



**National Capital Region  
Transportation Planning Board  
COMMUTER CONNECTIONS PROGRAM**

**Baltimore and St. Mary's County Regional  
Guaranteed Ride Home (GRH) Program**

**2019 GRH APPLICANT SURVEY  
Technical Survey Report**

*Prepared for:*

Metropolitan Washington Council of Governments  
777 North Capitol Street, NE, Suite 300  
Washington, DC 20002-4290

Prepared by:

LDA Consulting

In association with:

CIC Research, Inc.

September 17, 2019





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## ABSTRACT

### **Commuter Connections Guaranteed Ride Home Program 2019 Applicant Survey Technical Report**

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#### **ABOUT COMMUTER CONNECTIONS**

Commuter Connections, a program of the National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments (COG), promotes bicycling to work, ridesharing, and other alternatives to drive alone commuting, provides ridematching for carpools and vanpools, incentive programs for alternative commuting, and offers the free Guaranteed Ride Home program. Commuter Connections is funded by the District of Columbia, Maryland, Virginia and U.S. Department of Transportation.

#### **CREDITS**

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## EXECUTIVE SUMMARY

### Introduction

This report presents the results of a Guaranteed Ride Home (GRH) survey of 241 commuters who currently participate or who previously participated in the Baltimore and St. Mary's County regional Guaranteed Ride Home (GRH) Program marketed through the Maryland Transit Administration and operated through the Commuter Connections program at the Metropolitan Washington Council of Governments. This program was introduced in October 2010 to eliminate commuters' fear of being without transportation in the case of an emergency. The program provides up to four free rides home per year in a taxi, rental car, public transit, or a combination of these modes, in the event of an unexpected personal emergency or unscheduled overtime.

The Metropolitan Washington Council of Governments National Capital Regional Transportation Planning Boards' (COG/TPB) Commuter Connections program undertook the survey described in this report to identify and examine commute and demographic characteristics of commuters participating in GRH.

Commuter Connections undertook the survey described in this report for two purposes:

- Examine commute and demographic characteristics of commuters participating in GRH.
- Collect data needed to estimate reductions in vehicle trips, vehicle miles traveled, and emissions reduced as a result of commuters' participation in the GRH Program.

Interviews were conducted by Internet if the applicant had provided a contact email address. Telephone interviews were conducted with applicants who had not provided an email contact. For this reason, "past/Inactive" and "current/Active" participants were divided into Internet and telephone access groups, resulting in four sample groups: 1) Current-Telephone, 2) Past-Telephone, 3) Current-Internet, and 4) Past-Internet.

After all interviews were completed, the data were weighted to align the survey results with the total population of GRH participants during the evaluation period. The criterion used to weight the survey data was "type" of GRH participant. This variable denotes if the participant is currently registered for GRH or was registered in the past.

Following is a summary of results on the following topics:

- Program participation findings
- Impact of GRH on commute patterns
- Implications of results for travel and air quality assessment
- Program marketing findings

### Program Participation Findings

Several results related to program participation are notable, as summarized below:

- The GRH program has continued to attract participants but also retained many participants. One-quarter (26%) of current registrants had been registered for one year or less, but more than six in ten (63%) had been participating for three or more years.
- Forty-five percent of survey respondents were no longer registered for the GRH program (past registrants). However, 53% of respondents whose registration had expired and were listed as past registrants in the database thought they were still registered. Responses to a later question suggest many of these respondents did not realize they needed to re-register each year, so assumed they were still eligible for the program.
- Past registrants left the program for two types of reasons: reasons associated with characteristics of the program and reasons associated with personal circumstances of the registrants. The most frequently mentioned program reasons were that the respondents hadn't gotten around to it/forgot, mentioned by 23% of past registrants, that they did not know they had to re-register (14%), or did not know the registration had

expired (12%). These also were common reasons noted in 2016 and 2013, indicating it is still important to remind registrants that re-registration is required. Seven percent said it was too much effort to use the program, 7% had a problem with re-registering, and 6% were “dissatisfied with the program/had a bad experience.”

### **Impact of GRH on Commute Patterns**

The GRH survey was designed to examine the following key questions: Did the GRH Program encourage commuters who drive alone to work to use alternative modes, such as transit and carpool and did it encourage commuters who use alternative modes to use these modes more days per week?

- **Types of Commute Shifts Made by Participants** – The survey calculated three types of commute shifts that respondents might make: start using an alternative mode (driving alone pre-GRH), increase frequency of alternative mode use (alternative modes pre-GRH, increased frequency during GRH), and maintain alternative mode use (alternative mode pre-GRH and same number of alternative mode days during GRH).

Nearly four in ten (38%) of respondents started using alternative modes at the time they joined GRH. A small number of respondents (2%) increased the number of days they used alternative modes. The remaining 55% said they maintained but did not increase use of alternative modes they were using before GRH.

- **Shifts from Drive Alone to Alternative Modes** – The survey indicated that some commuters who registered for GRH were driving alone prior to joining the program. About 45% of respondents said they primarily drove alone to work before starting GRH. The remaining participants used alternative modes as their primary type of transportation before they joined the program.
- **Increase Use of Alternative Modes** – It is difficult to draw definitive conclusions on the role of GRH in encouraging more frequent use of alternative modes, because only five of the total respondents increased the number of days they used alternative modes. The low respondent number is not necessarily indicative of GRH’s value for this type of change, however. Nearly all participants who were using an alternative pre-GRH already did so three or four days per week. In other words, a large majority of participants already were using alternative modes nearly full-time.
- **Role of GRH in Motivating Change** – The majority of respondents said that the GRH Program was important to their decision to start, maintain, or increase use of alternative modes. But conversely, the majority of respondents also said they were likely to have made the same commute decisions even if GRH was not available. This suggests that GRH was a useful and even valuable service, but not “the reason” that commuters choose alternative modes.

GRH seemed to have a small impact in retaining respondents who were using an alternative pre-GRH and did not increase their alternative mode use. Eight percent of these respondents said they were “not at all likely” to have continued using these modes if GRH were not available and 27% were somewhat likely. Among registrants who started using a new alternative mode, 9% said they were not at all likely to have made the change without GRH and 38% were somewhat likely.

Almost two-thirds (64%) of respondents said GRH was the only Commuter Connections service they received. But even among respondents who did receive other Commuter Connections services, GRH was typically the most important of these services. Only 12% of respondents who started an alternative mode and the same share of respondents who maintained alternative mode use said another Commuter Connections service had been more important to their commute decision

### **Implications of Results for Travel and Air Quality Impact Assessment**

One purpose of the survey was to collect data to enable an evaluation of the travel and air quality impacts of the program. Several findings have specific implications for this assessment:

- A positive finding is that 58% of GRH registrants had been participating in GRH, and therefore using alternative modes, for more than three years. This means that congestion mitigation and air quality improvement benefits of GRH extend longer than the three year evaluation period and that it is reasonable to



carry over travel and air quality benefits of “retained” users, who started using alternative modes during a previous evaluation period, into the subsequent period.

