephone survey of commuters would be workers in the 12-jurisdiction region. Table 1 was compiled from the U.S. Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics (LAUS) website, and indicates that 2,589,278 workers resided in the 12 areas. As indicated in the table, four subareas dominate the number of workers in the region, i.e., District of Columbia, Fairfax County, Montgomery County and Prince George’s County.

Table 1 indicates that proportional sampling of workers would create problems. On the one hand, if statistically valid sample were drawn for the large counties, the less populated counties would not have statistically valid sample sizes. For example, a proportional sample that would permit a confidence level of 95% ± 4%, 600 workers, for Fairfax County would only permit 42 workers to be sampled in Calvert County. Alternatively, if a confidence level of 95% ± 4% were given to Calvert County, a proportional sample would require 8,655 interviews assigned to Fairfax County alone. Therefore, proportional sampling would not appear to be a viable approach.

**Table 1**  
**U.S. Bureau of Labor Statistics**

<b>Survey Area</b>	<b>Estimated Employed Workers from Bureau of Labor Statistics Local Area Unemployment Statistics (LAUS) Program (1st Q – 2004)</b>	<b>Percent</b>
Alexandria City, VA	82,418	3.18%
Arlington Co., VA	115,946	4.48%
Calvert Co., MD	40,578	1.57%
Charles Co., MD	64,468	2.49%
District of Columbia	281,000	10.85%
Fairfax Co., VA	585,320	22.61%
Frederick Co., MD	108,113	4.18%
Loudoun Co., VA	118,426	4.57%
Montgomery Co., MD	498,563	19.25%
Prince George’s, MD	453,285	17.51%
Prince William Co., VA	190,529	7.36%
Stafford Co., VA	52,635	2.03%
<b>Total</b>	<b>2,589,278</b>	<b>100.00%</b>

Source: U.S. Bureau of Labor Statistics <http://www.bls.gov/lau/home.htm>

The study team recommends that the sample be drawn to provide statistically reliable results for each subarea, and additionally, enough sample to provide reliable statistics for subpopulation analysis, such as

mode. Thus, for each subarea 600 worker interviews would be needed in order to achieve a confidence level of 95%  $\pm$  4%. The total sample size would be approximately 7,200 (12 subareas times 600). Once the data has been collected, region wide statistics may be computed by weighting the sample by the number of workers in the subarea. For example, the data collected for Fairfax County would be weighted 14.4 times more than the data collected for Calvert County when statistics are computed for the region as a whole. However, the weighted data would provide a confidence level of 95%  $\pm$  4% for each subarea. Thus, the regional statistics would reflect total workers within the region while maintaining statistical viability for relatively small counties.

The completed samples per subarea do not differ significantly even when finite population corrections are made. Essentially, a total sample of 7,200 is recommended in order to achieve 95% confidence  $\pm$  4% for each county. For the region as a whole the 7,200 sample size permits 95% confidence  $\pm$  1.2%.



## Attachment 2

### 2004 State of Commute Survey Data Expansion

Survey responses from the State of the Commute 2004 were expanded numerically to align the sampled survey results with published, employment information for the study area. The process developed for the 12-area, Washington, DC metropolitan region is described below in detail.

Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics (LAUS) for January – March, 2004 were used to expand responses to employed persons. This methodology was adopted over the multi-stepped methodology developed in 2001, as a simpler, more direct approach to expanding results to known, published statistics. The main advantage of the 2004 methodology lies in the fact that estimates of working households are not dependent upon survey data. To insure that using both the 2001 and the 2004 methods would produce comparable results; each method was tested and used to expand the 2004 survey responses. The results showed a difference of only 1.2% between the two methods. The use of the LAUS method was suggested and approved by COG.

**Table A-1 – Estimate of Workers by Survey Area**

Survey Area	Estimated Employed Workers from Bureau of Labor Statistics Local Area Unemployment Statistics (LAUS) Program (1st Q – 2004)	Working HH Sample (# Surveyed)	Rounded Worker Expansion Factor	Total Worker Estimates
Alexandria City, VA	82,418	600	137	82,200
Arlington Co., VA	115,946	600	193	115,800
Calvert Co., MD	40,578	600	68	40,800
Charles Co., MD	64,468	600	107	64,200
District of Columbia	281,000	600	468	280,800
Fairfax Co., VA	585,320	600	976	585,600
Frederick Co., MD	108,113	600	180	108,000
Loudoun Co., VA	118,426	600	197	118,200
Montgomery Co., MD	498,563	600	831	498,600
Prince George's, MD	453,285	600	755	453,000
Prince William Co., VA	190,529	600	318	190,800
Stafford Co., VA	52,635	600	88	52,800
Total	2,589,278	7,200	1,692	2,590,800

Estimates of employed workers were obtained from BLS for each jurisdiction in the study area for the first quarter of 2004, i.e., January – March. This timeframe was chosen to approximate the survey period. Dividing the BLS estimate by the number of interviews yields the expansion factor by jurisdiction. Only the integer portion of the expansion factor was retained to allow consistent cross-footing during analysis. The resulting control totals by jurisdiction differ only slightly from the estimate provided by BLS. For example in Alexandria City, VA, the BLS estimate of 82,418 workers is divided by 600 surveys to obtain a representation of 137 workers per complete survey. When 137 is multiplied by 600 surveys, the resulting estimate of 82,200 workers is produced for Alexandria City, VA.

The expansion factors allow for the proper representation of workers in each geographical area when analyzing the survey results. For example, without the expansion factor, the final estimated 40,800 workers in Calvert County would have the same representation as the estimated 585,600 workers in Fairfax County. By using the expansion factor shown in the table above for each sub-area, the number of workers has been adjusted so that each worker is equally represented within the region.

**Statistical Distributional Comparison Between Sample and Known Household Distributions**

To be consistent with the 2001 analysis, demographic variables were compared with published statistics. This was particularly important for the District of Columbia, where the survey distribution of ethnicity was shown to be skewed. The population distribution from the U.S. Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary File, Table 1 “Population by Race and Hispanic or Latino Origin for 18 Years and Over” was recommended for the bias adjustment. Although not an identical match, the 18 years and over population data allowed an acceptable comparison for workers 16 years and over from the survey data.

The method used for adjusting the ethnicity results from the survey is shown in Table A-2. First, the 39 refusals (6.5%) in the ethnic distribution of the 600 District of Columbia households were redistributed in the same proportion as the valid percent.

**Table A-2 – Bias Adjustment Factor for District of Columbia**

Q122/Q123. Ethnic Background	Distribution of Ethnicity From 2004 Survey	Distribution of Ethnicity From 2000 Census	Bias Adjusted Distribution of Workers	Number of Survey Responses	Bias Adjusted Factor
Hispanic	5.9	7.3	20,498	36	569
White	53.7	31.8	89,294	313	285
African-American	36.2	55.7	156,406	225	695
Other	4.2	5.2	14,602	26	562
Total	100.0	100.0	280,800	600	

Next, the distribution from the 2000 Census, “Population by Race and Hispanic or Latino Origin for 18 Years and Over” was applied to the survey responses to adjust the expansion factor (468) within the District of Columbia. Multiplying the percentage distribution of ethnicity from the 2000 Census by the total number of workers, 280,800 for District of Columbia, resulted in the bias adjusted distribution of workers. Dividing the number of workers in each ethnic category by the number of survey responses in the same category resulted in the bias adjusted expansion factor.

For example, to adjust the number of Hispanic households surveyed to reflect the 2000 Census race distribution, the following formula is followed:  $.073 * 280,800 = 20,498$ . This number is divided by the number of survey responses (plus the redistribution of non-response); for Hispanic, 36 responses. Once again, the integer portion of the expansion factor is used. Now, instead of each working household representing an equal weight within the District of Columbia, the working households are redistributed to more accurately reflect the ethnicity of the area. The same distribution is used to adjust workers within the geographic sub-areas.

### Level of Confidence for Analysis

The level of confidence for analysis of the region and the county/city sub-areas will differ, because the sample sizes in each category differ. Table A-3 shows the level of confidence for each of these geographic divisions for the State of the Commute 2004 survey sample. In addition, the level of confidence has been calculated for several other, non-geographic key statistics sub-populations of interest in the study.

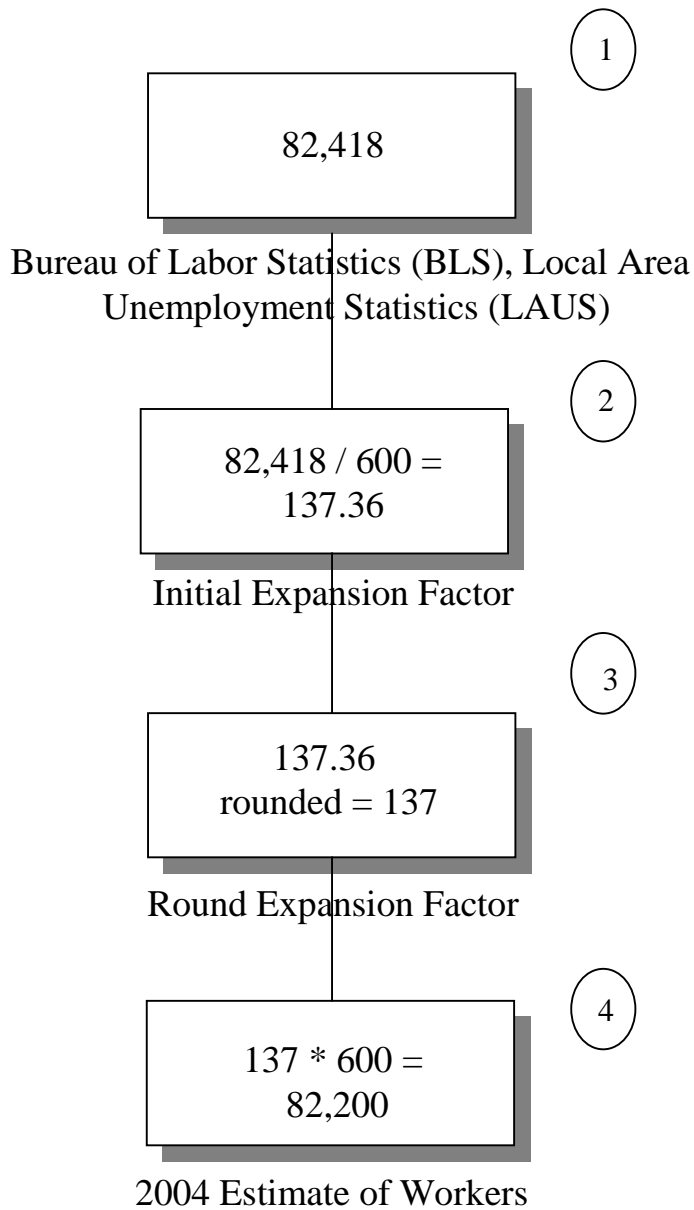
**Table A-3 – Level of Confidence for Analysis**

<b>Sub-Area or Sub-Population</b>	<b>Sample Size</b>	<b>Level of Confidence</b>
<b><i>Geographic Sub-Areas</i></b>		
Study Region – Twelve Areas	7,200	95% $\pm$ 1.2%
Study Portion of Virginia	3,600	95% $\pm$ 1.6%
Study Portion of Maryland	3,000	95% $\pm$ 1.8%
District of Columbia	600	95% $\pm$ 4.0%
Individual County or City Level	600	95% $\pm$ 4.0%
<b>Sub-Area or Sub-Population</b>	<b>Sample Size</b>	<b>Level of Confidence</b>
<b><i>Sub-Populations</i></b>		
Telecommuters	876	95% $\pm$ 3.3%
Carpoolers (with casual)/Vanpoolers	527	95% $\pm$ 4.3%
Transit Users	1,095	95% $\pm$ 3.0%
Bike Users or Walkers	180	95% $\pm$ 7.3%
Kiosk Users	96	95% $\pm$ 10.0%
Commuters Aware of GRH	4,047	95% $\pm$ 1.5%

### Summary

The survey data have been weighted to reflect the number of workers within the geographic areas of the study. These expansion factors permit the proper influence of each geographic area to be included when discussing the study area as a whole or by state. Expansion factors within the District of Columbia were adjusted for race bias in sampling.

## Example: Alexandria City, VA



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<sup>1</sup> Estimate of employment January - March, 2004

<sup>2</sup> Initial expansion factor per SOC 2004 survey

<sup>3</sup> Rounded expansion factor = 137

<sup>4</sup> Final Estimate of Workers in Alexandria City, VA

## FUTURE DIRECTION OF TDM PERFORMANCE MEASURES

One task within the Evaluation Framework development process is the consideration of new or enhanced performance measures that might be needed or appropriate for the Washington region in the next 3-5 years and beyond. There are several issues, which can be included in this discussion:

1. Do **revised goals** for the Commuter Connections program warrant new performance measures?
2. Are there **new performance measures** that will better assist in regional decision-making?
3. Are there **new ways to communicate** the effectiveness of the program to funders and decision-makers?

Each issue is introduced below for the purposes of initial discussion.

### Focus and Goals of the Program

As the focus of the program evolves from ones geared to air quality to ones geared toward congestion and mitigating its negative impacts (such as stress, time loss, energy loss, and air quality degradation), some **new performance measures** might be worth exploring. This could suggest, for example, that in addition to assessing regional travel and air quality impacts, the methodology should identify new approaches to measuring regional and local congestion, including the spatial or temporal distribution of vehicle trips and VMT reduced, impacts on travel delay, and travel time reliability by mode.

A good comparison for traditional TDM (mode shift and VMT reduction) and transportation systems performance indicators (such as travel time and delay) are attached.

If any of these system performance measures were desired as part of the TERM evaluation, the **availability and adequacy** of needed primary and secondary **data** would need to be assessed.

### New Performance Measures for Decision-makers

At our last Evaluation Work Group meeting, the desire for determining the **number of cars taken off the road** in specific jurisdictions or corridors was expressed. What would it take to derive this performance measure, how would it be expressed, and what level of effort would be needed?

Do decision-makers and funders want to see **benchmarking results** – a comparison of Washington region program performance to national averages or other commuter assistance programs? This could be tied to the ACT effort to create comparative indicators.

### New Ways to Communicate

It is important to identify **key audiences** that are seeking information about the benefits of TDM and, in particular, the impacts of the Commuter Connections program.

COG/Commuter Connections has an interest in reporting its performance to numerous audiences, including funders, policy-makers, program operations staff, and the traveling public. All of these groups could be potential audiences for TERM performance results, although the specific results that would resonate with them could be different.

Funders will want to know how their money was spent and were pre-established goals met. Transportation planners are likely to be most interested in the impacts of the TERMS on the operation of the transportation system. Travelers are most likely to respond to information about Commuter

Connections' performance in offering a range of high quality travel services or its contribution to reducing traffic congestion and air pollution.

Standard TDM indicators, such as placement or vehicle trip and VMT reduction, are not well-understood by many administrators and policy-makers. Finding the **terminology, presentation mechanisms, and critical points of reference** are as important as the results themselves.

**Measuring Performance of TDM Programs:  
Are TDM Programs and Traffic Operations Professionals  
Talking the Same Language?**

Typical TDM Performance Measures	Transportation Operations Performance Measures <sup>1</sup>
<ol style="list-style-type: none"> <li>1. Number of commuters requesting assistance</li> <li>2. Number of commuters switching modes</li> <li>3. Number of vans in service (where applicable)</li> <li>4. Number of vehicle trips eliminated</li> <li>5. Vehicle miles eliminated</li> <li>6. Vehicle trip rate (vehicles/100 commuters)</li> <li>7. Employer contacts</li> <li>8. Parking spots saved/parking needs reduced</li> <li>9. Commuter costs saved</li> <li>10. Major accomplishments</li> <li>11. Gasoline saved</li> <li>12. Emissions reduced</li> <li>13. Information materials distributed</li> <li>14. Special events</li> <li>15. Media/community relations</li> </ol>	<ol style="list-style-type: none"> <li>1. Extent of congestion - spatial</li> <li>2. Extent of congestion - temporal</li> <li>3. Recurring delay</li> <li>4. Speed</li> <li>5. Travel time-link</li> <li>6. Customer satisfaction</li> <li>7. Incident duration</li> <li>8. Non-recurring delay</li> <li>9. Throughput - person</li> <li>10. Throughput - vehicle</li> <li>11. Travel time – reliability (buffer time)</li> <li>12. Travel time – trip</li> </ol>

**COMMUTER CONNECTIONS 2005-2008 TERM EVALUATION  
EVALUATION METHODS FOR INDIVIDUAL TERMS  
DECEMBER 12, 2006**

These methodological summaries detail the specific evaluation approach for each of the five consolidated TERMS and for the Commuter Operations Center. The TERMS included are:

1. Telework Resource Center
2. Guaranteed Ride Home
3. Employer Outreach
4. Mass Marketing
5. InfoExpress Kiosks
6. Commuter Operations Center (including software upgrades)

For each TERM, the following information is provided:

- TERM description
- Goals defined by TPB for the TERM for 2008
- Nature of the evaluation
- Performance measures recommended for the TERM
- Data needed to measure TERM impacts and recommended data sources

The evaluation framework will define all performance measures and more detailed descriptions of the surveys and other data sources enumerated in this section.