- Another finding related to impact assessment is that the benefit from participants who increased their use of alternatives is likely to be small. Although some benefit was achieved by this increase, only 2% of participants fell into this category. So even though the average increase was 1.6 days per week, the overall impact of their changes would be minimal.
- An interesting finding is that 58% of past registrants were still using alternative modes, even though they were no longer registered for GRH. Ten percent were still carpooling, 4% were vanpooling, 38% continued to use transit, and 4% were walking/biking to work. Thus, these participants generate congestion mitigation and air quality benefit, even after they left the program.

### **Program Marketing Findings**

Finally, several survey results relate to program marketing. These conclusions are summarized below:

- Program marketing seems to be an effective source of information for GRH. Four in ten (45%) respondents said they had heard or seen some form of GRH advertising. And 24% of survey respondents said they had not registered before hearing or seeing the ads and that the ads had encouraged them to register.
- The results also showed the need for multiple outreach channels. Word of mouth continued to be the predominant method by which respondents learned of GRH, but employer/employee survey, Internet, and bus/train signs all were noted by at least 9% of respondents as their first information source about GRH.
- Word of mouth and employers were particularly important sources for drive alone commuters. Four in ten (39%) registrants who drove alone prior to registering mentioned word of mouth as their source and 23% learned of GRH from their employers. Bus and train riders were more likely than were respondents who drove alone or carpooled/vanpooled to say they learned about GRH from a bus or train sign.

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## **SECTION 1 – INTRODUCTION**

This report presents the results of a Guaranteed Ride Home (GRH) survey of 241 commuters who currently participate or who previously participated in the Baltimore and St. Mary’s County Regional Guaranteed Ride Home (GRH) Program supported through the Maryland Transit Administration and operated through the Commuter Connections program at the Metropolitan Washington Council of Governments. This program was introduced in October 2010 to eliminate commuters’ fear of being without transportation in the case of an emergency. The program provides up to four free rides home per year in a taxi, rental car, public transit, or a combination of these modes, in the event of an unexpected personal emergency or unscheduled overtime.

The Metropolitan Washington Council of Governments National Capital Regional Transportation Planning Boards’ (COG/TPB) Commuter Connections program undertook the survey described in this report to identify and examine commute and demographic characteristics of commuters participating in GRH.

This report is divided into two sections following this introduction:

- Section 2 – Description of the survey and sampling methodology
- Section 3 – Presentation of the survey results

Following these main sections are four appendices, including:

- Appendix A – Survey questionnaire
- Appendix B – Respondent alert letters
- Appendix C – Disposition of final dialing results
- Appendix D – Results from 2019, 2016, and 2013 GRH Surveys – Comparison on Key Questions

## SECTION 2 – SURVEY AND SAMPLING METHODOLOGY

### Survey Goals

The primary goal of the GRH survey is to examine characteristics of GRH Program participants and to examine research questions regarding potential travel changes that might be influenced or assisted by the GRH program. Commuter Connections introduced the Baltimore and St. Mary's County GRH Program in October 2010. In April/May 2013, Commuter Connections conducted a survey of GRH applicants to assess travel and air quality impacts of the program. The 2019 GRH survey is the third such survey. Specifically, the survey explores if the GRH program:

- Encourages commuters who drive alone to work to use alternative modes
- Encourages commuters who use alternative modes to use these modes more days per week

### Sample Selection Process

The set of eligible respondents for this survey included any commuter who registered for or participated in the Baltimore and St. Mary's County GRH program between March 16, 2016 and March 15, 2019. Commuters who had active and valid registration status at the time of the survey were considered "current or Active registrants." But some commuters who had participated in the program during the sample period had let their registrations expire and a small number had their registrations cancelled by Commuter Connections. These registrants were considered to be "past or Inactive registrants."

The GRH program also allows commuters who use alternative modes and who otherwise meet the program requirements, to take a trip without registering, under a "one-time exception" rule. If they choose to stay in the program, they must register after that trip. These participants are designated as "one-time exception" users. These users would have been eligible for the survey, but the database did not include any participants with this status.

In March 2019, the consultants received the GRH database from Commuter Connections for the designated survey period. To prepare the database for the survey, CIC Research first removed duplicate records for commuters who re-registered for the program at the end of a year and were given a new status code and a new record. CIC also observed duplicate records with slight differences in name, but with the same telephone number or address. Records also were removed for commuters who had home addresses in which a respondent completed a 2019 State of the Commute (SOC) survey interview. While the GRH registrant might not have been the person at that address who completed the SOC interview, this step was taken to avoid the possibility of survey overload. Finally, CIC also removed a few records for GRH registrants who had not provided any contact information. At the end of this database cleaning process, the database contained 1,161 records for the Baltimore GRH survey.

For the 2019 GRH survey and the surveys administered in 2013 and 2016, Commuter Connections conducted interviews by Internet with applicants who had provided an email address for contact and by telephone with applicants who had not provided an email contact. For this reason, "past/Inactive" and "current/Active" participants were divided into Internet and telephone access groups, resulting in four sample groups.

- 1) Current-Telephone
- 2) Past-Telephone
- 3) Current-Internet
- 4) Past-Internet

Table 1 summarizes the populations for the four sample groups.

**Table 1**  
**Sample Frame by Contact Method and GRH Program Status**

Sample Group	Database Population	Percentage
<b>Telephone Administration</b>		
Current Participants	14	1.2%
Past Participants	63	5.4%
<b>Internet Administration</b>		
Current Participants	434	37.4%
Past Participants	650	56.0%
<b>TOTAL – All Groups</b>	<b>1,161</b>	<b>100.0%</b>

## Questionnaire Design

LDA Consulting, with input from the Commuter Connections TDM Evaluation Group, Baltimore metropolitan region and St. Mary's County local jurisdiction staff, COG/TPB Commuter Connections staff, CIC Research, and Media Beef, designed both the Internet and telephone questionnaires used in the survey. The questionnaires, which were modeled on the 2019 GRH survey conducted by Commuter Connections in the Washington metropolitan region, with additional commute mode and travel route customizations to apply in the Baltimore region, collected data on eight major topics:

- Registration status
- Current commute patterns
- Commute patterns before participating in GRH (Pre-GRH)
- Commute patterns while participation in GRH (During-GRH)
- Influence of GRH on commute choices
- Use of other, non-GRH services provided by Commuter Connections and other organizations
- Use of and satisfaction with GRH trips and the GRH Program
- Use of social networking and travel/trip information applications
- Participant demographics

The questionnaire was designed for two forms of administration: telephone and Internet. The full set of questions was included in each form, but minor wording and format changes were made to the Internet version for visual administration. A copy of the final Internet questionnaire is presented in Appendix A.

## Survey Administration

### Internet Interviews

After finalizing the Internet questionnaire and survey sample for the project, CIC sent two lists and two letters of introduction to COG for distribution. One list contained the names and contact information for 434 current (Active) GRH participants. COG staff merged the survey sample with the alert letter for these participants, and then distributed the letters electronically, accompanied by a link to COG's server. The other list contained the names and contact information for 650 past (Inactive) GRH participants. These also were prepared and distributed electronically; these letters referenced the link to CIC's server. Copies of the emails can be found in Appendix B.