The unique data required for each TERM are described in the individual TERM evaluation components shown below. In general, the following data are needed to calculate travel and air quality impacts of each TERM, including:

- Number of commuters in the targeted population (e.g., all regional commuters, GRH applicants, regional telecommuters, kiosk users, etc.)
- TERM placement rate (percentage of targeted commuters who shift to alt modes – continued and temporary shifts)
- Vehicle trip reduction (VTR) factor (average trips reduced per day per commuter placed)
- Average one-way trip distance of commuters placed
- Access mode and distance to meeting locations for alternative mode users
- Regional NO<sub>x</sub> and VOC emissions factors per mile and per trip

# **1. METROPOLITAN WASHINGTON TELEWORK RESOURCE CENTER TERM**

## Program Description

The Metropolitan Washington Telework Resource Center (TRC), working with numerous partners in the region, assists employers to establish worksite telecommuting programs and arrangements and provides telecommute information to individual commuters. The TRC TERM estimates the impact of the portion of regional telecommuting that is attributable to the TRC's assistance.

## TERM Evaluation Changes Since 2002-2005

- Eliminate Separate Credit for MWTCs – In the 2002-2005 evaluation, the TRC TERM analysis included credits for Commuter Connections assistance to the Metropolitan Washington Telecenters. This component has been eliminated from the analysis, as CC has largely eliminated this support. However, credit for telecenter users who obtained TC information from the TRC will continue to be counted.

## Stated Goals for 2008

The purpose of the TRC is to increase the number of full-time or part-time home-based and telework center-based telecommuters in the region. COG defined five regional goals for the TRC for 2008:

- Create 31,854 new telecommuters
- Reduce 11,830 daily vehicle trips
- Reduce 241,209 daily miles of travel
- Reduce \_\_\_\_ daily tons of NO<sub>x</sub>
- Reduce \_\_\_\_ daily tons of VOC

## Nature of Evaluation

The populations of interest for this TERM include two groups:

- All regional teleworkers who are influenced by TRC services / assistance to begin teleworking
- Telework employees at worksites assisted by TRC

The evaluation first determines the number of regional teleworkers who were influenced or assisted by TRC services to begin teleworking and the travel impacts of their teleworking. Data for this component come from the State of the Commute survey: 1) number of new telecommuters in the region, 2) their frequency of telecommuting, 3) how they commute on non-telework days, and 4) how they learned about telecommuting. Placement rates and average trips reduced per placement are derived for home-based telecommuters and for those working at telecenters or other non-home locations.

Second, the evaluation estimates the portion of regional telecommuting influenced by the TRC through its employer telecommute seminars, direct assistance to employers with telecommuting programs, direct information assistance to commuters, and general promotion of telecommuting to the public-at-large.

Thus, the evaluation will define the regional universe of telecommuting and examine employers' and commuters' sources of information or assistance for telecommuting and the value of that information or assistance in their starting or expanding telecommuting programs to estimate the share of telecommuting attributable to the TRC.



Performance Measures

Performance measures recommended to evaluate the Telework Resource Center include:

*Participation, Utilization, and Satisfaction Measures:*

- Number of employers that receive telecommute information or assistance from the TRC
- Number of employers that implement/expand telecommute programs after receiving assistance
- Number of commuters who receive telecommute information or assistance from the TRC
- Number of commuters that begin telecommuting after receiving assistance
- Number of new telecommuters – home-based and non-home based
- Telecommute placement rate

*Program Impact Measures:*

- Vehicle trips reduced (number of daily trips reduced)
- VMT reduced (in miles)
- Emissions reduced (in tons of pollutants)

Data Needs and Sources

The following data are needed to assess TRC impacts. Each data source will be described in the Evaluation Framework document.

<u>Data Need</u>	<u>Data Source</u>
• Regional home-based telecommuters	State of the Commute (SOC) survey
• Non-home-based telecommuters	SOC survey
• Telecommute frequency (days/week)	SOC survey
• Percent drive-alone on non-telecommute days	SOC survey
• Travel distance on non-telecommute days	SOC survey
• Travel distance to telework centers	SOC survey
• Commuters' source of telecommute information	SOC survey
• TW at assisted employers worksite	TRC TW assistance survey

## Proposed timing of data collection

- SOC survey – Early 2007
- TRC Telework assistance survey – Early 2008

To avoid double counting benefits, the portion of travel and emissions impacts attributable to the employer assistance component of Telework Resource Center TERM are subtracted from the Employer Outreach TERM.

## **2. GUARANTEED RIDE HOME TERM**

### Program Description

The Guaranteed Ride Home (GRH) program eliminates a real or perceived barrier to use of commute alternatives, the fear of being stranded without a personal vehicle. GRH provides free return transportation by taxi or rental car in the event of an unexpected personal emergency or unscheduled overtime to commuters who use rideshare, transit, or bike or walk to work at least two times per week on average. Commuters pre-register for GRH and may use the service up to four times per year. The program also allows “one-time exception” rides provided to non-registered commuters who used an alternative on the day a GRH trip was needed. Commuters who wish to use GRH again in the future must then register.

### TERM Evaluation Changes Since 2002-2005

- No changes

### Stated Goals

COG defined the following regional goals for GRH for 2008:

- Register 36,992 GRH applicants
- Reduce 12,593 daily vehicle trips
- Reduce 355,136 daily vehicle miles of travel
- Reduce \_\_\_\_ daily tons of NOx
- Reduce \_\_\_\_ daily tons of VOC

### Nature of Evaluation

GRH is intended to encourage SOV commuters to shift to commute alternatives. Additionally, GRH is expected to help maintain existing commute alternatives and increase frequency of use. The evaluation measures the number of new alt mode users whose shifts were influenced by GRH and the number of commuters who used alt modes before registering for GRH who were influenced to continue using the modes. Since commuters must use commute alternatives when they register for GRH, the impact of GRH on shifts from driving alone must be assessed to determine the importance of GRH to travel changes.

Two populations are of interest for the GRH TERM evaluation:

- Commuters who registered for GRH
- One-time exception users – did not register for GRH but took an “exception” trip

### Performance Measures

The following performance measures are used for GRH:

#### *Participation, Utilization, and Satisfaction Measures:*

- Number of commuters who request GRH information
- Number of GRH applicants
- Number of one-time exception users
- GRH placement rate
- Percent of GRH participants who take a GRH trip
- Satisfaction of GRH users with the service

*Program Impact Measures*

- Vehicle trips reduced (number of daily trips reduced)
- VMT reduced (in miles)
- Emissions reduced (in tons of pollutants)

Data Needs and Sources

The following data are needed to estimate GRH impacts. Each data source will be described in the Evaluation Framework document.

Data Need

- GRH applicants
- One-time GRH exception users
- GRH placement rate
- GRH VTR factor
- Average travel distance (trip length)

Data Source

Commuter Connections GRH database  
 Commuter Connections GRH database  
 GRH Applicant survey  
 GRH Applicant survey  
 GRH Applicant survey

## Proposed timing of data collection

- Commuter Connections GRH database – ongoing
- GRH Applicant surveys – spring 2007

Two subgroups are identified for GRH. The first sub-group includes participants who both live and work within the Washington, DC Metropolitan Statistical Area (MSA). The second group includes participants who work within the MSA but live outside it. Placement rates, VTR factors (average trips reduced per placement), and travel distances are estimated for each of the two sub-groups. This distinction is made because credit for the “out of MSA” participants is discounted to eliminate the VMT saving that occurs outside the MSA.

The analysis of GRH also includes steps to avoid credit double counting from overlap with two other TERMS. Overlap occurs between GRH and the Commuter Operations Center because some GRH applicants also ask for rideshare information. The COC impacts are discounted to account for this overlap. And GRH results will be adjusted to assign a portion of the GRH program’s impacts to the Mass Marketing TERM to recognize that some GRH applicants will be influenced to contact Commuter Connections and apply for GRH after they have heard a Mass Marketing ad.

### **3. EMPLOYER OUTREACH TERM**

#### Program Description

The Employer Outreach TERM is designed to encourage employers to implement new commute alternative programs and to expand the services they offer in existing programs. In this TERM, jurisdiction-based sales representatives contact employers, educate them about the benefits commuter alternative programs offer to employers, employees, and the region and assist them to develop, implement, and monitor work site commute alternative programs. Commuter Connections assists the sales force with the following services, designed to enhance regional coordination and consistency:

- Computerized regional employer/employee contact database
- Marketing and information materials
- Employer outreach sales and service force training
- Annual evaluation program
- Support to Employer Outreach Ad-Hoc Group

#### TERM Evaluation Changes Since 2002-2005

- Eliminate Credit for Metrochek Employers not in ACT! Database – In the 2002-2005 evaluation, a separate calculation was performed to estimate impacts for employers that were not participating in Employer Outreach but that did offer Metrochek/Smart Benefits through WMATA's program. This credit will not be included in the 2005-2008 calculation.
- Incorporate Credit from Employer Outreach for Bicycling – In the 2002-2005 evaluation, a separate credit was estimated for impacts related to bicycle support implement by employers participating in Employer Outreach (Employer Outreach for Bicycling TERM). In the 2005-2008 evaluation, this credit will be captured in the Employer Outreach TERM. This will not result in a loss of benefits, since the Employer Outreach for Bicycling credit had been subtracted from the Employer Outreach TERM in 2002-2005 to avoid double counting these credits.
- Incorporate Bike to Work Day – In the 2002-2005 evaluation, impacts from Bike-to-Work Day were captured in the Employer Outreach for Bicycling TERM. In 2005-2008, this credit will be included in the Employer Outreach TERM.

#### Stated Goals

COG has defined the following regional goals for Employer Outreach for 2008:

- Achieve 942 participating employers, 90 with bicycle support
- Reduce 86,627ily vehicle trips
- Reduce 1,427,874 daily vehicle miles of travel
- Reduce \_\_\_ daily tons of NOx
- Reduce \_\_\_ daily tons of VOC

#### Nature of Evaluation

Employer Outreach is aimed at increasing the number of private employers implementing worksite commute alternative programs, but Employer Outreach is ultimately designed to encourage employees of client employers to shift from driving alone to commute alternatives. Two primary evaluation questions are

thus important. First, how many employers start or expand commute alternative programs? And second, how many employees use commute alternatives in response to new employer-sponsored services at the worksite.

Two populations are of interest for this TERM:

- 1) employers that participate in Employer Outreach and the employees at those worksites
- 2) commuters who participate in Bike-to-Work Day events.

#### Performance Measures:

The following performance measures are recommended for Employer Outreach:

##### *Jurisdiction Sales Representatives – Participation, Utilization, and Satisfaction Measures:*

- Number of employer clients (employers with commute alternative programs)
- Number of employees at worksites with commute alternative programs
- Level/extent of employers' commute alternative programs
- Commute alternative mode split at worksites with commute alternative programs (placements)
- Employer satisfaction with outreach assistance and services

##### *Bike to Work Day – Participation, Utilization, and Satisfaction Measures:*

- Number of riders participating in Bike to Work Day events
- Mode split of participants before and after Bike to Work Day events

##### *Program Impact Measures:*

- Vehicle trips reduced (number of daily trips reduced)
- VMT reduced (in miles)
- Emissions reduced (in tons of pollutants)

#### Data Needs and Sources

The following data items will be used to calculate program impacts.

<u>Data Need</u>	<u>Data Source</u>
<b>Jurisdiction Sales Representatives</b>	
• Employers participating in Employer Outreach Program (incl. bicycle)	ACT! database
• Employer characteristics	ACT! database
• Level of commute alternative program at worksite	ACT! database
• Starting Average Vehicle Ridership (AVR)	Employee baseline surveys
• Ending AVR (est.)	EPA COMMUTER Model*
• Average travel distance	SOC survey
<b>Bike to Work Day (BTWD)</b>	
• Number of BTWD participants	BTWD survey
• Before and after travel behavior	BTWD survey
• Average travel distance	BTWD survey

#### Proposed timing of data collection

- ACT! database - ongoing
- Employee baseline surveys – ongoing
- SOC survey – Early 2007
- WMATA files – ongoing
- Bike-to-Work Day (BTWD) event survey – Data averaged from surveys conducted following 2006 and 2007 events

The Employer Outreach TERM is unique in that it is the only TERM for which placement rates and VTR factors are not used to determine the number of new participants, vehicle trips reduced, or VMT reduced. This is because employee survey data cannot feasibly be collected to assess employees' post-program travel behavior. These missing evaluation elements are modeled using the EPA COMMUTER Model.

To estimate impacts, employers' starting mode shares and commute alternative program strategies are input into the COMMUTER Model and the model estimates "after" mode split and average vehicle ridership, that is, with the program in place. The TERM analysis used this model in both the 1999-2002 and 2002-2005 evaluations. For the 2005-2008 TERM analysis, a new model will be evaluated to assess its use for this TERM. The CUTR Worksite Trip Reduction (WTR) Model will be assessed to gauge whether it is a more robust tool for evaluating changes to employer programs. Based on the results of that assessment, the COMMUTER or WTR Model will be used for the current evaluation period.

## 4. MASS MARKETING TERM

### Program Description

In 2003, Commuter Connections embarked on an ambitious effort to educate the region's commuters about alternatives to stress-filled solo commuting and to raise awareness of commute assistance services available through Commuter Connections and its partners. Radio, direct mail, and other media are used to create a new level of public awareness and to provide a call to action to entice commuters to switch to alternative modes. The objectives of the Mass Marketing TERM are to:

- Raise regional awareness about the Commuter Connections brand
- Address commuters' frustration with congestion
- Induce commuters to try and adopt alternative commute modes

### TERM Evaluation Changes Since 2002-2005

- Calculate Both "Direct" and "Referred" Impacts – In the 2002-2005 TERM framework, it was assumed that credits would be calculated only for commuters who were directly influenced by the MM TERM to change modes. In the 2002-2005 evaluation, however, a second credit was estimated for a share of GRH and ridematching applications that were generated by referrals from MM ad campaigns to the GRH program and Commuter Operations Center. Both credits will be included in the 2005-2008 evaluation framework.

### Stated Goals

COG has defined the following regional goals for Mass Marketing for 2008:

- Induce 11,023 commuters to switch modes
- Reduce 7,759 daily vehicle trips
- Reduce 141,231 daily vehicle miles of travel
- Reduce \_\_\_\_ daily tons of NOx
- Reduce \_\_\_\_ daily tons of VOC

### Nature of Evaluation

The Mass Marketing TERM has two populations of interest:

- 1) All commuters in the Commuter Connections service area
- 2) Commuter Connections rideshare and GRH applicants who were influenced by the marketing campaign to request Commuter Connections services

The Mass Marketing TERM presents two challenges not encountered in most of the other TERMS. First, it is more difficult to assess influence on the general commuting public than it is to identify and track program participants. Second, when commuters who changed travel behavior can be identified, it is still necessary to identify what motivated their change – the media campaign or another influence.

The Mass Marketing evaluation method examines impacts from two types of change, which are measured separately. The first is "*directly*" influenced change. These are mode shifts that are made when the ads motivate commuters to change mode with no contact with Commuter Connections. An example of this type of change would be a carpool formed when a commuter hears the ad and asks a co-worker to car-

pool. Direct influences can only be assessed through a regional survey of commuters that asks about mode change and the reasons for the changes.

This influence of Mass Marketing on the general commuting population will be assessed through questions in the State of Commute survey that estimate the incidence of mode shifting in the region and what prompted the shift. If the shift is attributed to a message that is part of the Mass Marketing campaign, the associated trip, VMT, and emissions reductions can be credited to the campaign.

The second is “referred change.” These are mode shifts that occur among commuters who are influenced by the ads to contact Commuter Connections. These changes would include, for example, a commuter who hears the ad, requests a ridematch list from Commuter Connections, then forms a new carpool.

*Referred* influences are best measured by tracking changes in the volume of requests of information and services through two Commuter Connections’ traditional programs: the Commuter Operations Center and GRH. A comparison of the volumes of requests received during periods of media activity to periods without media activity can provide an estimate of the changes in requests as a result of the ads. A prorated share of the impacts of these other TERM impacts then can be assigned to Mass Marketing.

The Mass Marketing TERM will, therefore, use both data from the State of the Commute survey as well as ongoing tracking data from the Commuter Operations Center and tracking of timing of MM ads. Separate direct and indirect placement rates, VTR factors, and impacts will be estimated for each of these two components.

*Participation, Utilization, and Satisfaction Measures:*

- Percentage of regional commuters aware of ad campaign and messages
- Percentage of commuters with positive attitudes toward alt modes (e.g., willingness to try alt mode)
- Percentage of regional commuters aware of Commuter Connections programs/services
- Number of contacts to Commuter Connections (e.g., call volumes, web hits, registrants)
- Direct change placement rates (temporary and continued change)

*Program Impact Measure (direct and indirect):*

- Vehicle trips reduced (number of daily trips reduced)
- VMT reduced (in miles)
- Emissions reduced (in tons of pollutants)

Data Needs

Assess changes in awareness, attitudes, information (Population-at-large):

- In SOC survey, assess commuters’ awareness and recall of specific marketing messages and awareness of Commuter Connections commuter assistance services. Were commuters aware of commute ads and the specific messages conveyed? Were commuters who heard the ads more willing to consider using alt modes?

Assess increase in contacts (Population-at-large and Commuter Connections clients):

- Monitor volume of inquiries to Commuter Connections program information sources (phone, internet). Did contact increase during periods of mass marketing advertisement waves?
- Ask commuters who contact CC about referral source



- In SOC survey, ask about use of regional services that might correspond to awareness of the Mass Marketing campaign

Assess trial and permanent behavior change (Population-at-large):

- In SOC survey, assess travel behavior changes among commuters who recall hearing message and cite influence of marketing campaign. Also compare incidence of change with and without TERM influence. Need to correct for double counting with commuters who also cite influence of other TERMS on change.
- Track changes in call and internet email request volumes to COC and assign incremental increase in placements to the Mass Marketing TERM.

Data Needs

Data Source

- |                                                                    |                                                       |
|--------------------------------------------------------------------|-------------------------------------------------------|
| • Regional commuters aware of ads / messages                       | SOC survey                                            |
| • Percentage of commuters with positive attitudes toward alt modes | SOC survey                                            |
| • Regional commuters aware of CC services                          | SOC survey                                            |
| • Contacts to CC info sources                                      | SOC survey and COC tracking                           |
| • MM placement rates (temporary and continued)                     | SOC survey and COC tracking                           |
| • MM VTR factors                                                   | SOC survey, GRH survey, CC Applicant Placement survey |

Proposed timing of data collection

- SOC survey – Early 2007
- CC Applicant Placement survey – 2005
- GRH Applicant survey – Spring 2007
- Commuter Operations Center (COC) tracking – Ongoing

Not all increases in program inquiries resulting from indirect impacts will be assigned to the Mass Marketing TERM. The share of GRH and COC indirect impacts to be assigned to MM will be determined by estimating the increase in applications that occur during period when MM ads are run. These credits will be subtracted from GRH or COC to avoid double counting.

## **5. INFO EXPRESS KIOSKS**

### Program Description

This TERM focuses on the information delivery system for commuters. It involves self-service electronic kiosks located in the District of Columbia and in northern Virginia that offer information on commute options and allow for remote submittal of ridematch and GRH registration applications.

### TERM Evaluation Changes Since 2002-2005

- None

### Stated Goals

The following goals were defined for the InfoExpress Kiosk program for 2008:

- Reduce 5,925 daily vehicle trips
- Reduce 155,839 daily vehicle miles of travel
- Reduce \_\_\_\_ daily tons of NOx
- Reduce \_\_\_\_ daily tons of VOC

### Nature of Evaluation

The Kiosk population of interest includes regional commuters who can be directly identified as having used an InfoExpress Kiosk. Evaluation of the kiosk users is more difficult than for other TERMS, because the anonymous nature of kiosks makes it difficult to follow-up with these users. To assess impacts for those users who obtain traveler information using kiosks, the evaluation will rely on the SOC survey. A sufficient number of survey respondents used kiosks (based on the 2001 and 2004 SOC surveys) to enable kiosk analysis from this source and we anticipate a similar use incidence in 2007. From these data, a placement rate and VTR factor will be developed for this population.

### Performance Measures

The following performance measures are proposed:

#### *Kiosks - Participation, Utilization, and Satisfaction Measures:*

- Number of users who access commute/transportation information through a kiosk
- Number of users who submit a ridematch application to Commuter Operations Center
- Number of users who obtain transit schedules or maps
- Kiosk user placement rate (percent of users who shift to a commute alternative)

#### *Program Impact Measures:*

- Vehicle trips reduced (number of daily trips reduced)
- VMT reduced (in miles)
- Emissions reduced (in tons of pollutants)

### Other Data Needs

The following data items will be used to calculate performance measures for Integrated Rideshare. Each data source will be described in the Evaluation Framework document.

#### Data Needs

- Kiosk users
- Applications submitted to CC via kiosks
- Kiosk users' placement rate
- Kiosk VTR Factor, ave travel distance

#### Data Source

SOC survey  
Commuter Connections database  
SOC survey  
SOC survey

#### Proposed timing of data collection

- Commuter Connections database – ongoing
- SOC survey – Early 2007

This TERM overlaps with the Commuter Operations Center for rideshare applicants who submit their applications via the kiosk. Double counting of impacts is avoided by estimating the kiosk impact for these rideshare applicants and subtracting this credit from the impacts calculated for the Commuter Operations Center.

## **6. COMMUTER OPERATIONS CENTER**

### Program Description

For many years COG has offered basic commute information and assistance, such as ridematching. Because these services were available when the emissions baseline was developed for regional conformity, only benefits above this 1997 baseline are included as a TERM.

The function of the Commuter Operations Center is to increase commuters' awareness of commute alternatives, through regional and local marketing and outreach programs and to encourage and assist commuters to form ridesharing arrangements. Encouraging commuters who drive alone to shift to commute alternatives is a priority for the COC, but the COC also assists commuters who now use commute alternatives to continue to do so, by offering ridematching and transit assistance when carpools break up or commuters' travel patterns change and disrupt existing commute alternative arrangements.

Commuter Connections program services include: carpool and vanpool matchlists, transit route and schedule information, information on Park & Ride lot locations and HOV lanes, telework information, commute program assistance for employers, GRH, and bicycling and walking information. Commuters obtain services by calling a toll-free telephone number or by submitting a ridematch application obtained from COG, an employer, a local partner assistance program, a transportation management association (TMA), or through the internet or one of the information kiosks described below.

### TERM Evaluation Changes Since 2002-2005

- Incorporate Software Upgrades – In the 2002-2005 evaluation, the Integrated Rideshare TERM included a Software Upgrade component. This component included integrated information on transit service options, Park & Ride locations, and telecenter locations into the Commuter Connections Ridematch Software System (information provided to all matchlist recipients). This component has now been incorporated into the Commuter Operations Center.

### Stated Goals

COG has defined the following goals for the Commuter Operations Center for 2008:

- Register 152,356 commuters
- Reduce 10,399 daily vehicle trips
- Reduce 296,635 daily vehicle miles of travel
- Reduce \_\_\_ daily tons of NOx
- Reduce \_\_\_ daily tons of VOC

### Nature of Evaluation

Since the basic Commuter Connections ridematching and information services are covered in the conformity baseline, this evaluation component seeks to credit the program with any increases in effectiveness due to program enhancements not covered by other TERMS. Thus, the basic approach is to determine the total transportation and air quality impacts for all Commuter Connections services and subtract out impacts assigned to GRH, Mass Marketing, InfoExpress Kiosks, and any other TERM that overlaps with the COC. The balance of impacts equals the impacts of the COC.

Performance Measures

The following performance measures are proposed for the Commuter Operations Center:

*Participation, Utilization, and Satisfaction Measures*

- Number of commuter applicants to the COC
- Percent of applicants who receive matchnames on their matchlist
- COC placement rate
- Applicant satisfaction with COC service

*Program Impact Measures:*

- Vehicle trips reduced (number of daily trips reduced)
- VMT reduced (in miles)
- Emissions reduced (in tons of pollutants)

Data Needs and Sources:

The following data items will be used to calculate program impacts for the Commuter Operations Center, including software upgrades and kiosks.

Data Needs

- Commuter Connections (CC) applicants
- CC placement rate
- CC VTR Factor and average travel distance
- Vehicle trips and VMT assigned to other TERMS

Data Source

Commuter Connections database  
 CC Applicant Placement survey  
 CC Applicant Placement survey  
 Results of other TERM evaluations

## Proposed timing of data collection

- Commuter Connections database – ongoing
- CC Applicant Placement survey (2005)
- SOC survey – early 2007

**Greater Washington, D.C., State of the Commute Survey – FY07**  
V2 – 12/06/06

**INTRODUCTION**

Hello. My name is \_\_\_\_\_. I'm calling (from CIC Research) on behalf of the Metropolitan Washington Council of Governments. We're talking to residents of Maryland, Virginia, and the District of Columbia about their travel to work. (IF NECESSARY: This is a genuine survey. No attempt will be made to sell you anything. Your answers will be kept completely confidential and will be used only together with those of other respondents.). Is now a good time? (ARRANGE CALL BACK)

**SCREENING QUESTIONS**

S1 Is anyone in your household employed? By employed, I mean a wage or salaried employee, military or self-employed...

**INTERVIEWERS: SCREEN OUT KEEPING OWN HOUSE (HOUSEWIFE), DISABLED, RETIRED, STUDENT, VOLUNTEER OR UNEMPLOYED-LOOKING FOR WORK**

- 1 yes (SKIP TO QS4)
- 2 no (ASK QS2)

S2 How many persons live in your home? Please count yourself, family and friends, and anyone who may be unrelated to you such as live-in housekeepers or boarders.

- \_\_\_\_\_ persons
- 88 Don't know
  - 99 Refuse

S3 In what county (or Independent City) do you live now? (DO NOT READ)

- 1 Alexandria City, VA
- 2 Arlington Co., VA
- 3 Calvert Co., MD
- 4 Charles Co., MD
- 5 Washington, DC (District of Columbia)
- 6 Fairfax Co., VA (City of Falls Church, City of Fairfax)
- 7 Frederick Co., MD (City of Frederick)
- 8 Loudoun Co., VA
- 9 Montgomery Co., MD (City of Rockville, City of Gaithersburg, City of Takoma Park)
- 10 Prince George's Co., MD (City of Greenbelt, City of College Park, City of Bowie)
- 11 Prince William Co., VA (City of Manassas, City of Manassas Park)
- 12 Stafford Co., VA
- 13 Other (SPECIFY) \_\_\_\_\_
- 88 Don't know
- 99 Refused

**RECORD INFORMATION AND THEN, THANK & TERMINATE**

S4 Are you an employed person who is at least 16?

- 1 yes (SKIP TO Q1)
- 2 no (ASK QS5)

S5 Is anyone else in your household employed either full-time or part-time?

- 1 yes (ASK FOR THAT PERSON AND REPEAT INTRO, THEN GO BACK TO QS4 OR ARRANGE CB)
- 2 no (GO BACK TO QS2)

**EMPLOYMENT STATUS AND HOME/WORK LOCATION**

- 1 What is your employment status right now -- are you employed 35 hours or more per week, or less than 35 hours?
- 1 Employed full-time (35 hours or more) (CONTINUE)
  - 2 Employed part-time (less than 35 hours) (CONTINUE)
  - 3 Not employed, keeping house, retired, disabled, full-time student, looking for work (GO BACK TO QS5)
  - 8 Don't know (THANK & TERMINATE)
  - 9 Refuse (THANK & TERMINATE)

**QUOTA SCREENER -- NEED 600 IN EACH OF AREAS 1 - 11**

- 2 In what county (or Independent City) do you live now? (DO NOT READ)
- 1 Alexandria City, VA
  - 2 Arlington Co., VA
  - 3 Calvert Co., MD
  - 4 Charles Co., MD
  - 5 Washington, DC (District of Columbia)
  - 6 Fairfax Co., VA (City of Falls Church, City of Fairfax)
  - 7 Frederick Co., MD (City of Frederick)
  - 8 Loudoun Co., VA
  - 9 Montgomery Co., MD (City of Rockville, City of Gaithersburg, City of Takoma Park)
  - 10 Prince George's Co., MD (City of Greenbelt, City of College Park, City of Bowie)
  - 11 Prince William Co., VA (City of Manassas, City of Manassas Park)
  - 12 Other (SPECIFY) \_\_\_\_\_ (THANK AND TERMINATE)
  - 88 Don't know (THANK AND TERMINATE)
  - 99 Refused (THANK AND TERMINATE)

2a What is your home zip code?

\_\_\_\_\_

IF Q2 = 1 AND Q2a = \_\_\_\_\_ . RECODE Q2 = 6  
IF Q2 = 6 AND Q2a = \_\_\_\_\_ . RECODE Q2 = 1

3 In what county (or independent city) do you work? (IF "ALL OVER", ASK: Where do you work the most?)

- 1 Alexandria City (VA)
- 2 Anne Arundel Co. (MD)
- 3 Arlington Co. (VA)
- 4 Calvert Co. (MD)
- 5 Charles Co. (MD)
- 6 Washington, DC (District of Columbia)
- 7 Fairfax Co. (VA)
- 8 Fairfax City (VA)
- 9 Falls Church City (VA)
- 10 Frederick Co. (MD)
- 11 Howard Co. (MD)
- 12 Loudoun Co. (VA)
- 13 Manassas City (VA)
- 14 Manassas Park City (VA)
- 15 Montgomery Co. (MD)
- 16 Prince George's Co. (MD)
- 17 Prince William Co. (VA)
- 18 Stafford Co. (VA)
- 19 Baltimore County (MD)
- 20 Carroll County (MD)
- 21 Other \_\_\_\_\_
- 88 Don't know
- 99 Refuse

## COMMUTE PATTERNS

Now, I'd like to ask you some questions about your commute to and from work. If you have more than one job, just tell me about your primary job.

- 4 First, in a TYPICAL week, how many days are you assigned to work?
- \_\_\_\_\_ days  
\_\_\_\_ "0", not currently working (GO BACK TO Q5)
- 5 How many of those days are weekdays (Monday-Friday)?
- \_\_\_\_\_ days  
\_\_\_\_ "0", (CODE AS WKALL, THEN SKIP TO Q57)
- 6 And how many weekdays do you commute to a work location outside your home? (IF RESPONDENT SAYS, "VARIES BY WEEK" OR "DON'T KNOW", PROMPT "What would you say would be most typical?" IF RESPONDENT STILL SAYS "DON'T KNOW," CODE AS 8)
- 10 None (SKIP TO Q8)
- 1 One  
2 Two  
3 Three  
4 Four  
5 Five
- 8 Don't know (SKIP TO Q61)  
9 Refuse (SKIP TO Q61)
- 7 At what time do you usually arrive at work? (DO NOT READ)
- 1 5 am to 5:29 am  
2 5:30 am to 5:59 am  
3 6 am to 6:29 am  
4 6:30 am to 6:59 am  
5 7 am to 7:29 am  
6 7:30 am to 7:59 am  
7 8 am to 8:29 am  
8 8:30 am to 8:59 am  
9 9 am to 9:29 am  
10 9:30 am 9:59 am  
11 10 am to 5:59 pm  
12 6 pm to 12 midnight  
13 12:01 am to 4:59 am
- 88 Don't know  
99 Refuse

### SKIP TO Q11

- 8 So to be sure I understand, you work at home every weekday you work. Is that right?
- 1 Yes (CONTINUE)  
2 No (INTERVIEWER PROMPT, "SO YOU COMMUTE TO A WORK LOCATION OUTSIDE YOUR HOME ONE OR MORE WEEKDAYS, IS THAT CORRECT?) GO BACK TO Q5)
- 9 Are you self-employed with your primary work location at home?
- 1 Yes (PROGRAMMER, CODE AS HOMEALL) (SKIP TO INSTRUCTIONS BEFORE Q15)  
2 No (CONTINUE)



- 10 Do you telecommute every weekday you work?
- 1 Yes (**PROGRAMMER, CODE AS TELEALL, SKIP TO INSTRUCTIONS BEFORE Q13**)
  - 2 No (**SPECIFY SITUATION, THEN THANK AND TERMINATE**)
- 11 Do you work a compressed or flexible work schedule, for example, a full-time work week in fewer than five days or a schedule with flexible start and end times?
- 1 yes (**CONTINUE**)
  - 2 no (**SKIP TO Q13**)
- 12 What type of schedule do you use? (**DO NOT READ, UNLESS NEEDED TO CLARIFY**)
- 1 4/40 (4 10-hour days per week, 40 hours)
  - 2 9/80 (9 days every 2 weeks, 80 hours)
  - 3 3/36 (3 12-hour days per week, 36 hours - police, fire, hospitals)
  - 4 flex-time or flexible work hours (core hours with flexible start & stop)
  - 5 Work 5 or more days per week, 35 or more hours per week (RECODE Q11 = 2)
  - 6 other (**SPECIFY**) \_\_\_\_\_

**IF TELEALL (FROM Q10), AUTOCODE Q13 = 1, THEN SKIP TO Q13a**

- 13 Now I want to ask you about telecommuting, also called teleworking. For purposes of this survey, "telecommuters" are defined as "wage and salary employees who at least occasionally work at home or at a telework or satellite center during an entire work day, instead of traveling to their regular work place." Based on this definition, are you a telecommuter?
- 1 yes
  - 2 no (**SKIP TO Q14a**)
  - 9 DK/Ref (**SKIP TO Q14a**)
- 13a Does your employer have a formal telecommuting program at your workplace or do you telecommute under an informal arrangement between you and your supervisor?
- 1 yes, formal program
  - 2 yes, informal arrangement
  - 3 N/A
  - 9 DK/Ref

**IF TELEALL AND Q5 = 1, AUTOCODE Q14 = 4, THEN SKIP TO INSTRUCTIONS BEFORE Q15**  
**IF TELEALL AND Q5 = 2, AUTOCODE Q14 = 5, THEN SKIP TO INSTRUCTIONS BEFORE Q15**  
**IF TELEALL AND Q5 = 3, 4, OR 5, AUTOCODE Q14 = 6, THEN SKIP TO INSTRUCTIONS BEFORE Q15**

- 14 How often do you usually telecommute? (**DO NOT READ**)
- 1 occasionally for special project
  - 2 Less than one time per month/only in emergencies (e.g., sick child, snowstorm)
  - 3 1-3 times a month
  - 4 one day a week
  - 5 two days a week
  - 6 3 or more times a week
  - 7 other (**SPECIFY**) \_\_\_\_\_
  - 9 DK/Ref.