Three reminder letters were sent to current participants who had not yet responded to the survey on COG's server. A total of 51 current participants were interviewed via the Internet site located on COG server. Past participants also received an initial invitation and three reminders. A total of 67 Internet interviews were completed and submitted to the CIC server.

### Telephone Interviews

COG/TPB staff also sent a survey introduction letter, by postal mail, to the 77 past and current participants who had not provided an email address. These participants were included in the telephone survey. A copy of this letter can be found in Appendix B. Commuter Connections received invalid/undeliverable postal returns for 14 addresses of the 77 that were mailed. Most of these respondents had a valid telephone number, however, so were able to be contacted.

Interviews were conducted in CIC's telephone survey facilities, using the CATI (computer-assisted telephone interviewing) system and Voxco software. Prior to beginning the full telephone survey effort, interviewer-training sessions were held, covering the following topics:

- An explanation of the purpose of the study and the group to be sampled
- Overview of COG and its function
- Verbatim reading of the questionnaire
- Review of the definition and instruction sheet to familiarize interviewers with the terminology
- Review of skip-patterns to familiarize interviewers with questionnaire flow
- Practice session on CATI systems in full operational mode

Telephone calls were made between April 15, 2019 and May 16, 2019 on weekdays from 12:15 pm to 8:45 pm EDT. Calls were first directed to the respondent's work number. If contact at work was unsuccessful, the respondent was called at home. Interviews were conducted while respondents were at work or at home, depending on their preferences. If the call was answered by an answering machine, at least three more attempts were made to contact the respondent. A minimum of four attempts were made to contact each "live" sample point.

All interviewing was conducted at CIC's offices with survey supervisors present. Survey supervisors were responsible for overseeing the CATI server, checking quotas, editing call-back appointment times, monitoring interviews, answering questions, and reviewing completed surveys. To ensure data quality, the survey supervisors conducted periodic random monitoring. Other quality assurance checks were done once the data was collected.

The telephone effort resulted in 131 completed interviews. Of the completed interviews, 6 were from the telephone only sample group and 125 were telephone follow-up calls to participants who received the email invitation and did not complete the survey via the Internet. The telephone survey had a refusal rate of 8.5%.<sup>1</sup> An average of 44.7 call attempts was made for each completed interview. A disposition of telephone dialing results can be found in Appendix C.

### Participation Incentive

To boost survey response rates, survey respondents who completed the survey were offered the opportunity to participate in a random drawing for one of five \$100 Amazon gift cards. When interviewing was completed, names of drawing winners were randomly selected from among respondents who requested to participate in the drawing. Each winner was emailed a gift card voucher. Both Internet and telephone respondents were eligible for the drawing.

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<sup>1</sup> Refusal rates are calculated as the number of initial refusals, plus the number terminated during the interview, divided by the total sample. See Appendix C.



### Removal of Non-Working Respondents

After performing the initial post-processing, eight interviews of respondents who were not currently working were removed from the survey data. In past GRH surveys, these respondents were screened out in an early survey question. But because the 2019 survey offered a gift card drawing, these respondents were skipped to the end of the survey and permitted to enter their name in the drawing. For gift card purposes, they were considered to be completed interviews, but for consistency with past surveys, they were removed prior to beginning further analysis. With these removed, a total of 241 interviews were collected.

### **Weighting of Survey Data**

After all interviews were completed, the data were weighted to align the survey results with the total population of GRH participants during the evaluation period. The criterion used to weight the survey data was “type” of GRH participant. This variable denotes if the participant was a current or past participant. Table 2 shows the relationship between the sample and the total participation group for the weighting variable. The differences between these groups tested as statistically significant, thus were weighted to realign participant responses to the population groups. As anticipated, the sample group contained a higher proportion of current participants and a lower proportion of past participants, when compared to the total respondent group.

**Table 2**  
**Comparison of Sample Group and Total Population Distribution**

Type of GRH Participant	Sample Group		Total Population
	(n = __)	Percentage	Percentage
<b>Current Participants</b>			
Telephone participants	2	0.8%	1.2%
Internet participants	131	54.4%	37.4%
<b>Total Current Participants:</b>	<b>133</b>	<b>55.2%</b>	<b>38.6%</b>
<b>Past Participants</b>			
Past telephone participants	4	1.6%	5.4%
Past Internet participants	104	43.2%	56.0%
<b>Total Past Participants:</b>	<b>108</b>	<b>44.8%</b>	<b>61.4%</b>
<b>Total – All Participants</b>	<b>241</b>	<b>100.0%</b>	<b>100.0%</b>

### Level of Confidence for Analysis

The level of confidence for the study was calculated using the finite population correction factor, an approach used when the sample size is large relative to the total population. Completion of 241 interviews from a population of 1,154 (1,161 minus 7 undeliverable postal mail/emails) resulted in a level of confidence of 95%  $\pm$  5.6% for the 2019 Baltimore region GRH survey. This was slightly lower than the 95%  $\pm$  4.9% for the 2016 survey, due to the smaller sample size collected in 2019 (241) when compared with 2016 (329).

## SECTION 3 SURVEY RESULTS

Following are key results from each section of the survey. Survey result percentages presented in the results tables and figures show percentages weighted to the total applicant population, but also show the raw number of respondents (e.g., n=\_\_ ) to which the weighting factor was applied for that question.

Where relevant, survey results are compared for sub-groups of respondents and with corresponding data for the 2016 and 2013 Baltimore region GRH surveys, when these data are available. These comparisons are presented in the appropriate sub-sections. Appendix D also presents comparisons of 2019 results with those of previous GRH surveys.

- Characteristics and demographics of the sample
- Registration Information
- GRH information sources
- Current commute patterns for GRH participants
- Commute patterns before and during participation in GRH
- Influence of GRH on commute pattern decisions
- Use of and satisfaction with GRH trips and the GRH Program
- Social networking and travel/trip information applications

The questionnaire was designed for two forms of administration: telephone and Internet. The full set of questions was included in each form, but minor wording and format changes were made to the Internet version for visual administration. A copy of the final Internet questionnaire is presented in Appendix A.

### Characteristics and Demographics of the Sample

#### Home and Work Locations

The majority (85%) of respondents lived in Maryland. About 4% lived in Virginia and 2% lived in the District of Columbia (Table 3). Most of the remaining respondents lived north of Baltimore in Pennsylvania (7%) or New Jersey (1%). The distribution by work state was considerably different; essentially all (96%) of the respondents worked in Maryland.