**SKIP TO Q15**

14a Do you at least occasionally work at home or at a location other than your central work place during your normal work hours? (IF ASKED: Normal work hours means the hours that you work, which may or may not be the normal business hours of your employer.)

- 1 yes
- 2 no (SKIP TO Q14d)
- 9 DK/Ref (SKIP TO Q14d)

14b On these days, where do you typically work? (DO NOT READ RESPONSES)

- 1 home
- 2 client/customer's office
- 3 satellite office, other office of my employer
- 4 community/business location (e.g., library, Kinkos, business center)
- 5 other \_\_\_\_\_
- 9 DK/Ref

14c How often do you usually work at this or these locations? (DO NOT READ)

- 1 occasionally for special project
- 2 Less than one time per month/only in emergencies (e.g., sick child, snowstorm)
- 3 1-3 times a month
- 4 one day a week
- 5 two days a week
- 6 3 or more times a week
- 7 other (SPECIFY) \_\_\_\_\_
- 9 DK/Ref.

14d Does your employer have a formal telecommuting program at your workplace or permit employees to telecommute under an informal arrangement with the supervisor?

- 1 yes, formal program
- 2 yes, informal arrangement
- 3 no
- 9 DK/Ref

**IF Q14a = 1, AUTOCODE Q14e = 1, THEN SKIP TO Q14f**

14e Would your job responsibilities allow you to work at a location other than your main work place at least occasionally?

- 1 yes
- 2 no (SKIP TO Q15)
- 9 DK/Ref (SKIP TO Q15)

**IF Q14c = 1, 2, 3, OR 7, AUTOCODE Q14f = 1, THEN SKIP TO Q15**

**IF Q14c = 4, 5, OR 6, AUTOCODE Q14f = 2, THEN SKIP TO Q15**

14f Would you be interested in telecommuting on an occasional or regular basis?

- 1 yes, occasional basis
- 2 yes, regular basis
- 3 no
- 9 DK/Ref

**CURRENT COMMUTE PATTERNS**

**INSTRUCTIONS BEFORE Q15**

**IF HOMEALL FROM Q9, DON'T ASK Q15. AUTO FILL Q15, RESPONSE 18 = Q5, THEN SKIP TO Q61**

**IF TELEALL FROM Q10, DON'T ASK Q15. AUTO FILL Q15, RESPONSE 2 = Q5, THEN SKIP TO INSTRUCTIONS BEFORE Q34**

15 Now thinking about LAST week, how did you get to work each day. Let's start with Monday? ... How about Tuesday? ... Wednesday? .... Thursday? .... Friday?

**IF RESPONDENT MENTIONS MORE THAN ONE MODE ON ANY DAY, PROMPT FOR THE MODE USED FOR THE LONGEST DISTANCE PORTION OF THE TRIP.**

**IF Q12 = 1, 2, OR 3 AND RESPONDENT DOES NOT MENTION "CWS day off" (RESPONSE 1), ASK:**  
 "You said you typically work a compressed work schedule. Did you have a compressed work schedule day off last week?"

**IF Q14 = 4, 5, OR 6 AND RESPONDENT DOES NOT MENTION "Telecommute" (RESPONSE 2), ASK:**  
 "You said you typically telecommute one or more days per week. Did you telecommute last week?"

**IF RESPONDENT SAYS TRAVEL TO WORK IN A CAR, TRUCK, OR VAN, SAY, Were you alone in the vehicle? IF YES, REPORT RESPONSE 3. IF NO, SAY, "Including yourself, how many people were in the vehicle?" IF 2-4, RECORD RESPONSE 5, IF 5, PROBE TO ASK ABOUT VANPOOL, THEN CODE RESPONSE 5 OR 7 AS APPROPRIATE, IF 6 OR MORE, RECORD AS RESPONSE 7**

**IF ALL WEEKDAYS IN Q5 ARE ACCOUNTED FOR BY MODES 1-15 IN Q15 BEFORE ALL WEEKDAYS ARE COUNTED, ASK:** You said you typically work only (number of weekdays reported in Q5) per week. Were the weekdays I haven't asked you about regular days off for you last week? **IF RESPONSE IS YES, CATI WILL AUTOFILL REMAINING DAYS WITH CODE 16; OTHERWISE CONTINUE AND RECORD MODES USED FOR THOSE DAYS**

**IF RESPONDENT MENTIONS "SICK, VACATION, HOLIDAY" (RESPONSE 17) FOR ANY DAY, CODE RESPONSE 17, THEN ASK "if you had worked that day, how would you likely have traveled to work?" AND CODE ADDITIONAL MODE RESPONSE FOR THAT DAY.**

Mode/Day of Week	Go to Work				
	Mon	Tues	Wed	Thur	Fri
1. compressed work schedule day off	1	1	1	1	1
2. telecommute/telework	2	2	2	2	2
3. drive alone in your car, taxi	3	3	3	3	3
4. motorcycle	4	4	4	4	4
5. carpool, including carpool w/family member, dropped off	5	5	5	5	5
6. casual carpool (slugging)	6	6	6	6	6
7. vanpool	7	7	7	7	7
8. buspool	8	8	8	8	8
9 rode a bus (public Bus, shuttle)	9	9	9	9	9
10. Metrorail	10	10	10	10	10
11. MARC (MD Commuter Rail)	11	11	11	11	11
12. VRE	12	12	12	12	12
13. AMTRAK/other train	13	13	13	13	13
14. bicycle	14	14	14	14	14
15. walk	15	15	15	15	15
16. regular day off (non-CWS)	16	16	16	16	16
17. sick, vacation, holiday, work out of area, etc. (prompt for travel on non sick, vacation day)	17	17	17	17	17
18. work at home – self-employed	18	18	18	18	18
19. N/A					
20. N/A					
88. N/A					

16 How long is your typical daily commute one way? Please tell me both how many minutes and how many miles. First, how many minutes?

Number of minutes \_\_\_\_\_  
 Time varies \_\_\_\_\_  
 888 Don't know  
 999 Refuse

17 And how many miles? (IF LESS THAN 1 MILE, RECORD AS 0.5)

Number of miles \_\_\_\_\_  
 888 Don't know  
 999 Refuse

**USE OF MODES**

**IN Q18, <MODE Q15> = ALL MODES 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 NAMED IN Q15.**

18 How long have you been using <MODE Q15> to get to work? (DO NOT READ)

**IF MORE THAN ONE <MODE Q15>, REPEAT FOR OTHER <MODE Q15>**  
**ADD TO BRIEFING DOCUMENT INSTRUCTIONS IF RESPONDENT SAYS, "DO YOU MEAN HOW LONG HAVE I BEEN USING <MODE Q15, THIS TYPE OF TRANSPORTATION> OR HOW LONG I'VE BEEN IN THIS PARTICULAR <MODE Q15, bus route, carpool, vanpool, etc.>," INTERVIEWER SHOULD SAY, "Using <MODE Q15, this type of transportation>."**

**CODE MONTHS FOR EACH MODE CURRENTLY USED**  
**IF LESS THAN ONE MONTH, CODE 1 MONTH**  
**IF RESPONDENT SAYS "always used" OR "only used" FOR ANY <MODE Q15>, CODE MONTHS AS 666.**  
**IF RESPONDENT SAYS "didn't work or live in Washington region then" FOR ANY <MODE Q15>, CODE MONTHS AS 777.**  
**IF RESPONDENT SAYS, "don't know" FOR ANY <MODE Q15>, CODE MONTHS AS 999**

	Number of months
1	N/A
2	N/A
3	drive alone
4	motorcycle
5	carpool
6	casual carpool (slugging)
7	vanpool
8	buspool
9	bus
10	Metrorail
11	MARC
12	VRE
13	AMTRAK, other train
14	Bicycle
15	Walk
16	N/A
17	N/A
18	N/A

**DEFINE RECENT MODE = Q18 MODE WITH FEWEST MONTHS**  
**IF TIE FOR RECENT MODE, DESIGNATE BOTH MODES AS RECENT MODE**

**IF Q18 = 666 FOR RECENT MODE, AUTOCODE Q19a = 19, THEN SKIP TO Q20**  
**IF Q18 = 777 FOR RECENT MODE, AUTOCODE Q19a = 20, THEN SKIP TO Q20**

19a Before starting to <RECENT MODE> to work, what type or types of transportation did you use to get to work? (ALLOW MULTIPLE MODES 1 - 15. DO NOT ACCEPT MULTIPLES FOR 19, 20, OR 99)

Deleted: ALTERNATIVE

Deleted: If Q15 = 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, OR 15 ASK ABOUT

Deleted: MOST COMMON <ALT MODE Q15>. OTHERWISE, SKIP TO Q21

Deleted: You said that you <ALT MODE Q15>.

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IF Q12 = 1, 2, OR 3 AND RESPONDENT DOES NOT MENTION "CWS day off" (RESPONSE 1), ASK:  
 "You said you typically work a compressed work schedule now. Did you work a compressed schedule at that time?"

IF Q14 = 4, 5, OR 6 AND RESPONDENT DOES NOT MENTION "Telecommute" (RESPONSE 2), ASK:  
 "You said you typically telecommute one or more days per week now. Did you telecommute at that time?"

(DO NOT READ OTHER RESPONSES)

- 1 compressed work schedule
- 2 telecommute
- 3 drive alone in your car, taxi
- 4 motorcycle
- 5 carpool, including carpool with family member, dropped off
- 6 casual carpool (slugging)
- 7 vanpool
- 8 buspool
- 9 bus
- 10 Metrorail
- 11 MARC
- 12 VRE
- 13 AMTRAK, other train
- 14 Bicycle
- 15 walk
- 16 N/A
- 17 N/A
- 18 N/A
- 19 always used, only used <RECENT MODE>
- 20 not working then, not in DC area then
- 99 Don't know, refused

20 What were the reasons you began using <MODE Q15>? (DO NOT READ; CHECK ALL THAT APPLY)  
 (Probe for the 3 most important and only record 3)

Personal circumstances/preferences

- 1 changed jobs/work hours
- 2 moved to a different residence
- 3 employer or worksite moved
- 4 spouse started new job
- 5 save money
- 6 save time
- 7 gas prices too high
- 8 tired of driving
- 9 prefer to drive, wanted to drive
- 10 safety
- 11 no vehicle available
- 12 car became available, additional car in household
- 13 to stay with family/children
- 14 HOV lanes too congested
- 15 Congestion (other)
- 16 always used
- 17 close to work or transportation pick up/drop off location
- 18 afraid of or didn't like previous form of transportation
- 19 stress
- 20 weather
- 21 bought hybrid vehicle
- 22 convenient (NOT AN ANSWER, PROBE FOR WHY IT'S CONVENIENT)
- 23 to get exercise

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¶

¶

19b FOR EACH MODE MENTIONED IN Q19a, ASK,... ¶

About how many days per week did you use <MODE FROM Q19a>? ¶

¶

IF SUM OF DAYS FROM Q19b NE Q5, ASK "And how did you commute on other days you were assigned to work?" – ACCEPT OPTION OF "didn't work, regular day off." ¶

¶

Mode/Day typically used per week    Number of days using mode ¶

<#>compressed work schedule day off 1 2 3 4 5 ¶

<#>telecommute . 1 2 3 4 5 ¶

<#>drive alone in your car, taxi 1 2 3 4 5 ¶

<#>motorcycle 1 2 3 4 5 ¶

<#>carpool, including carpool with family member, dropped off . 1 2 3 4 5 ¶

<#>casual carpool (slugging) . 1 2 3 4 5 ¶

<#>vanpool . 1 2 3 4 5 ¶

<#>buspool . 1 2 3 4 5 ¶

<#>bus 1 2 3 4 5 ¶

<#>Metrorail 1 2 3 4 5 ¶

<#>MARC . 1 2 3 4 5 ¶

<#>VRE 1 2 3 4 5 ¶

<#>AMTRAK, other train . 1 2 3 4 5 ¶

<#>bicycle . 1 2 3 4 5 ¶

<#>walk 1 2 3 4 5 ¶

<#>didn't work, regular days off . 1 2 3 4 5 ¶

<#>N/A ¶

<#>N/A ¶

<#>always used, only used <ALT MODE Q15> . . . . . 5 ¶

<#>not working then, not in DC area then . . . . . 5 ¶

99 don't know, refused . . . . . 5 ¶

¶

---

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Commuter Services/Programs

- 24 new option that became available
- 25 special program at work
- 26 pressure or encouragement from employer
- 27 GRH
- 28 Ozone action/Code Red days
- 29 no parking, parking expense
- 30 found carpool partner
- 31 NuRide (VA carpool incentive)
- 32 Metrochek, SmartTrip, transit subsidy, vanpool subsidy
- 33 Commuter Choice Maryland

Information/Promotion

- 34 advertising
- 35 initiated request/looked for information on my own
- 36 info. from Commuter Connections/Council of Governments/COG/800 number
- 37 Commuter Connections Website
- 38 other Website
- 39 word of mouth/recommendation
- 40 information from transit agency
- 41 saw highway sign
- 42 yellow pages
- 43 Other \_\_\_\_\_
  
- 88 Don't know
- 99 Refuse

22 In the past two years, have you used or tried any other type of transportation between home and work that you've not already mentioned?

- 1 yes
- 2 no (SKIP TO Q28)

23 What was that type of transportation? (DO NOT READ; CHECK ALL THAT APPLY. IF Q23 = Q15 ANY DAY OR Q19a, INTERVIEWER PROMPT, "YOU ALREADY MENTIONED <MODE Q15, Q19a>, DID YOU TRY ANY OTHER TYPE OF TRANSPORTATION?")

- 1 compressed work schedule day off
- 2 telecommute
- 3 drive alone, taxi
- 4 motorcycle
- 5 carpool, including carpool with family member, dropped off
- 6 casual carpool (slugging)
- 7 vanpool
- 8 buspool
- 9 bus
- 10 Metrorail
- 11 MARC
- 12 VRE
- 13 AMTRAK, other train
- 14 bicycle
- 15 walk
- 16 N/A
- 17 N/A
- 18 N/A
- 19 N/A
- 20 N/A
- 99 don't know, refused

24 How long did you use <Q23 mode(s)>? (DO NOT READ)

- \_\_\_\_\_ months (CONVERT YEARS TO MONTHS)
- 0 less than one month
- 888 occasionally (tried one, emergency use)
- 999 still using (ASK Q25)

**Deleted: SKIP TO Q22!**  
¶  
21 . In the past two years, have you used or tried any other type of transportation between home and work, OTHER than driving alone, taxi, or motorcycle?¶  
¶  
1 . yes (SKIP TO Q23)¶  
2 . no (SKIP TO Q28) ¶  
¶

**Deleted: ,**

**Deleted: OTHER than driving alone, taxi, or motorcycle,**

**Deleted: NOTE: DRIVE ALONE IS NOT A VALID ANSWER. PROBE FOR OTHER ANSWER. IF DRIVE ALONE, TAXI, OR MOTORCYCLE ARE ONLY ANSWERS, SNAP BACK AND CHANGE Q21/Q22 TO "NO."**

**Deleted: (NOT VALID ANSWER)**

**Deleted: (NOT VALID ANSWER)**

SET Q23LONG = Q24, LONGEST DURATION

IF Q24 = STILL USING FOR ANY MODE, THAT MODE = Q23 LONG

IF Q24 = OCCASIONAL FOR ANY MODE, THAT MODE = Q23LONG, UNLESS RESPONDENT MENTIONED BOTH "OCCASIONAL" MODE AND OTHER MODE, THEN USE OTHER MODE

SKIP TO Q26

25 How many days would you say you now < Q23LONG> in a typical month?

\_\_\_\_\_ DAYS PER MONTH

99 don't know, refused

26 What prompted you to use or try this type of transportation? (DO NOT READ; CHECK ALL THAT APPLY)  
(Probe for the 3 most important and only record 3)

Personal circumstances/preferences

- 1 changed jobs/work hours
- 2 moved to a different residence
- 3 employer or worksite moved
- 4 spouse started new job
- 5 save money
- 6 save time
- 7 gas prices too high
- 8 tired of driving
- 9 prefer to drive, wanted to drive
- 10 safety
- 11 no vehicle available
- 12 car became available, additional car in household
- 13 to stay with family/children
- 14 HOV lanes too congested
- 15 congestion (other)
- 16 always used
- 17 close to work or transportation pick up/ drop off location
- 18 afraid of or didn't like previous form of transportation
- 19 stress
- 20 weather
- 21 bought hybrid vehicle
- 22 convenient (NOT AN ANSWER, PROBE FOR WHY IT'S CONVENIENT)
- 23 to get exercise

Commute Services/Programs

- 24 new option that became available
- 25 special program at work
- 26 pressure or encouragement from employer
- 27 GRH
- 28 Ozone action/Code Red days
- 29 no parking, parking expense
- 30 found carpool partner
- 31 NuRide (VA carpool incentive)
- 32 Metrochek, SmartTrip, transit subsidy, vanpool subsidy
- 33 Commuter Choice Maryland

Information/Promotion

- 34 advertising
- 35 initiated request/looked for information on my own
- 36 info. from Commuter Connections/Council of Governments/COG/800 number
- 37 Commuter Connections Website
- 38 other Website
- 39 word of mouth/recommendation
- 40 information from transit agency
- 41 saw highway sign
- 42 yellow pages
- 43 Other \_\_\_\_\_

- 88 Don't know
- 99 Refuse

**IF Q23 = Q15, ANY DAY, ANY MODE, OR Q24 = STILL USING, SKIP TO Q28**

27 Why didn't you continue < Q23LONG>? (DO NOT READ; CHECK ALL THAT APPLY)

- 1 too inconvenient
- 2 cost too much
- 3 took too much time
- 4 safety concerns
- 5 job changes - job, work site, schedule
- 6 need vehicle during or after work
- 7 vehicle became unavailable/unreliable
- 8 moved home location
- 9 didn't like pool partners
- 10 new/changes in employer program
- 11 bus or rail schedule or route change
- 12 child-related activities (e.g., school)
- 13 circumstantial (e.g., car became available)
- 14 used only temporarily (e.g., car in shop)
- 15 weather related
- 16 parking issue
- 17 lost carpool partner
- 18 bought a hybrid or compressed natural gas (CNG) vehicle
- 19 Other (SPECIFY) \_\_\_\_\_

**ALTERNATIVE MODE PATTERNS**

**IF Q15 = 5, 6, 7, CONTINUE, OTHERWISE, SKIP TO Q29**

28 Now I'd like to ask you about your current car/van pool (FROM Q15). Including yourself, how many people usually ride in your carpool or vanpool? (If more than one answer in Q15, select one using this priority: vanpool, carpool, casual carpooling/slug.)

\_\_\_\_\_ total people in pool (must be more than 1)

**IF Q15 = 5, 6, 7, 8, 9, 10, 11, 12, OR 13, CONTINUE USING THE MOST COMMON ALTERNATIVE MODE, OTHERWISE, SKIP TO INTRO BEFORE Q31**

29 How do you get from home to where you meet your <Q15 ALT MODE: carpool, vanpool, buspool, or public transportation>?

- 1 picked up at home by car/van pool or driver (SKIP TO INTRO BEFORE Q34)
- 2 drive alone to driver's home or drive alone to passenger's home
- 3 drive to a central location, like park & ride, or train or subway station
- 4 dropped off or another car/van pool
- 5 bicycle
- 6 motorcycle
- 7 walk
- 8 driver of car pool/van pool (SKIP TO INTRO BEFORE Q34)
- 9 bus/transit
- 10 other (SPECIFY) \_\_\_\_\_

30 How many miles is it one way from your home to where you meet your <Q15 ALT MODE: carpool, vanpool, buspool, or public transportation>? (IF LESS THAN 1 MILE, ENTER 0.5)

\_\_\_\_\_ miles



TELECOMMUTE

INSTRUCTIONS BEFORE Q34

IF Q13 = 1 OR Q15 = 2 ANY DAY, CONTINUE, OTHERWISE, SKIP TO INTRO BEFORE Q44, IF TELEALL, DO NOT READ INTRO BEFORE Q34, SKIP TO Q34

Deleted: Q43

INTRO TO Q34: Now I have a few more questions about telecommuting.

34 First, how long have you been telecommuting?
\_\_\_\_\_ months (CONVERT YEARS TO MONTHS)
999 Don't know/refused

IF TELEALL, AUTOCODE Q36 = 1, THEN SKIP TO Q40

36 Where do you work when you telecommute? Do you work at home, in a telework center, a satellite office provided by your employer, or someplace else? (IF NECESSARY: Telework Centers are federally funded facilities located around the Washington area that allow government and non-government employees to work closer to home some or all of the time.)

- 1 Home (SKIP TO Q40)
2 Telework Center
3 Both home and Telework Center
4 Satellite office provided by employer
5 Both home and satellite office
6 Business service center (Kinkos) or other "retail" location
7 Both home and business service center (Kinkos) or other "retail" location
8 Library or community center
9 Both home and library or community center
10 Executive office suites (WHAT STATE)
11 Both home and executive office suites (IN WHAT STATE IS EXECUTIVE OFFICE SUITE)
12 other location (SPECIFY)
99 Don't know (ASK STATE)

Deleted: (ENTER NUMBER FROM LIST) (IF RESPONDENT DOES NOT KNOW LOCATION, ASK STATE)

Deleted: (ENTER TELEWORK CENTERS NUMBER FROM LIST) (IF RESPONDENT DOES NOT KNOW LOCATION, ASK STATE)

- Deleted: [Telecenters]
Maryland
1. Bowie State University Telecommuting Center (White Oak)
2. Frederick Telework Center
3. Hagerstown Telework Center
4. Laurel Lakes Telecommuting Center
5. Calvert Telecommuting Center (Prince Frederick Telecommuting)
6. Waldorf Telecommuting Center (Charles County)
Virginia
7. GMU (George Mason University) Fairfax Telework and Training Center
8. Fredericksburg Regional Telework Center (Fredericksburg)
9. GMU Herndon Telework and Training Center
10. Manassas Telecommuting Center
11. Fredericksburg Regional Telework Center (Stafford)
12. GMU Sterling Telework and Training Center
13. Shenandoah Valley Telecommuting Center (NetTech Center of Winchester)
14. Woodbridge Telework Center
Washington, D.C.
15. Executive Office Club
West Virginia
16. Jefferson County TeleCenter (BIZTECH, The Telecenter at the Business and Technology Community Center of Jefferson County)

IF Q36 = 3, 5, 7, 9, OR 11, CONTINUE, OTHERWISE, SKIP TO Q38

37 How many days per week, on average, do you telecommute from the location outside your home?
\_\_\_\_\_ days per week

38 How many miles is it one way from your home to this location? (IF LESS THAN ONE MILE, RECORD "1")
\_\_\_\_\_ miles (no decimals)

39 And how do you get from home to this location?
1 N/A
2 N/A
3 drive alone, taxi
4 motorcycle
5 carpool, including carpool with family member, dropped off
6 casual carpool (slugging)
7 vanpool
8 buspool
9 bus
10 Metrorail
11 MARC
12 VRE
13 AMTRAK, other train
14 bicycle
15 walk
99 DK/Ref

40 Why did you start to telecommute? (DO NOT READ) (ALLOW MULTIPLE ANSWERS)

- 1 changed jobs/work hours
- 2 save money
- 3 save time
- 4 new option that became available
- 5 advertising
- 6 special program at work
- 7 moved to a different residence
- 8 pressure or encouragement from employer
- 9 safety
- 10 no vehicle available
- 11 tired of driving
- 12 initiated request on my own
- 13 info. From Commuter Connections / COG (Council of Governments) / Web (SKIP TO Q43)
- 14 employer or worksite moved
- 15 get more work done
- 16 quiet, uninterrupted
- 17 stay with family or children
- 18 avoid congestion
- 19 convenient
- 20 personal circumstances (weather, repair man, sick)
- 21 other (SPECIFY) \_\_\_\_\_
- 99 DK/Ref

41 Did you receive any information about telecommuting from Commuter Connections or from the Telework Resource Center at the Council of Governments?

- 1 yes (SKIP TO Q44)
- 2 no
- 9 DK/Ref

Deleted: Q43

IFQ40 = 5, 6, 12, OR 13 SKIP TO Q44, OTHERWISE, CONTINUE

Deleted: Q43

42 How did you find out about telecommuting? (DO NOT READ)

- 1 advertising (radio, newspaper or TV)
- 2 special program at work/employer provided information
- 3 initiated request on my own
- 4 information from Commuter Connections / COG (Council of Governments)
- 5 word of mouth
- 6 newspaper or magazine article
- 7 Commuter Connections Website
- 8 Other Website
- 9 County or jurisdiction program
- 10 other (SPECIFY) \_\_\_\_\_
- 99 DK/Ref

AVAILABILITY OF TRANSPORTATION OPTIONS

IF TELEALL, SKIP TO Q61

INTRO BEFORE Q44: Next, I want to ask you about transportation services that might be available in your area.

44 Regardless of whether or not you use them, what train or bus companies provide service in the area where you live? (DO NOT READ; PROBE WELL; ACCEPT MULTIPLE RESPONSES, BUT DO NOT ALLOW MULTIPLE RESPONSES WITH 1 OR 99)

1 No buses or trains provide service

Buses

- 2 Alexandria DASH
3 Fairfax Connector
4 Fairfax Cue
5 Loudoun Commuter Bus
6 Metrobus
7 MTA bus
8 Omni Ride
9 Ride On
10 "The Bus"
11 TransIT Bus
12 Other Bus (PROBE FOR NAME)

Trains

- 13 AMTRAK/ACELA
14 MARC
15 MetroRail/subway
16 Virginia Railway Express (VRE)
17 Other Train (PROBE FOR NAME)

- 18 Other (SPECIFY)
99 Don't know/Refused

45a About how far from your home is the nearest bus stop? (NOTE IF MILES OR BLOCKS)

Number of miles
Number of blocks
999 Don't know

45b How far from your home is the nearest train station? (NOTE IF MILES OR BLOCKS)

Number of miles
Number of blocks
999 Don't know

45c What train or bus companies provide service in the area where you work? (DO NOT READ CHOICES; PROBE WELL FOR NAME OF BUS OR TRAIN COMPANY; CHECK ALL THAT APPLY BELOW, BUT DO NOT ALLOW MULTIPLE RESPONSES WITH 1 OR 99)

1 No buses or trains provide service

Buses

- 2 Alexandria DASH
3 Fairfax Connector
4 Fairfax Cue
5 Loudoun Commuter Bus
6 Metrobus
7 MTA bus
8 Omni Ride
9 Ride On
10 "The Bus"
11 TransIT Bus
12 Other Bus (PROBE FOR NAME)

Deleted: Q43

Deleted: ¶
IF Q15 = 9, 10, 11, 12, or 13, SKIP TO Q45

Deleted: ¶
43. Regardless of whether or not you use it, can you tell me if public transportation such as buses or trains provide service from the area where you live to the area where you work? ¶

- 1. Yes, there is ¶
2. No, there isn't (SKIP TO Q46) . ¶
8. Don't know (SKIP TO Q46) ¶
9. Refused (SKIP TO Q46) 44. What train or bus companies are those? (DO NOT READ; PROBE WELL; ACCEPT MULTIPLE RESPONSES) ¶
<#>Alexandria DASH ¶
<#>AMTRAK/ACELA ¶
<#>Fairfax Connector ¶
<#>Fairfax Cue ¶
<#>Loudoun Commuter Bus ¶
<#>MARC ¶
<#>Metrobus ¶
<#>MetroRail/subway ¶
<#>MTA bus ¶
<#>Omni Ride ¶
<#>Ride On ¶
<#>"The Bus" ¶
<#>TransIT Bus ¶
<#>Virginia Railway Express ¶
<#>Bus (PROBE FOR NAME) ¶
<#>Train (PROBE FOR NAME) ¶
<#>Other (SPECIFY) ¶
99. Don't know/Refused ¶

¶
NOW, SKIP TO Q46 ¶

45. What train or bus companies provide service from the area where you live? (DO NOT READ CHOICES) [1]

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Deleted: <#>AMTRAK/ACELA ¶

Deleted: <#>MARC ¶

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Deleted: <#>MetroRail/subway ¶

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Deleted: Bus (PROBE FOR NAME) ¶

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Trains

- 13 AMTRAK/ACELA
- 14 MARC
- 15 MetroRail/subway
- 16 Virginia Railway Express (VRE)
- 17 Other Train (PROBE FOR NAME)

- 18 Other (SPECIFY)
- 99 Don't know/Refused

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- 46 Is there a special HOV (High Occupancy Vehicle) lane that can be used only by carpools, vanpools and buses along your route to work?
- 1 Yes
  - 2 No (SKIP TO Q52)
  - 9 Refused/Don't know (SKIP TO Q52)

IF Q15 = 14, 15, ALL DAYS, AUTOCODE Q47 = 2, THEN SKIP TO Q54

- 47 Do you use the HOV lane to get to or from work?
- 1 Yes
  - 2 No (SKIP TO Q52)
  - 9 Refused/Don't know (SKIP TO Q52)

- 50 How much time does the HOV lane save you in your one-way trip to or from work?
- \_\_\_\_\_ minutes
- 999 DK/Ref.

- 51 Did the HOV lane influence your decision to use your current way of commuting?
- 1 Yes
  - 2 No
  - 9 Refused/Don't know

- 52 Do you know the locations of Park 'n Ride lots along the route that you take to work?
- 1 yes
  - 2 no (SKIP TO Q54)
  - 3 there aren't any (SKIP TO Q54)
  - 8 Don't know (SKIP TO Q54)
  - 9 Refused (SKIP TO Q54)

- 53 In the past year have you used Park 'n Ride lots when commuting to work?
- 1 yes
  - 2 no
  - 9 DK/Ref.