**Table 3**  
**Home and Work States**

(2013 n = 543, 2016 n = 329, 2019 n = 241)

State	Home State			Work State		
	2013	2016	2019	2013	2016	2019
Delaware	2%	1%	0%	0%	0%	0%
District of Columbia	2%	1%	2%	<1%	1%	3%
Maryland	72%	71%	85%	100%	98%	96%
New Jersey	3%	6%	1%	0%	0%	0%
Pennsylvania	6%	6%	7%	0%	0%	0%
Virginia	14%	15%	4%	<1%	1%	<1%
Other	1%	0%	1%	0%	0%	0%

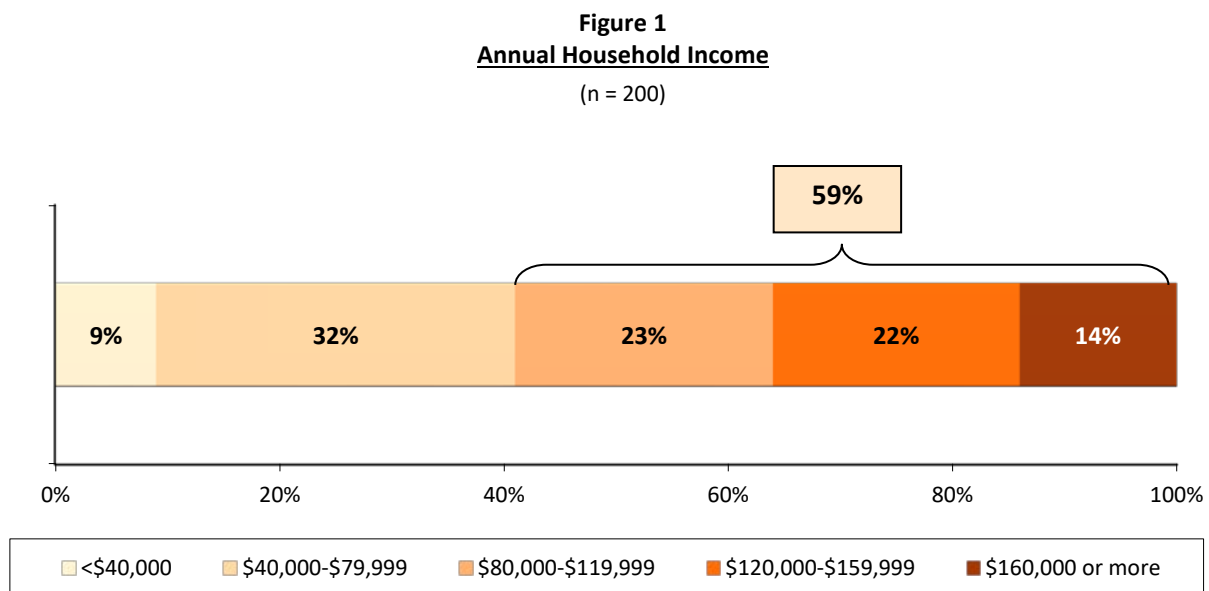
Top home locations for GRH registrants, each with at least 3% of total respondents, included:

<u>Home County</u>	<u>Percentage</u>
• Harford County, MD	23%
• Baltimore City, MD	17%
• Baltimore County, MD	17%
• Howard County, MD	6%
• York County, PA	5%
• Anne Arundel County, MD	5%
• Prince George's County, MD	4%
• Frederick County, MD	4%
• Fairfax County, VA	3%
• Carroll County, MD	3%
• Montgomery County, MD	3%

### Demographics

The survey asked respondents four demographic questions: gender, income, age, and race/ethnicity. Female respondents represented 59% of total respondents and 41% were male. Details of other characteristics are presented below.

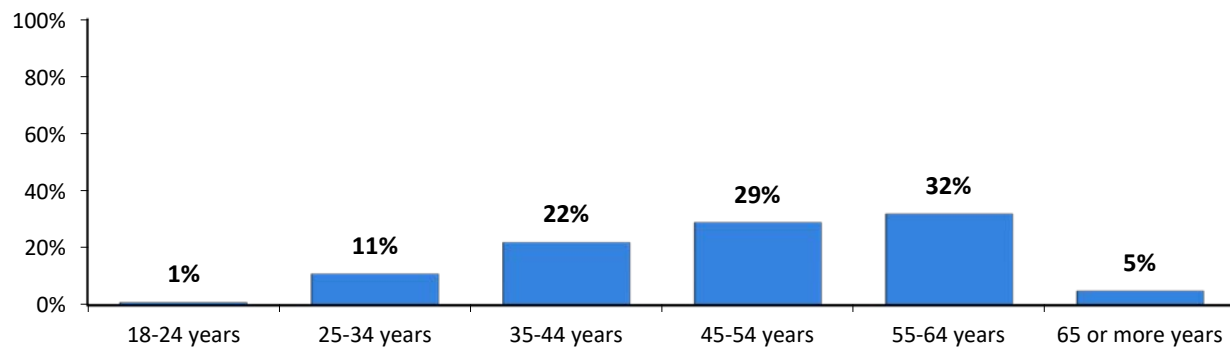
**Income** – Figure 1 presents the distribution of respondents' annual household income. Six in ten (59%) respondents had household incomes of \$80,000 or more and 14% had incomes of \$160,000 or more.



**Age** – GRH participants were clustered in the middle and older age brackets (Figure 2). About half (51%) were between the ages of 35 and 54 years old, and 37% were 55 years or older. Only one in ten (12%) were under 35 years.

**Figure 2**  
**Respondent Age Distribution**

(n = 235)



**Race/Ethnicity** – Lastly, as shown in Table 4, Non-Hispanic Whites and Non-Hispanic Blacks represented the two largest ethnic group categories of GRH survey respondents, 57% and 27% respectively. Hispanics accounted for about 4% and Asians represented 11% of respondents.

**Table 4**  
**Race/Ethnicity**

(n = 217)

Race/Ethnicity Group	Percentage
Non-Hispanic White	57%
Non-Hispanic Black	27%
Asian	11%
Hispanic	4%
Other	1%

## Registration Information

### Registration Status

As noted earlier, to facilitate respondents' understanding of survey questions, the GRH database population was divided into categories by their registration status. More than seven in ten (71%) respondents said they were currently registered for GRH (Table 5). Sixteen percent said they had been registered in the past, but were not participating at the time of the survey. The remaining 13% said they were not sure of their GRH status. No respondents self-identified as a one-time exception user.

**Table 5**  
**Registration Status as Defined by Respondent (during survey interview)**

(n = 241)

Registration Status	Percentage
Current registrants	71%
Past registrants	16%
Not sure	13%

A major function of the survey was to examine travel changes from the time before participants were in the GRH program, thus, the survey asked numerous questions relating to the times “before” and “while” participating in GRH. Respondents’ registration status could be defined by their actual status, as defined in the database, but also by their perception of their status, which could be different than the actual status. The respondent-perceived status was used in the survey interview to ensure that respondents were asked questions that would make sense to them. But as shown in Table 6, a substantial portion of respondents defined their registration status differently than was shown in the GRH database.

**Table 6**  
**Registration Status as Defined by Respondent Compared with Status Defined in Database**

Registration Status Defined in GRH Database	Registration Status Perceived by Respondent	
	Current	Past
Current registrants (n = 111)	85%	<b>15%</b>
Past registrants (n = 130)	<b>53%</b>	47%

More than eight in ten (85%) respondents whose database status was current/active correctly identified their status as current. The remaining 15% said they were no longer registered for the program, although their registration was actually current; they had registered or re-registered less than one year before the survey was conducted. Some of these respondents might have made a commute change since their last registration/re-registration date that would make them ineligible for GRH, such as reducing their use of alternative modes to less than twice per week. Because these respondents perceived themselves no longer registered, they were treated in the survey interview as “past registrants.”