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**IF Q47 = 1 AND Q15 = 3 (DRIVE ALONE), ALL DAYS, ASK Q48, OTHERWISE, SKIP TO Q49**

¶

48 . Do you drive an alternative fuel vehicle to work, for example, an electric or hybrid vehicle or one that uses compressed natural gas instead of gasoline? ¶

¶

1 . Yes ¶

2 No ¶

9 . Refused/Don't know¶

¶

49 . About how many days per week do you use the HOV lane for commuting? ¶

¶

<#>One¶

<#>Two¶

<#>Three¶

<#>Four¶

<#>Five¶

<#>Varies from one week to another¶

9 Refused/Don't know (SKIP TO Q52)

**ATTITUDES TOWARD TRANSPORTATION MODES**

**If Q15 = 8, 9 OR Q29 = 9, SKIP TO Q55**

**If Q23 = 8, 9 AND Q24 = 999 (still using), SKIP TO Q55**

**If Q43 = 2 (no), AUTOCODE Q54 = 1 AND AUTOCODE Q55 = 1, THEN SKIP TO Q56**

54 You said earlier that you do not ride the bus regularly for your commute to work. Why don't you ride the bus?  
(DO NOT READ, ACCEPT MULTIPLE RESPONSES)

- 1 No bus service available (in home area or in work area/bus too far away
- 2 Don't know if service is available/don't know location of bus stops
- 3 Need my car for work
- 4 Need car before or after work
- 5 Need car for emergencies/overtime
- 6 It might not be safe/I don't feel safe (on bus or at bus stops)
- 7 Bus is unreliable/late
- 8 Trip is too long/distance too far
- 9 Takes too much time
- 10 Don't like to ride with strangers
- 11 Prefer to be alone during commute
- 12 Work schedule irregular
- 13 Too expensive
- 14 Too uncomfortable/crowded
- 15 Buses too dirty
- 16 Have to transfer/too many transfers
- 17 Had a bad experience with the bus in the past
- 18 Have to wait too long for the bus or between buses
- 19 Other (specify) \_\_\_\_\_
- 99 DK/Ref

**IF Q15= 10, 11, 12, 13 (TRAIN), SKIP TO Q56**

**If Q23 = 10, 11, 12, 13 AND Q24 = 999 (still using), SKIP TO Q56**

55 You said that you do not ride the train to work. Why not? (DO NOT READ, ACCEPT MULTIPLE RESPONSES)

- 1 No train service available (in home area or in work area)/train too far away
- 2 Don't know if service is available/don't know location of train stations
- 3 Need my car for work
- 4 Need car before or after work
- 5 Need car for emergencies/overtime
- 6 It might not be safe/I don't feel safe (on train or at train stations)
- 7 Train is unreliable/late
- 8 Trip is too long/distance too far
- 9 Takes too much time
- 10 Don't like to ride with strangers
- 11 Prefer to be alone during commute
- 12 Work schedule irregular
- 13 Too expensive
- 14 Too uncomfortable/crowded
- 15 Train too dirty
- 16 Have to transfer/too many transfers
- 17 Had a bad experience with the train in the past
- 18 Have to wait too long for the train or between trains
- 19 Other (specify) \_\_\_\_\_
- 99 DK/Ref

**IF Q15 = 5, 6, 7 OR Q29 = 1, 4, OR 8 SKIP TO Q57**

**If Q23 = 5, 6, 7 AND Q24 = 999 (still using), SKIP TO Q57**

56 You said that you do not use a carpool or vanpool for your trip to work. Why don't you carpool or vanpool?  
(DO NOT READ, ACCEPT MULTIPLE RESPONSES)

- 1 Don't know anyone to carpool/vanpool with
- 2 Need my car for work
- 3 Need car before or after work
- 4 Need car for emergencies/overtime
- 5 It might not be safe/I don't feel safe
- 6 Carpool/vanpool partners are/could be unreliable/late
- 7 Trip is too long/distance too far
- 8 Takes too much time
- 9 Doesn't save time
- 10 Don't like to ride with strangers
- 11 Prefer to be alone during commute
- 12 Work schedule irregular
- 13 Too expensive
- 14 Had a bad experience with carpooling/vanpooling in the past
- 15 Other (specify) \_\_\_\_\_
- 99 DK/Ref

**CURRENT COMMUTE COMPARED TO LAST YEAR**

57 Would you say your commute is easier, more difficult, or about the same now as it was one year ago?

- 1 easier (ASK Q58)
- 2 more difficult (ASK Q59)
- 3 about the same (SKIP TO Q61)
- 4 not applicable (SKIP TO Q61)
- 9 DK/Ref (SKIP TO Q61)

58 In what way is it easier?

- 1 shorter distance
- 2 trip is faster, takes less time
- 3 route is less congested
- 4 started carpooling/vanpooling to work
- 5 started using bus, train to work
- 6 started driving alone to work
- 7 less stressful
- 8 bought a hybrid or compressed natural gas (CNG) vehicle
- 9 started using HOV lanes
- 10 other \_\_\_\_\_
- 19 Refused/Don't know

59 In what way is it more difficult?

- 1 longer distance
- 2 trip is slower, takes more time
- 3 more congested
- 4 started carpooling/vanpooling to work
- 5 started using bus, train to work
- 6 started driving alone to work
- 7 more stressful
- 8 construction on route to work
- 9 trains, buses, metro more crowded
- 10 other \_\_\_\_\_
- 19 DK/Ref.

60 Have you changed your work or home location in the last year? IF YES, AND RESPONDENT DOES NOT VOLUNTEER INFORMATION, ASK, "Did you change your home or work location?"

- 1 Yes, changed home location
- 2 Yes, changed work location
- 3 Yes, changed BOTH home AND work locations
- 4 No (SKIP TO Q61)
- 9 DK/Ref. (SKIP TO Q61)

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60a Was your previous location also in the Washington metropolitan region?

- 1 Yes
- 2 No
- 9 DK/Refused

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60b What factors did you consider in your decision to make this change? (DO NOT READ, ACCEPT MULTIPLE RESPONSES)

Commute Factors

- 1 Length, ease of commute
- 2 Cost of commuting
- 3 Commuting options that would be available (e.g., transit)

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Residential Factors

- 4 Quality of schools, stay in same school system
- 5 Cost of house
- 6 Cost of living
- 7 Size of house
- 8 Quality of neighborhood
- 9 Closeness to family or friends
- 10 Entertainment, shopping, services nearby

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Job Factors

- 11 Income, salary
- 12 Job satisfaction
- 13 Career advancement
- 14 Job opportunities for spouse

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- 15 Other (SPECIFY) \_\_\_\_\_
- 19 DK/Refused

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60c As you were considering making this change, how important to your decision was the ease of your trip to work relative to the other factors you just mentioned? Was it less important than other factors, more important than other factors, or about the same importance?

- 1 Less important
- 2 More important
- 3 About the same importance
- 9 DK/Refused

**AWARENESS OF COMMUTE PROGRAMS/SERVICES**

61 Have you heard, seen, or read any advertising about commuting in the past 6 months?

- 1 yes
- 2 no (SKIP TO Q81)
- 9 DK/Ref (SKIP TO Q81)

Deleted: Q73

Deleted: Q73

62 What messages do you recall from this advertising? (DON'T READ, ACCEPT MULTIPLE RESPONSES)

- 1 none (SKIP TO Q81)
- 2 that you should rideshare, carpool, vanpool) (NOT ACCEPTABLE ANSWER; PROBE FOR WHY AND RECORD ELSEWHERE)

Deleted: Q73

- 3 that new trains and/or buses are coming
- 4 that you can call for carpool or vanpool info
- 5 call 1-800-745-RIDE / call Commuter Connections
- 6 Commuter Choice Maryland
- 7 contact the Commuter Connections website (www.commuterconnections.org, www.commuterconnections.com)
- 8 it saves money
- 9 it saves time
- 10 it is less stressful
- 11 guaranteed ride home (GRH)
- 12 employer would give me MetroChek benefits, SmartTrip benefits
- 13 it would help the environment
- 14 it reduces traffic
- 15 it saves wear and tear on the car
- 16 Ozone Action Days / Code Red Days
- 17 Telework Center / telecommuting
- 18 HOV lanes
- 19 regional services/programs are available to help with commute
- 20 Springfield interchange reconstruction
- 21 Wilson bridge reconstruction, Bridge Bucks
- 22 use the bus or train, use Metrobus
- 23 other (SPECIFY) \_\_\_\_\_
- 99 DK/Ref. (SKIP TO Q81)

Deleted: (ASK Q79)†  
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63 What organization or group sponsored the ad you recall? (DO NOT READ, ACCEPT MULTIPLE RESPONSES)

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- 1 Commuter Connections
- 2 Metropolitan Washington Council of Governments, MWCOG, COG
- 3 Metro, WMATA
- 4 MARC, Maryland Commuter Rail
- 5 VRE, Virginia Railway Express
- 6 VDOT (Virginia Department of Transportation)
- 7 DDOT (District of Columbia Department of Transportation)
- 8 MDOT (Maryland Department of Transportation)
- 9 VDRPT, Virginia Department of Rail and Public Transportation
- 10 Maryland State Highway Administration
- 11 MTA, Maryland Mass Transit Administration
- 12 Maryland Department of the Environment
- 13 WABA, Washington Area Bicycling Association
- 14 other (specify) \_\_\_\_\_
- 99 DK/Ref.

64 And where did you see, hear, or read this advertisement? (DO NOT READ, ACCEPT MULTIPLE RESPONSES)

- 1 Commuter Connections website
- 2 other website, internet
- 3 radio
- 4 TV
- 5 postcard in mail
- 6 newspaper
- 7 in train station
- 8 on train or bus
- 9 at work
- 10 other (\_\_\_\_\_)
- 19 DK/Ref.

IF HOMEALL, SKIP TO Q81,  
IF TELEALL, SKIP TO Q81,  
IF WKALL, SKIP TO Q81,

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Deleted: Q73  
Deleted: (Q113?)



Attitude changes/actions taken after hearing ads

65 After seeing or hearing this advertising, were you more likely to consider ridesharing or public transportation?

- 1 yes
- 2 no (SKIP TO Q81)
- 9 DK/Ref (SKIP TO Q81)

Deleted: Q73

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66 After seeing or hearing this advertising, did you take any actions to try to change how you commute? IF YES... "What actions did you take? (DO NOT READ)

- 1 didn't take any action (SKIP TO Q81)

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Sought information

- 2 looked for commute information on the internet
- 3 asked friend, family member, or co-worker for commute information (referral)
- 4 contacted a local or regional organization for commute information
- 5 looked for a carpool or vanpool partner
- 6 called a transit operator to ask about schedules or routes
- 7 asked employer about telecommuting opportunities
- 8 asked employer about Metrochek or SmartTrip
- 9 looked for information about guaranteed ride home (GRH) program
- 10 looked for information about HOV lanes

Started participating in commute service/program

- 11 registered for guaranteed ride home (GRH) program
- 12 purchased alternative fuel vehicle (e.g., electric car, hybrid car, CNG-fueled vehicle)
- 13 started using HOV lane to get to work

Changed personal situation, work schedule, or commute route

- 14 moved my home or job location, changed jobs
- 15 started going to work earlier or later
- 16 changed or reduced number of days I work
- 17 changed route to work

Tried another way of getting to work, started using another form of transportation

- 18 tried or started driving alone to work
- 19 tried or started carpooling to work
- 20 tried or started vanpooling to work
- 21 tried or started using bus to get to work
- 22 tried or started using train to get to work
- 23 tried or started bicycling or walking to work
- 24 tried or started telecommuting/teleworking

Other

- 25 other action (specify \_\_\_\_\_) (SKIP TO Q81)
- 99 DK/Ref (SKIP TO Q81)

Deleted: Q73

Deleted: Q73

*Autocode reasons for change for respondent currently using alt mode (Q15) named in Q66*

- IF Q66 = 19 AND Q15 = 5 OR 6, CODE Q67 = Q20, DO NOT ASK Q67
- IF Q66 = 20 AND Q15 = 7, CODE Q67 = Q20, DO NOT ASK Q67
- IF Q66 = 21 AND Q15 = 8 OR 9, CODE Q67 = Q20, DO NOT ASK Q67
- IF Q66 = 22 AND Q15 = 10, 11, 12, OR 13, CODE Q67 = Q20, DO NOT ASK Q67
- IF Q66 = 23 AND Q15 = 14 OR 15, CODE Q67 = Q20, DO NOT ASK Q67
- IF Q66 = 24 AND Q15 = 2, CODE Q67 = Q20, DO NOT ASK Q67

*Autocode reasons for change for respondent who tried alt mode named in Q66 within past two years (Q23)*

- IF Q66 = 19 AND Q23 = 5 OR 6, CODE Q67 = Q26, DO NOT ASK Q67
- IF Q66 = 20 AND Q23 = 7, CODE Q67 = Q26, DO NOT ASK Q67
- IF Q66 = 21 AND Q23 = 8 OR 9, CODE Q67 = Q26, DO NOT ASK Q67
- IF Q66 = 22 AND Q23 = 10, 11, 12, OR 13, CODE Q67 = Q26, DO NOT ASK Q67
- IF Q66 = 23 AND Q23 = 14 OR 15, CODE Q67 = Q26, DO NOT ASK Q67
- IF Q66 = 24 AND Q23 = 2, CODE Q67 = Q26, DO NOT ASK Q67

67 What were the reasons you decided to take this action? [DO NOT READ, ALLOW MULTIPLE RESPONSES]

Personal circumstances/preferences

- 1 changed jobs/work hours
- 2 moved to a different residence
- 3 employer or worksite moved
- 4 spouse started new job
- 5 save money
- 6 save time
- 7 gas prices too high
- 8 tired of driving
- 9 prefer to drive, wanted to drive
- 10 safety
- 11 no vehicle available
- 12 car became available, additional car in household
- 13 to stay with family/children
- 14 HOV lane too congested
- 15 congestion
- 16 always used
- 17 close to work or transportation pick up/drop off location
- 18 afraid of or didn't like previous form of transportation
- 19 stress
- 20 weather
- 21 bought hybrid vehicle
- 22 convenient (NOT AN ANSWER, PROBE FOR WHY IT'S CONVENIENT)
- 23 to get exercise

Commute Services/Programs

- 24 new option that became available
- 25 special program at work
- 26 pressure or encouragement from employer
- 27 GRH
- 28 Ozone action/Code Red days
- 29 no parking, parking expense
- 30 found carpool partner
- 31 NuRide (VA carpool incentive)
- 32 Metrochek, SmartTrip, transit subsidy, vanpool subsidy
- 33 Commuter Choice Maryland

Information/Promotion

- 34 advertising
- 35 initiated request/looked for information on my own
- 36 info. From Commuter Connections/Council of Governments/COG/800 number
- 37 Commuter Connections Website
- 38 other Website
- 39 word of mouth/recommendation
- 40 information from transit agency
- 41 saw highway sign
- 42 yellow pages
- 43 Other \_\_\_\_\_
- 88 Don't know
- 99 Refused

IF Q67 = 34 (advertising), CODE Q68 = 1, DO NOT ASK Q68

68 Did the advertising you saw or heard encourage you to take this action?

- 1 yes
- 2 no (SKIP TO Q70)
- 9 DK/Ref (SKIP TO Q70)

IF Q68 = 1 AND RESPONDENT MENTIONED MORE THAN ONE MESSAGE IN Q62, ASK Q69, OTHERWISE, SKIP TO Q70

69 You mentioned that you recall several advertising messages. Which message was most important in encouraging you to start or try this type of transportation? Was it ... (READ RESPONSES FROM Q62)

\_\_\_\_\_ message from Q62

**IF Q66 = 2, 3, 4, 5, 6, 7, 8, 9, OR 10, AND Q66 NE 19, 20, 21, 22, 23, OR 24 ASK Q70, OTHERWISE, SKIP TO Q71**

70 How likely is it that you will try another type of transportation for your commute to work, other than driving alone, taxi, or motorcycle, within the next year? Would you say it is ... (READ RESPONSES 1-3. DO NOT READ RESPONSE 9)

- 1 very likely
- 2 somewhat likely
- 3 not likely
- 9 DK/Ref

*Collect info on mode/modes used before trying/starting new alt mode – skip out respondents who did not try alt mode and respondents who answered this question in Q19*

**IF Q66 NE 19, 20, 21, 22, 23, OR 24, SKIP TO Q73**

*Autofill previous modes for respondents currently using alternative mode (Q15) named in Q66*

**IF Q66 EQ 19 AND Q15 = 5 OR 6, AUTOFILL Q71 = "still using," AUTOFILL Q72 = Q19, THEN SKIP TO Q73**

**IF Q66 EQ 20 AND Q15 = 7, AUTOFILL Q71 = "still using," AUTOFILL Q72 = Q19, THEN SKIP TO Q73**

**IF Q66 EQ 21 AND Q15 = 8 OR 9, AUTOFILL Q71 = "still using," AUTOFILL Q72 = Q19, THEN SKIP TO Q73**

**IF Q66 EQ 22 AND Q15 = 10, 11, 12, 13, AUTOFILL Q71 = "still using," AUTOFILL Q72 = Q19, THEN SKIP TO Q73**

**IF Q66 EQ 23 AND Q15 = 14,15, AUTOFILL Q71 = "still using," AUTOFILL Q72 = Q19, THEN SKIP TO Q73**

**IF Q66 EQ 24 AND Q15 = 2, AUTOFILL Q71 = "still using," AUTOFILL Q72 = Q19, THEN SKIP TO Q73**

*Autofill duration for respondents who tried alt mode named in Q66 in past two years (Q23)*

**IF Q66 = 19 AND Q23 = 5 OR 6, ANY DAY, AUTOFILL Q71 = Q24, THEN ASK Q72a**

**IF Q66 = 20 AND Q23 = 7, ANY DAY, AUTOFILL Q71 = Q24, THEN ASK Q72a**

**IF Q66 = 21 AND Q23 = 8 OR 9, ANY DAY, AUTOFILL Q71 = Q24, THEN ASK Q72a**

**IF Q66 = 22 AND Q23 = 10, 11, 12, OR 13, ANY DAY, AUTOFILL Q71 = Q24, THEN ASK Q72a**

**IF Q66 = 23 AND Q23 = 14 OR 15, ANY DAY, AUTOFILL Q71 = Q24, THEN ASK Q72a**

**IF Q66 = 24 AND Q23 = 2, ANY DAY, AUTOFILL Q71 = Q24, THEN ASK Q72a**

71 How long did you <ALT MODE FROM Q66> to work? (IF MORE THAN ONE ALT MODE NOTED IN Q66, ASK DURATION FOR ALL)

- \_\_\_\_\_ months (CONVERT YEARS TO MONTHS)
- \_\_\_\_\_ less than one month
- \_\_\_\_\_ occasionally (tried one, emergency use) (SKIP TO Q73)
- \_\_\_\_\_ still using

999 DK/Ref.

**IF Q66 = 19, 20, 21, 22, 23, 24 (MORE THAN ONE OF THESE), THEN CHOOSE ALT MODE USED LONGEST TIME FOR Q72a. IF MORE THAN ONE ALT MODE USED SAME AMOUNT OF TIME, CHOOSE BOTH MODES.**

72a Before trying <ALT MODE FROM Q66> to work, what type or types of transportation did you use to get to work? (ACCEPT MULTIPLE RESPONSES, PROGRAMMER, LIST MODES FOR USE IN Q72b)

Deleted: IN ORDER: TRAIN, BUS, VANPOOL, CARPOOL, BIKE/WALK, TELECOMMUTE

**FOR EACH MODE MENTIONED IN Q72a, ASK...**

72b About how many days per week did you use <MODE FROM Q72a>??

**IF SUM OF DAYS FROM Q72b NE Q5, ASK "And how did you commute on other days you were assigned to work?" ACCEPT OPTION OF "didn't work, regular day off."**

**IF Q7 = 1, 2, OR 3 AND RESPONDENT DOES NOT MENTION "CWS day off" (RESPONSE 1), ASK: "You said you typically work a compressed work schedule now. Did you work a compressed schedule at that time?"**

IF Q14 = 4, 5, OR 6 AND RESPONDENT DOES NOT MENTION "Telecommute" (RESPONSE 2), ASK:  
 "You said you typically telecommute one or more days per week now. Did you telecommute at that time?"

Mode/Day typically used per week	Number of days using mode				
1 compressed work schedule day off	1	2	3	4	5
2 telecommute	1	2	3	4	5
3 drive alone in your car, taxi	1	2	3	4	5
4 motorcycle	1	2	3	4	5
5 carpool, including carpool with family member, dropped off	1	2	3	4	5
6 casual carpool (slugging)	1	2	3	4	5
7 vanpool	1	2	3	4	5
8 buspool	1	2	3	4	5
9 bus	1	2	3	4	5
10 Metrorail	1	2	3	4	5
11 MARC	1	2	3	4	5
12 VRE	1	2	3	4	5
13 AMTRAK, other train	1	2	3	4	5
14 bicycle	1	2	3	4	5
15 walk	1	2	3	4	5
16 didn't work, regular days off	1	2	3	4	5
17 N/A					
18 N/A					
19 N/A					
20 20. not working then, not in DC area then					5
99 don't know, refused					5

81 Is there a phone number or website you can use to obtain information on ridesharing, public transportation, HOV lanes, and telecommuting in the Washington region?

- 1 Yes
- 2 No (SKIP TO Q86)
- 9 DK/Ref (SKIP TO Q86)

83 What is it? (DON'T READ, ACCEPT MULTIPLES)

- |                                                                                       |                                                  |
|---------------------------------------------------------------------------------------|--------------------------------------------------|
| 1 800-745-RIDE (7433)                                                                 | Commuter Connections (COG)                       |
| 2 888-730-6664                                                                        | Potomac Rappahannock Transportation              |
| 3 703-324-1111                                                                        | Fairfax County Ridesources                       |
| 4 301-565-5870                                                                        | Montgomery Transit Information Call Center       |
| 5 202-637-7000                                                                        | METRO (Washington Metro, Area Transit Authority) |
| 6 <a href="http://www.mwcog.org">www.mwcog.org</a>                                    | Commuter Connections (COG)                       |
| <a href="http://www.commuterconnections.org">www.commuterconnections.org</a>          | Commuter Connections (COG)                       |
| <a href="http://www.commuterconnections.com">www.commuterconnections.com</a>          | Commuter Connections (COG)                       |
| 7 <a href="http://www.vre.org">www.vre.org</a>                                        | Virginia Railway Express (VRE)                   |
| 8 <a href="http://www.commuterdirect.com">www.commuterdirect.com</a>                  | Arlington                                        |
| <a href="http://www.commuterpage.com">www.commuterpage.com</a>                        | Arlington                                        |
| 9 <a href="http://www.springfieldinterchange.com">www.springfieldinterchange.com</a>  | Springfield Interchange (VDOT)                   |
| 10 <a href="http://www.maryland.com">www.maryland.com</a>                             | Maryland Mass Transit Admin. (MTA)               |
|                                                                                       | MARC Commuter Rail                               |
| 11 <a href="http://www.wmata.com">www.wmata.com</a>                                   | WMATA, Metro                                     |
| 12 <a href="http://www.HOVcalculator.com">www.HOVcalculator.com</a>                   | VDOT                                             |
| 13 <a href="http://www.commuterchoicemaryland.com">www.commuterchoicemaryland.com</a> | Commuter Choice Maryland                         |
| -866-RIDE-MTA (1-800-743-3682),                                                       |                                                  |
| 14 Other (SPECIFY) _____                                                              |                                                  |

84 Have you used this number or website in the past year? (CHECK FOR ALL RESPONSES IN Q83)

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refuse

IF Q83 = ONLY 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, SKIP TO Q85a

Deleted: IF Q62 = 17 (telecommute), CODE Q73 = 1 (DO NOT ASK Q73) AND CONTINUE TO Q74

IF Q62 NE 17, CONTINUE WITH Q73

73 Have you heard, seen, or read any advertising about telecommuting/telework in the past 6 months?

- 1 yes
- 2 no (SKIP TO Q79)
- 9 DK/Ref (SKIP TO Q79)

74 IF Q62 = 17 (telecommute), SAY, "You mentioned that you saw or heard advertising for telecommuting." THEN CONTINUE WITH Q74

After seeing or hearing this advertising, were you more likely to consider telecommuting?

- 1 yes
- 2 no (SKIP TO Q79)
- 9 DK/Ref (SKIP TO Q79)

IF Q74 = 3, AUTOCODE Q75 = 1, THEN SKIP TO Q79

IF Q74 NE 3 AND Q15 = 2, ANY DAY OR TELEALL, ASK Q75, OTHERWISE, SKIP TO Q77

75 Were you telecommuting before you saw or heard the telecommute advertising?

- 1 yes (SKIP TO Q79)
- 2 no (CONTINUE)
- 9 DK/Ref (SKIP TO Q79)

76 Did the advertising encourage you to start telecommuting?

- 1 yes
- 2 no
- 9 DK/Ref

SKIP TO Q79

77 IF Q66 = 7, AUTOCODE C ... [2]

Deleted: (SKIP TO Q83)

Deleted: ASK Q82

Deleted: ASK Q82

Deleted: 82 If you wanted to find this type of information for the Washington region, where would you look? (ACCEPT MULTIPLE RESPONSES)

- <#>TV
- <#>magazine
- <#>newspaper ad
- <#>newspaper article
- <#>sign/billboard
- <#>mail/postcard
- <#>brochure
- <#>transportation fair/special e ... [3]

85 How did you find out about this number or website? (DO NOT READ; RECORD FIRST MENTION ONLY)

- 1 TV
- 2 magazine
- 3 newspaper ad
- 4 newspaper article
- 5 sign/billboard
- 6 mail/postcard
- 7 brochure
- 8 transportation fair/special event
- 9 radio
- 10 employer
- 11 library
- 12 phonebook, yellow pages
- 13 word of Mouth (family, friend, co-worker)
- 14 internet/Web
- 15 InfoExpress kiosks
- 16 Ozone Action/Code Red days
- 17 other \_\_\_\_\_
- 88 Don't know
- 99 Refuse

**Commuter Connections and Other Local Jurisdiction Programs**

86 IF Q83 = 1 OR 6, CODE Q86 = 1, THEN SKIP TO Q87  
Have you heard of an organization in the Washington region called Commuter Connections?

- 1 yes
- 2 no (SKIP TO Define Local Program)
- 8 Don't know (SKIP TO Define Local Program)
- 9 Refuse (SKIP TO Define Local Program)

Deleted: Q89

Deleted: Q89

Deleted: Q89

87 How did you learn about Commuter Connections? (DO NOT READ; ACCEPT MULTIPLE RESPONSES)

- 1 TV
- 2 magazine
- 3 newspaper ad
- 4 newspaper article
- 5 sign/billboard
- 6 mail/postcard
- 7 brochure
- 8 transportation fair/special event
- 9 radio
- 10 employer
- 11 Library
- 12 phonebook, yellow pages
- 13 word of mouth (family, friend, co-worker)
- 14 internet/Web
- 15 InfoExpress kiosks
- 16 Ozone Action/Code Red days
- 17 Other \_\_\_\_\_
- 88 Don't know
- 99 Refuse

88 What services does Commuter Connections provide? (DO NOT READ, ACCEPT MULTIPLE RESPONSES)

- 1 guaranteed ride home
- 2 rideshare (carpool/vanpool) information
- 3 help finding carpool/vanpool partners, matchlists
- 4 transit schedule/route information
- 5 HOV lane information
- 6 park & ride lot information, parking information
- 7 telecommute information

- 8 bicycle/walking information
- 9 road construction information
- 10 kiosks, InfoExpress
- 11 Metrochek, SmartTrip
- 12 other (specify) \_\_\_\_\_
- 88 don't know
- 99 Refuse

**IF Q83 = 1 OR 6, AUTOCODE Q88a = 1, THEN SKIP TO Define Local Program**

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**88a** Have you contacted Commuter Connections in the past year or visited a website sponsored by this organization?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refuse

**Define Local Program for Q88b - Q88d**

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IF Q2 = 1 OR Q3 = 1 (Alexandria), INSERT Alexandria Rideshare as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 2 OR Q3 = 3 (Arlington), INSERT Arlington County Commuter Services as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 3 OR Q3 = 4 (Calvert), INSERT \_\_\_\_\_ as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 4 OR Q3 = 5 (Charles), INSERT Alexandria Rideshare as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 5 OR Q3 = 6 (Wash DC), INSERT \_\_\_\_\_ as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 6 OR Q3 = 7, 8, OR 9 (Fairfax Co. Ffx City, Falls Church), INSERT Fairfax County Rideshare as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 7 OR Q3 = 10 (Frederick), INSERT \_\_\_\_\_ as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 8 OR Q3 = 12, 13, OR 14 (Loudoun, Manassas, Manassas Park), INSERT Loudoun County Rideshare as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 9 OR Q3 = 15 (Montgomery), INSERT Montgomery County Rideshare as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 10 OR Q3 = 16 (Prince Georges), INSERT \_\_\_\_\_ as <PROGRAM> in Q88b - Q88d  
 IF Q2 = 11 OR Q3 = 17 (Prince William), INSERT \_\_\_\_\_ as <PROGRAM> in Q88b - Q88d

**88b** Have you heard of an organization called <PROGRAM>?

- 1 yes
- 2 no (SKIP TO Q89)
- 8 Don't know (SKIP TO Q89)
- 9 Refuse (SKIP TO Q89)

**88c** Have you contacted <PROGRAM> in the past year or visited a website sponsored by this organization?

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- 1 Yes
- 2 No (SKIP TO Q89)
- 8 Don't know (SKIP TO Q89)
- 9 Refuse (SKIP TO Q89)

**88d** What information or services were you seeking from <PROGRAM> or website? (DO NOT READ, ACCEPT MULTIPLE RESPONSES)

- 1 transit schedule/route information
- 2 carpool, vanpool (rideshare) information
- 3 help finding carpool/vanpool partners, matchlists
- 4 guaranteed ride home
- 5 Ozone alerts
- 6 park & ride lot information, parking information
- 7 telecommute, telework information
- 8 bicycle, walking information
- 9 road construction information
- 10 MetroChek / SmarTrip
- 11 travel directions, driving directions
- 12 other (specify) \_\_\_\_\_
- 88 don't know
- 99 Refuse

**EMPLOYER SERVICES**

**IF HOMEALL SKIP TO Q105  
IF TELEALL SKIP TO Q105**

89 Next, please tell me if your employer makes any of the following commute services or benefits available to you. How about information on commuter transportation options?

- 1 yes
- 2 no (**SKIP TO Q90**)
- 9 Don't know/Ref (**SKIP TO Q90**)

89a Have you received or used this information from your employer?

- 1 yes
- 2 no
- 9 DK/Ref

90 What about free on-site parking? Does your employer make that available to all employees at your worksite?

- 1 yes
- 2 no (**SKIP TO Q91**)
- 9 Don't know/Ref (**SKIP TO Q93**)

90a Have you used this free parking?

- 1 yes
- 2 no
- 9 DK/Ref

**SKIP TO Q93**

91 Does your employer pay part of your parking cost or do you have to pay the entire cost if you drive to work?

- 1 employer pays part/employee pays part
- 2 employee pays all
- 3 free offsite parking
- 9 DK/Ref

92 Does your employer offer parking discounts for carpools or vanpools?

- 1 yes
- 2 No (**SKIP TO Q93**)
- 9 Don't know/Ref (**SKIP TO Q93**)

92a Have you used this parking discount?

- 1 yes
- 2 no
- 9 DK/Ref

93 Does your employer set aside special parking spaces for carpools or vanpools?

- 1 yes
- 2 no (**SKIP TO Q94**)
- 9 Don't know/Ref (**SKIP TO Q94**)

93a Have you used one of these special spaces?

- 1 yes
- 2 no
- 9 DK/Ref

- 94 Does your employer offer MetroChek, SmarTrip, or other subsidies for public transportation or vanpooling?
- 1 yes
  - 2 no (SKIP TO Q95)
  - 9 Don't know/Ref (SKIP TO Q95)
- 94a Have you used the transit or vanpool subsidy?
- 1 yes
  - 2 no
  - 9 DK/Ref
- 95 Does your employer offer cash payments or other subsidies for carpooling?
- 1 yes
  - 2 no (SKIP TO Q96)
  - 9 Don't know/Ref (SKIP TO Q96)
- 95a Have you used the carpool subsidy?
- 1 yes
  - 2 no
  - 9 DK/Ref
- 96 Does your employer offer any facilities or programs to employees who bike or walk to work?
- 1 yes
  - 2 no (SKIP TO Q97)
  - 9 Don't know/Ref (SKIP TO Q97)
- 96a Have you used any of these facilities or programs?
- 1 yes
  - 2 no (SKIP TO Q97)
  - 9 DK/Ref (SKIP TO Q97)
- 96b What have you used? (DO NOT READ)
- 1 Bike lockers or racks
  - 2 Personal shower or lockers
  - 3 Cash or subsidies for bike or walk
  - 4 Bike club
  - 5 Bike equipment or clothing
  - 6 Participation in Bike to Work Day
  - 7 Other \_\_\_\_\_
  - 9 DK/Ref
- 97 And last, does your employer provide guaranteed rides (GRH) home in case of emergencies or unscheduled overtime? (NOTE: DOESN'T HAVE TO BE A PART OF A FORMAL GRH PROGRAM)
- 1 yes
  - 2 no (SKIP TO Q102)
  - 9 Don't know/Ref (SKIP TO Q102)
- 97a Have you used this service or have you participated in this program? (DO NOT READ)
- 1 yes, used GRH trip / participate in the program (e.g., registered/signed up for, eligible for)
  - 2 no
  - 9 DK/Ref

**GUARANTEED RIDE HOME**



102 Do you know if there is a regional GRH or Guaranteed Ride Home program available in the event of unexpected emergencies and unscheduled overtime for commuters who rideshare or use public transportation?

- 1 yes, there is
- 2 no, there isn't (SKIP TO Q105)
- 9 DK/Ref (SKIP TO Q105)

Deleted: IF Q79 = 1 (YES, SEEN ADVERTISING), THEN AUTO FILL Q102 = 1, AND SKIP TO Q103.