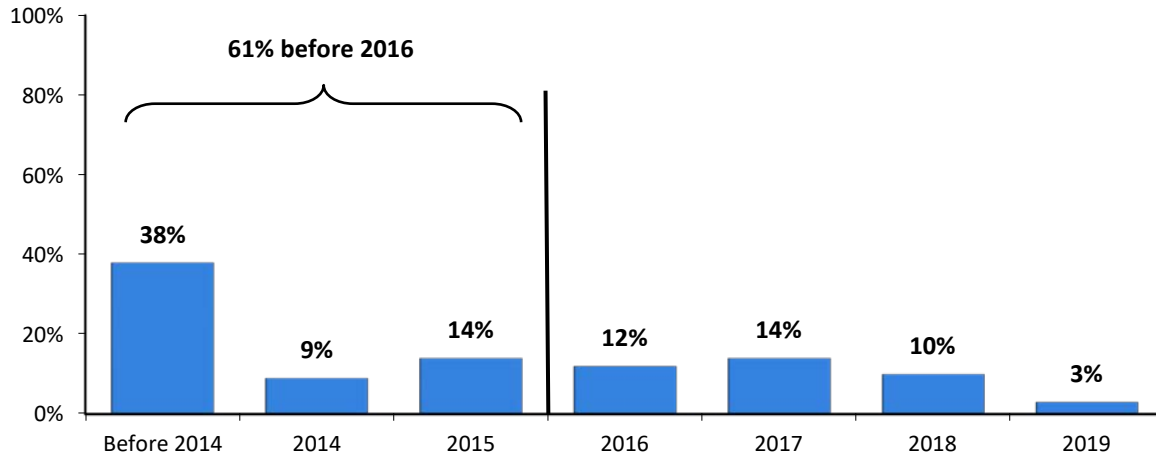
A more significant issue was the 53% of respondents whose registrants had expired, but who thought they were still registered. It is possible these respondents did not realize they needed to re-register each year, so assumed they were still eligible for the program. These respondents were treated as “currently registered” in the survey and throughout the report.

#### Year of Registration

Respondents in the survey were selected from those who had registered or re-registered for GRH between March 2016 and March 2019, but about six in ten (61%) surveyed respondents said they first registered before 2016 (Figure 3). Twelve percent registered in 2016, 14% in 2017, and 10% in 2018. Three percent said they registered in 2019, but because the survey interviews were conducted in April and May 2019, registration figures for 2019 included only registrants who joined GRH between January 1 through March 15.

**Figure 3**  
**Year First Registered for GRH Program**

(n = 224; excludes 17 respondents who could not recall year)



Note that 7% of total respondents surveyed could not remember when they registered. They are not included in the base for the distribution shown in Figure 3, however, it is likely many of these respondents would have registered at least several years ago.

#### Participation in Other GRH Programs

When asked if they had participated in another GRH program prior to joining Commuter Connections' program, 11 respondents, about 5% of the total respondents surveyed, said they had participated in another program. Respondents mentioned programs sponsored by a local government (3 respondents), Virginia Railway Express commuter rail (3 respondents), and an employer (2 respondents). Two respondents said the program was offered by another organization and one respondent did not recall who sponsored the program.

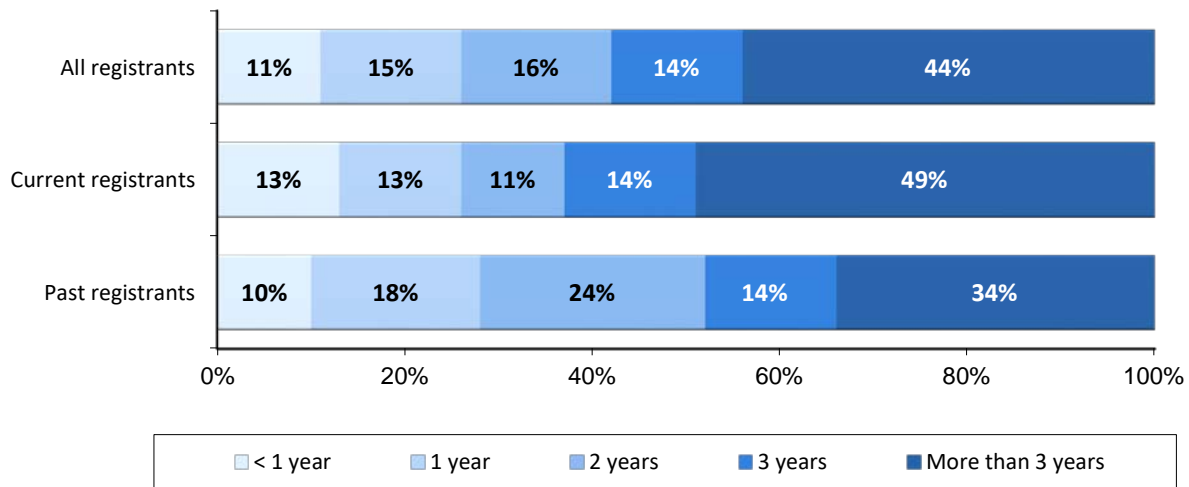
#### Time Participating in GRH

Nearly three-quarters (74%) of respondents participated (or had been participating) for two or more years and 44% had been participating for more than three years (Figure 4).

The comparison of GRH duration for respondents who self-identified as current versus past registrants shows a similar share of registrants who were new to the program. Twenty-six percent of current registrants and 28% of past registrants had been registered for less than two years. But a much larger share of current registrants had been long-time users; 49% of current registrants had been participating for more than three years, compared with 34% of past registrants.

**Figure 4**  
**Length of Time Registered in GRH Program By Survey Registration Status**

(All registrants n = 222; Current registrants n = 152; Past Registrants n = 70)