IF Q97a = 1, CODE Q103 = 1, CODE Q104 = 2, THEN SKIP TO Q105

Deleted: , 2, OR 3

103 In the past two years, have you registered for or used any guaranteed Ride Home service?

- 1 Yes
- 2 No (SKIP TO Q105)
- 9 DK/Ref (SKIP TO Q105)

104 Who sponsored or offered the service? (DO NOT READ)

- 1 Commuter Connections/Council of Governments/COG
- 2 Employer
- 3 VRE
- 4 TMA (TyTran)
- 5 Other \_\_\_\_\_
- 9 Don't know/Refuse

**NEW PROGRAM OPTIONS**

Note: Q104a – Q104e were added to the 2005 Mini-Household survey to test commuters' interest in on-line ridematching and rideshare incentive programs. They are included here for consistency and to collect data for possible CC program changes.

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104a In some U.S. cities, commuters can find carpool partners through an internet website. Commuters who want to carpool enter information about when and where they work and a phone number or email address where they can be contacted. They also can search for other commuters who have similar travel and want to carpool.

If a service like this was available in the Washington metro area, how likely would you be to use it? Would you ...definitely use it, probably use it, maybe or maybe not use it, probably not use it, or definitely not use it?

- 1 definitely use (SKIP TO Q104c)
- 2 probably use (SKIP TO Q104c)
- 3 maybe or maybe not use (SKIP TO Q104c)
- 4 probably not use
- 5 definitely not use
- 9 DK/Ref (DO NOT READ, SKIP TO Q104d)

104b For what reasons would you not be interested in using this service? (DO NOT READ RESPONSES; CHECK ALL THAT APPLY)

- 1 not interested in carpooling or vanpooling
- 2 cannot carpool or vanpool because of circumstances (work hours irregular,...)
- 3 already carpool
- 4 concerned about privacy, don't want personal information on internet
- 5 no access to internet
- 6 other \_\_\_\_\_
- 9 DK/Ref

**SKIP TO Q104d**

104c Would you be willing to provide any of the following information on this website for other commuters to use to contact you...? (READ CHOICES 1 - 3) (ALLOW MULTIPLE RESPONSES, 1 - 3)

- 1 A postal address
- 2 An email address

- 3 A phone number
- 4 Not willing to provide any of this information
- 9 DK/Ref (**DO NOT READ**)

104d **IF Q15 = 5 - 15, ANY DAY, SKIP TO Q105**

Suppose commuters who carpool to work could receive a monthly \$25 gift card for purchases at area merchants. How likely would you be to try carpooling to receive the gift card? Would you ... definitely try, probably try, maybe or maybe not try, probably not try, or definitely not try carpooling?

- 1 definitely try (**SKIP TO Q105**)
- 2 probably try (**SKIP TO Q105**)
- 3 maybe or maybe not try
- 4 probably not try
- 5 definitely not try
- 9 DK/Ref (**DO NOT READ**)

104e What if the monthly gift card was for \$50? In this case, would you ... definitely try, probably try, maybe or maybe not try, probably not try, or definitely not try carpooling?

- 1 definitely try
- 2 probably try
- 3 maybe or maybe not try
- 4 probably not try
- 5 definitely not try
- 9 DK/Ref (**DO NOT READ**)

**KIOSKS**

105 Have you ever seen any self-service computer kiosks, located in shopping malls and other public places in the Washington area, which offer information on transit and ridesharing, and other travel information?

- 1 Yes
- 2 No (**SKIP TO Q113**)
- 9 DK/Ref. (**SKIPT O Q113**)

106 In the past two years, have you used one of these kiosks to obtain commute or other transportation information, other than to purchase transit or train tickets?

- 1. Yes
- 2 No (**SKIP TO Q113**)
- 9 DK/Ref. (**SKIP TO Q113**)

107 Where was the kiosk that you used located? (**READ ONLY IF NECESSARY; CHECK ALL THAT APPLY**)

- 1 Ballston Common Mall
- 2 Fair Oaks Mall
- 3 La Promenda at L'Enfant Plaza
- 4 National Foreign Service Training Center – Arlington, VA
- 5 Pentagon
- 6 Reston Town Center
- 7 Springfield Mall
- 8 Tysons Corner Center
- 9 United States Department of State (State Department)
- 10 Union Station
- 11 Montgomery County (White Flint Mall, County Executive Building)
- 12 Fairfax County (libraries, government center, etc.)
- 13 Other \_\_\_\_\_
- 99 DK/Ref.

108 What information did you obtain from the kiosk? (**DO NOT READ, CHECK ALL THAT APPLY; GET TOP 3 ANSWERS ONLY**)

- 1 general rideshare information

- 2 carpool/vanpool matchlist
- 3 transit route/schedule info
- 4 P&R info
- 5 GRH information or registration
- 6 telecommuting information
- 7 HOV lane information
- 8 Mall/retail center information
- 9 Weather information
- 10 Traffic information (SmartTraveler)
- 11 Fairfax County Information
- 12 Maps and guides
- 13 Springfield Interchange construction information
- 14 Ozone Action/Code Red days
- 15 Other \_\_\_\_\_

**IF TELEALL OR HOMEALL, SKIP TO Q113**

109 Did any of the information you received encourage you to use or try another type of transportation, other than driving alone, even if only temporarily, for your commute to work?

- 1. Yes
- 2. No (**SKIP TO Q113**)
- 9. DK/Ref. (**SKIP TO Q113**)

110 What was that type of transportation? (**DO NOT READ; CHECK ALL THAT APPLY**) (**NOTE: DRIVE ALONE IS NOT A VALID ANSWER; PROBE FOR OTHER ANSWER. IF DRIVE ALONE IS ONLY ANSWER, SNAP BACK AND CHANGE Q109 TO "NO."**)

- 1 N/A
- 2 N/A
- 3 drive alone in your car (N/A)
- 4 motorcycle (N/A)
- 5 carpool
- 6 casual carpool (slugging)
- 7 vanpool
- 8 buspool
- 9 bus
- 10 Metrorail
- 11 MARC
- 12 VRE
- 13 AMTRAK, other train
- 14 bicycle
- 15 walk
- 16 N/A
- 17 N/A
- 18 N/A
- 19 N/A
- 20 N/A
- 21 N/A
- 22 other \_\_\_\_\_

111 How long did you use or have you used that type of transportation?

\_\_\_\_\_ months (**CONVERT YEARS TO MONTHS**)

112 How did you usually travel to work before you obtained information from the kiosk?

- 1 N/A
- 2 N/A
- 3 drive alone in your car
- 4 motorcycle
- 5 carpool
- 6 casual carpool (slugging)
- 7 vanpool
- 8 buspool

- 9 bus
- 10 Metrorail
- 11 MARC
- 12 VRE
- 13 AMTRAK, other train
- 14 bicycle
- 15 walk
- 16 N/A
- 17 N/A
- 18 N/A
- 19 N/A
- 20 N/A
- 21 N/A
- 22 other \_\_\_\_\_

**DEMOGRAPHICS**

- 113 In total, how many motor vehicles, in working condition, including automobiles, trucks, vans, and highway motorcycles are owned or leased by members of your household? \_\_\_\_\_
- 114 How many persons live in your home? Please count yourself, family and friends, and anyone who may be unrelated to you such as live-in housekeepers or boarders.  
 \_\_\_\_\_ persons
- 88 Don't know (SKIP TO Q118)  
 99 Refuse (SKIP TO Q118)

**IF Q114 = 1, AUTOCODE 1114a = 0, AUTOCODE Q115 = 1, THEN SKIP TO Q116**

114a And how many of these household members are under the age of 16?

- \_\_\_\_\_ household members
- 888 Don't know  
 999 Refuse

**JF TELEALL OR HOMEALL SKIP TO Q119**

Now I have a few last questions for classification purposes.

- 118 First, about how many employees work at your worksite? Is it . . . (READ CHOICES)
- 1 1 - 25
  - 2 26-50
  - 3 51-100
  - 4 101-250
  - 5 251-999
  - 6 1,000 or more
  - 9 DK/Ref.

119 What is your occupation? \_\_\_\_\_

**IF HOMEALL SKIP TO Q121, AUTO CODE "5" IN Q120**

- 120 What type of employer do you work for? Is your employer a federal agency, a state or local government agency, a non-profit organization or association, a private employer, or are you self-employed?
- 1 federal agency
  - 2 state, or local government agency
  - 3 non-profit organization/association
  - 4 private sector employer
  - 5 self-employed
  - 6 other (SPECIFY) \_\_\_\_\_

**Deleted:** 115 . How many of these household members are employed outside the home? (INCLUDING RESPONDENT)¶

¶ \_\_\_\_\_ employed¶

¶ 888 Don't know (SKIP TO Q118)¶

¶ 999 . Refuse (SKIP TO Q118)¶

¶ 116 IF Q114 = 1 AND Q1 = 1  
 AUTOCODE Q116 = 1, DO NOT ASK Q116¶

IF Q114 = 1 AND Q1 = 2,  
 AUTOCODE Q116 = 0, DO NOT ASK Q116¶

How many work at outside job or jobs 35 hours or more per week?¶

¶ \_\_\_\_\_ household members (IF Q116 = Q115, SKIP TO Q118)¶

<#>Don't know¶

999 . Refuse¶

¶ 117 IF Q114 = 1 AND Q1 = 1,  
 AUTOCODE Q117 = 0, DO NOT ASK Q117¶

IF Q114 = 1 AND Q1 = 2,  
 AUTOCODE Q117 = 1, DO NOT ASK Q117¶

And how many work at outside job or jobs less than 35 hours per week?¶

¶ \_\_\_\_\_ household members¶

<#>Don't know¶

999 . Refuse¶

¶

9 DK/Ref.

121 Which of the following groups includes your age? (READ CHOICES)

- 1 under 18
- 2 18 - 24
- 3 25 - 34
- 4 35 - 44
- 5 45 - 54
- 6 55 - 64
- 7 65 or older
- 9 Refused (DON'T READ)

122 Do you consider yourself to be Latino, Hispanic, or Spanish?

- 1 Yes
- 2 No
- 9 DK/Ref.

123 Now I want to ask you about your race. Which one of the following best describes your racial background. Is it . . . (READ CHOICES 1-5; SELECT ONE RESPONSE ONLY)

- 1 White
- 2 Black or African-American
- 3 American Indian or Alaska Native
- 4 Asian
- 5 Native Hawaiian or Other Pacific Islander
- 6 Other (SPECIFY) \_\_\_\_\_
- 9 Refused

124 Finally, please stop me when I reach the category that best represents your household's total annual income. Is it . . . (READ CHOICES)

- 1 less than \$20,000
- 2 \$20,000 - \$29,999
- 3 \$30,000 - \$39,999
- 4 \$40,000 - \$59,999
- 5 \$60,000 - \$79,999
- 6 \$80,000 - \$99,999
- 7 \$100,000 - \$119,999
- 8 \$120,000 - \$139,999
- 9 \$140,000 - \$159,999
- 10 \$160,000 or more
- 99 Refused (DON'T READ)

Thank you very much for your time and cooperation!

---

(RECORD SEX:) 1 male 2 female

(RECORD LANGUAGE OF INTERVIEW:) 1 English 2 Spanish

43 Regardless of whether or not you use it, can you tell me if public transportation such as buses or trains provide service from the area where you live to the area where you work?

- 1 Yes, there is
- 2 No, there isn't (SKIP TO Q46)
- 8 Don't know (SKIP TO Q46)

9 Refused (SKIP TO Q46) 44 What train or bus companies are those? (DO NOT READ; PROBE WELL; ACCEPT MULTIPLE RESPONSES)

Alexandria DASH  
 AMTRAK/ACELA  
 Fairfax Connector  
 Fairfax Cue  
 Loudoun Commuter Bus  
 MARC  
 Metrobus  
 MetroRail/subway  
 MTA bus  
 Omni Ride  
 Ride On  
 "The Bus"  
 TransIT Bus  
 Virginia Railway Express  
 Bus (PROBE FOR NAME) \_\_\_\_\_  
 Train (PROBE FOR NAME) \_\_\_\_\_  
 Other (SPECIFY) \_\_\_\_\_  
 99 Don't know/Refused

**NOW, SKIP TO Q46**

45 What train or bus companies provide service from the area where you live? (DO NOT READ CHOICES; PROBE WELL FOR NAME OF BUS OR TRAIN COMPANY; CHECK ALL THAT APPLY BELOW)

IF Q62 = 17 (telecommute), CODE Q73 = 1 (DO NOT ASK Q73) AND CONTINUE TO Q74  
 IF Q62 NE 17, CONTINUE WITH Q73

73 Have you heard, seen, or read any advertising about telecommuting/telework in the past 6 months?

- 1 yes
- 2 no (SKIP TO Q79)
- 9 DK/Ref (SKIP TO Q79)

74 IF Q62 = 17 (telecommute), SAY, "You mentioned that you saw or heard advertising for telecommuting." THEN CONTINUE WITH Q74

After seeing or hearing this advertising, were you more likely to consider telecommuting?

- 1 yes
- 2 no (SKIP TO Q79)
- 2 no, was already telecommuting
- 9 DK/Ref (SKIP TO Q79)

IF Q74 = 3, AUTOCODE Q75 = 1, THEN SKIP TO Q79

IF Q74 NE 3 AND Q15 = 2, ANY DAY OR TELEALL, ASK Q75, OTHERWISE, SKIP TO Q77

75 Were you telecommuting before you saw or heard the telecommute advertising?

- 1 yes (SKIP TO Q79)
- 2 no (CONTINUE)

9 DK/Ref (SKIP TO Q79)

76 Did the advertising encourage you to start telecommuting?

- 1 yes
- 2 no
- 9 DK/Ref

**SKIP TO Q79**

77 **IF Q66 = 7, AUTOCODE Q77 = 1, THEN SKIP TO Q78**

Did you ask your employer about telecommuting opportunities at your work place?

- 1 yes
- 2 no
- 9 DK/Ref

78 **IF Q66 = 24, AUTOCODE Q78 = 1, THEN SKIP TO Q79**

Did you try telecommuting?

- 1 yes
- 2 no
- 9 DK/Ref

**IF TELEALL, SKIP TO Q113**

79 **IF Q62 = 11, CODE Q79 = 1, THEN SKIP TO Q79a**

Have you heard, seen, or read any advertising about Guaranteed Ride Home or GRH in the past 6 months?

- 1 yes
- 2 no (SKIP TO Q80)
- 9 DK/Ref (SKIP TO Q80)

79a **IF Q66 = 9 AND Q66 NE 11, AUTOCODE Q79a = 1, THEN SKIP TO Q80**  
**IF Q66 NE 9 AND Q66 = 11, AUTOCODE Q79a = 2, THEN SKIP TO Q80**  
**IF Q66 = 9 AND Q66 = 11, AUTOCODE Q79a = 3, THEN SKIP TO Q80**

**IF Q62 = 11, SAY: ““You mentioned that you saw or heard advertising for Guaranteed Ride Home.” THEN CONTINUE WITH Q79a**

After seeing or hearing this ad, did you seek information about GRH or register for a GRH program?

- 1 yes, sought information about GRH from regional program or from employer
- 2 yes, registered for GRH
- 3 yes, sought GRH information and registered for GRH
- 4 no
- 9 DK/Ref

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**IF Q66 = 10 OR 13, SKIP TO Q81**

**IF Q62 = 17, ASK Q80, OTHERWISE, SKIP TO Q81**

80a **IF Q66 = 10 AND Q66 NE 13, AUTOCODE Q80a = 1, THEN SKIP TO Q81**  
**IF Q66 NE 10 AND Q66 = 13, AUTOCODE Q80a = 2, THEN SKIP TO Q81**  
**IF Q66 = 10 AND Q66 = 13, AUTOCODE Q80a = 3, THEN SKIP TO Q81**

**IF Q62 = 18, SAY: ““You mentioned that you saw or heard advertising for HOV lanes.” THEN CONTINUE WITH Q80a**

Did you seek information about HOV lanes or start using HOV lanes for your commute after hearing or seeing the ad?

- 1 yes, sought information about HOV lanes
- 2 yes, started using HOV lanes for commuting
- 3 yes, sought HOV information and started using HOV lanes
- 3 no
- 9 DK/Ref

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Lori

12/10/2006 9:56:00 PM

82 If you wanted to find this type of information for the Washington region, where would you look?  
(ACCEPT MULTIPLE RESPONSES)

TV  
magazine  
newspaper ad  
newspaper article  
sign/billboard  
mail/postcard  
brochure  
transportation fair/special event  
radio  
employer  
library  
phonebook, yellow pages  
word of mouth (family, friend, co-worker)  
internet/web  
InfoExpress kiosks  
N/A  
other  
88 Don't know  
99 Refuse

SKIP TO Q86

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