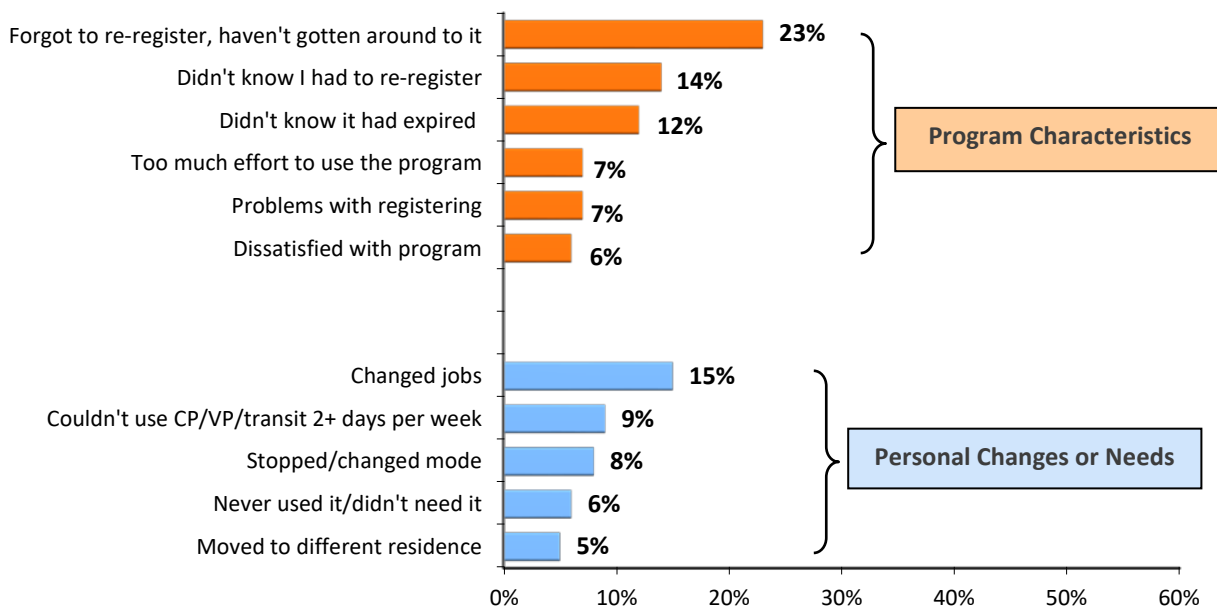


**Reasons for Not Re-registering**

Past registrants were asked why they did not re-register for GRH when their registration expired. Figure 5 presents common reasons, divided into two categories: reasons associated with the GRH program and reasons associated with personal circumstances of the registrant.

**Figure 5**  
**Reasons Past Registrants Did Not Re-Register**

(n = 57, note scale only extends to 60% to highlight results)



A frequently-mentioned program reason for not re-registering was that respondents forgot to re-register or had not gotten around to it; 23% of past registrants mentioned this reason. Another sizeable share did not know they had to re-register or did not know their registrations had expired, cited by 14% and 12% of respondents, respectively. The dominance of these reasons suggests that registrants need to be reminded that re-registration is required and reminded of their individual deadlines for renewing. Seven percent stopped because they thought it was too much effort to use the program and 7% said they had a problem with re-registering. Six percent said they were dissatisfied with some aspect of the program.

Other respondents mentioned personal reasons that were unrelated to the program, but likely related to their commuting opportunities and needs. Fifteen percent changed jobs and 5% moved to a different residence. Nine percent said they no longer could use ridesharing or transit two or more days per week, as required by the GRH rules, and 8% said they changed the mode they used, also likely no longer meeting the program conditions. Six percent did not re-register because they had never used the program and presumably felt it was not necessary.

## GRH Information Sources

### How Heard About GRH

Commuters heard about the GRH Program from various sources (Table 7). More than one-third (36%) mentioned word of mouth/referrals as their source, 23% learned about GRH from their employer, and 15% cited the Internet/social media. Smaller shares mentioned other sources, such as a sign in a bus/train station (9%), radio (3%), a brochure or other promotional material (3%), and on-site fair or event at a worksite (3%). GRH information sources in 2019 were generally similar to sources from previous years.

**Table 7**  
**How Respondents Learned About GRH**

Information Source	2013 GRH (n = 120)	2016 GRH (n = 329)	2019 GRH (n = 241)
Word of mouth – referral	27%	36%	36%
Employer/employee survey	23%	21%	23%
Internet/social media	11%	7%	15%
Bus/train sign	11%	5%	9%
Radio	2%	3%	3%
Brochure/promotional materials	3%	2%	3%
On-site fair/event	<1%	2%	3%
Other rideshare/transit organization	8%	7%	2%
Advertisement	0%	0%	2%
Direct mail/postcard from CC	2%	1%	1%
Other *	6%	4%	2%
Don't know / no answer	11%	10%	9%

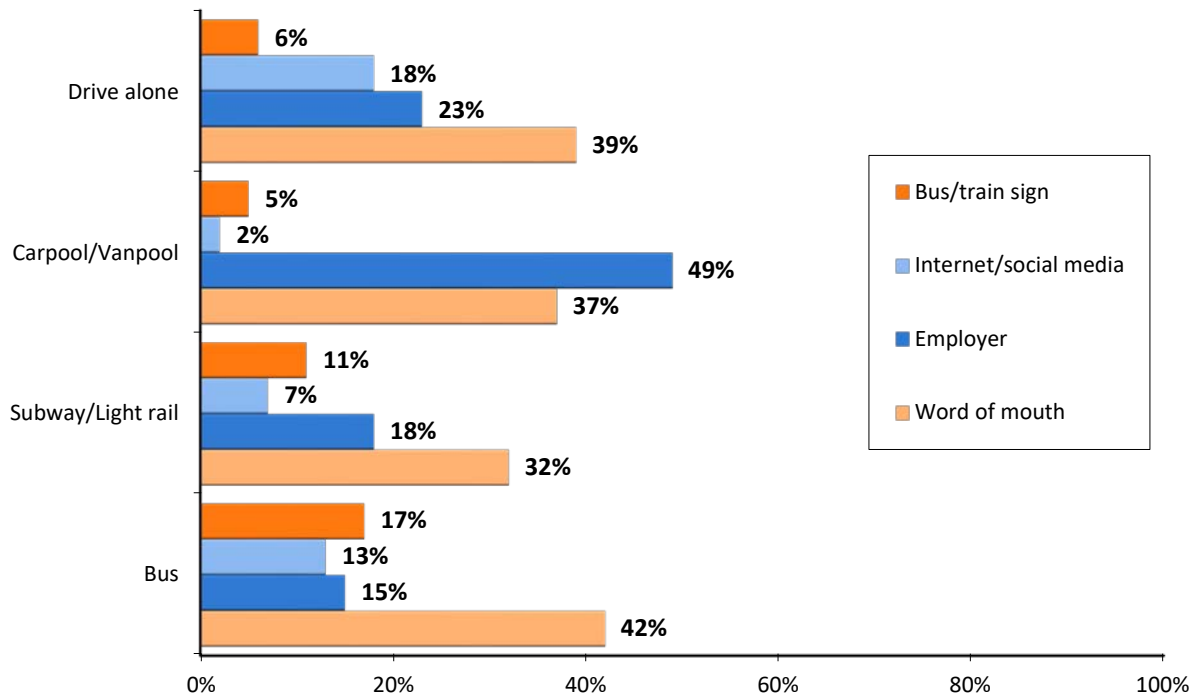
Percentages might add to more than 100% due to multiple responses

\* Each response in the "Other" category was mentioned by less than 1% of respondents.



**GRH Referral Source by Pre-GRH Commute Mode** – Some differences were noted for respondents’ source of referral by the commute modes they used before joining GRH (pre-GRH mode) (Figure 6). Word of mouth was an important referral source for all respondents, regardless of the mode they used before they joined GRH, but was a slightly less common source for subway/light rail riders (32%) than for other respondents.

**Figure 6**  
**How Respondents Learned About GRH by Primary Mode Pre-GRH**  
 (Drive alone n = 101, Carpool/vanpool n = 25, Bus n = 63, Subway/Light rail n = 16)  
 (Note very small sample size for Subway/Light rail)



Employer also was noted as a common source across modes, but was particularly named by carpoolers and vanpoolers; 49% of these respondents mentioned this source, compared with about two in ten of other mode users. Not surprisingly, bus riders and subway/light rail riders mentioned learning about GRH from a sign at a bus stop or on a transit vehicle more than did drive alone and ridesharing respondents.

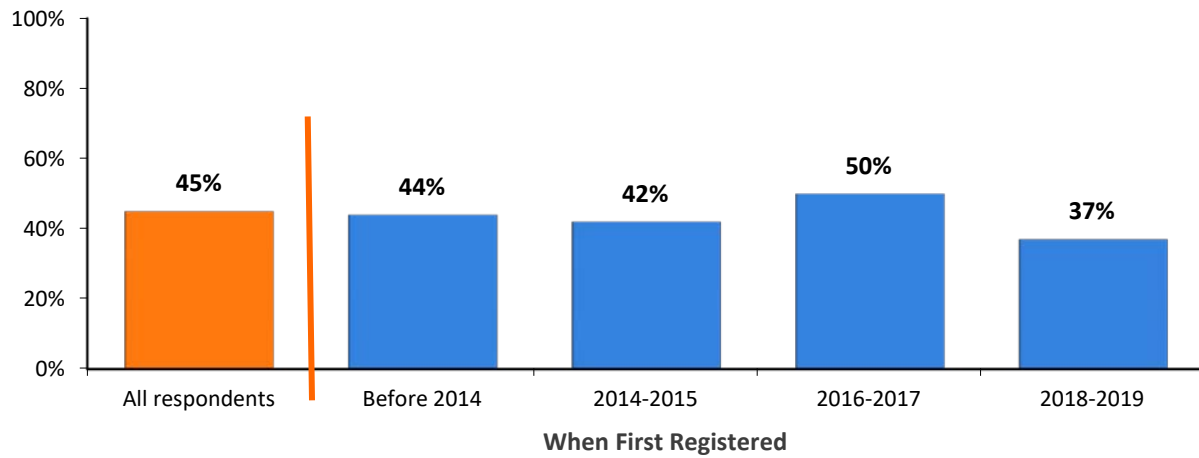
#### GRH Advertising

**Heard or Saw GRH Advertising** – When asked if they had heard, seen, or read any advertising about GRH, 45% of respondents said they recalled GRH advertising. This was slightly higher than the percentage who recalled advertising in the 2016 survey (41%).

Respondents were about equally likely to have seen or heard GRH advertising regardless of when they registered for the program (Figure 7). The small differences in ad awareness for respondents who registered before 2014 and for the four years between 2014 and 2017 are not statistically significant. Respondents who started GRH most recently (2018-2019) appear to have been less aware of GRH advertising (37%), but given the small sample sizes for these years, even this drop is not statistically significant.

**Figure 7**  
**Heard or Saw GRH Advertising by Year Registered for GRH**

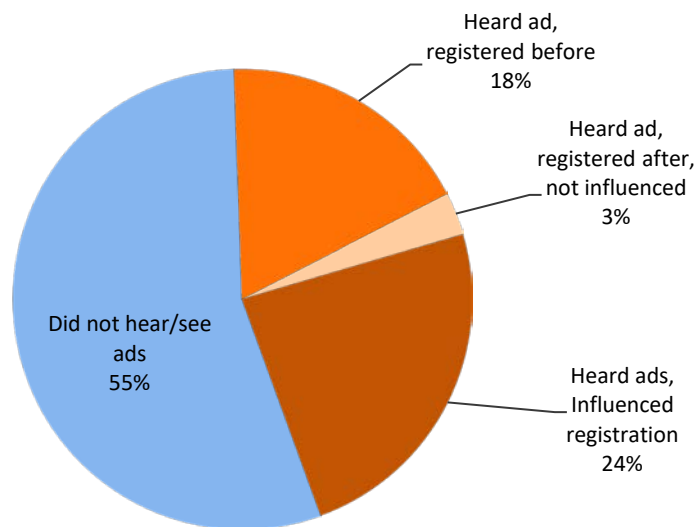
(All n = 241, Before 2014 n = 86, 2014-2015 n = 52, 2016-2017 n = 53, 2018-2019 n = 33)



**Influence of Ads on GRH Registration** – The 45% of respondents who said they had seen or heard GRH advertising were asked if they had registered for GRH before they encountered the ads and if the ads had influenced them to register for GRH. Figure 8 shows these results, combined with the results for those who had not seen the ads. This chart thus summarizes ad exposure and ad influence.

**Figure 8**  
**Influence of GRH Advertising**

(n = 241)



Fifty-five percent of respondents had not seen or heard the ads at all. About two in ten (18%) saw or heard ads but had already registered for GRH. And 3% said they saw or heard the ads before they registered, but that the ads had not influenced them. These groups, in total, represented registrants who were not influenced by the advertising (76%).

The remaining 24% of respondents said they saw or heard the ads before they registered and that the advertising had encouraged them to register. This indicates that advertising was instrumental in both informing and persuading a substantial portion of registrants to join the program.

## Current Commute Patterns

An important section of the survey examined characteristics of respondents' commuting behavior, particularly to determine changes respondents had made in response to GRH. Thus, the survey queried respondents about their commuting for three time periods:

- **Current** – Commuting patterns at the time of the survey
- **During-GRH** – Commuting patterns during the time the respondent participated in GRH. For current registrants, this is the same as the current time period. For one-time exception users and past registrants, this was a previous point in time.
- **Pre-GRH** – Commuting patterns at the time just before the respondent registered for GRH (current and past registrants) or heard about GRH (one-time exception users)

Commute pattern questions in the survey included:

- Current mode used
- Carpool occupancy, if applicable
- Commute distance

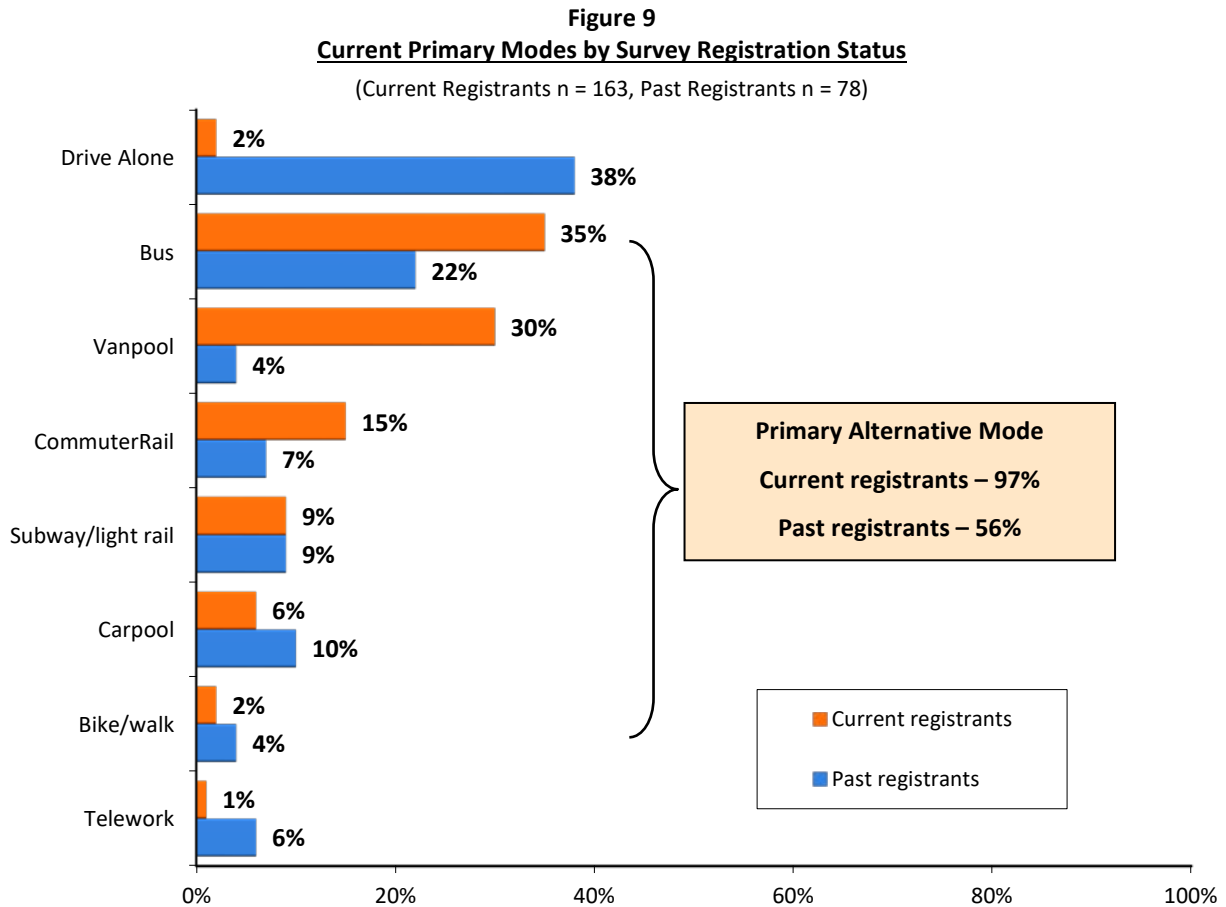
### Work Schedule

The overwhelming majority (96%) of respondents worked full-time. But 11% worked a compressed schedule in which they worked a full-time schedule in fewer than five days; 7% worked a 9/80 compressed schedule, with one weekday off in alternate weeks and 2% worked a 4/40 schedule, with one weekday off each week, and 2% worked another compressed schedule. These respondents were classified as working a five-day week for purposes of commute mode, with either one-half, one, or two weekdays off each week.

### Current Commute Mode

Respondents were asked about use of various commute modes for a typical work week, Monday through Friday. Figure 9 shows the percentages of respondents who used each mode as their primary mode (mode used most days of the week). Because it was expected that past registrants would have different modes from respondents who were currently eligible for GRH, these two groups are shown separately.

**Current Registrants** – Bus was the most common primary mode for current registrants; it was used by 35% of current registrants. Vanpool was the second most common primary mode, used by 30% of current registrants. Commuter rail and subway (Baltimore subway or Metrorail)/light rail) were used by 15% and 9% of respondents, respectively. Six percent of current registrants primarily carpooled, 2% biked or walked, and 1% teleworked. Two percent of current registrants said they primarily drove alone to work, but commuters are eligible for the program if they use any alternative mode two or more days per week, so this would be permissible.

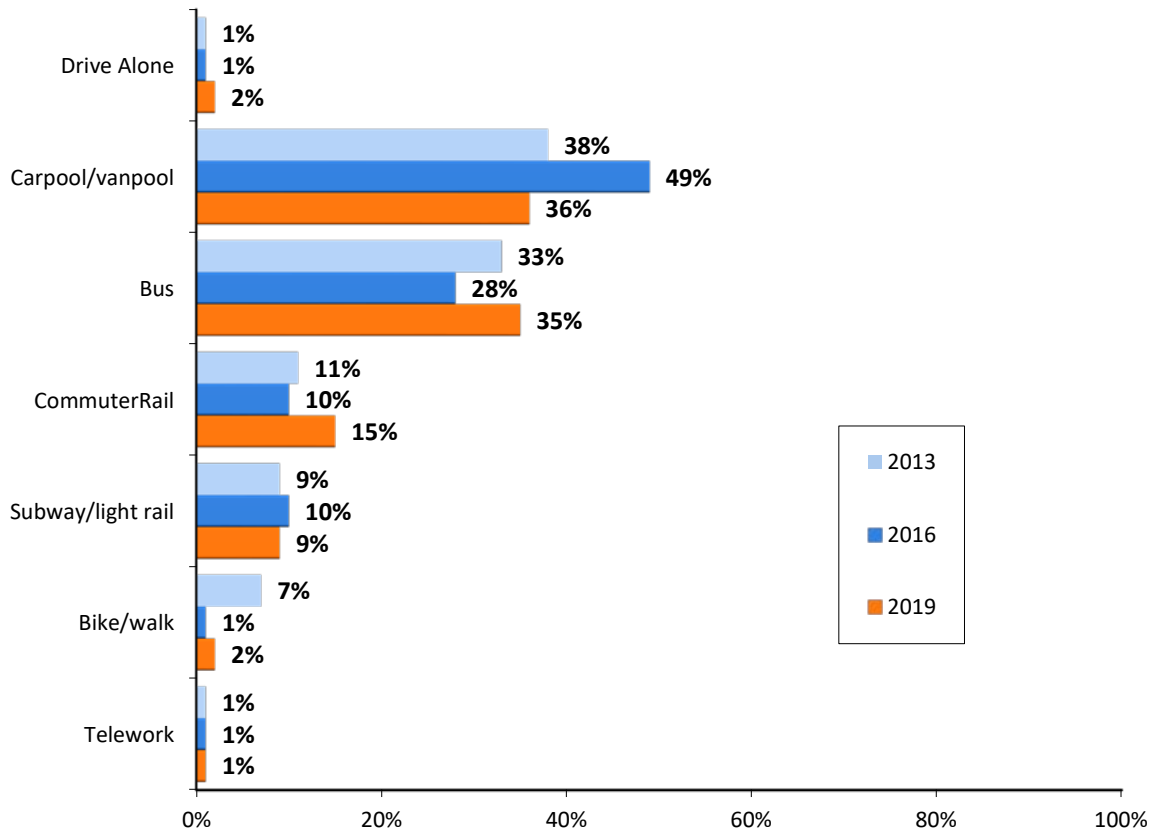


**Past Registrants** – Not surprisingly, past registrants were more likely than were current registrants to drive alone; 38% of past registrants said this was their primary mode. But nearly six in ten (56%) past registrants said they still used an alternative mode most of the time. Thus they were still eligible for GRH, even though they no longer participated. More than two in ten (22%) rode a bus and 10% carpoled. Nine percent primarily rode a subway or light rail train, and 4% biked/walked. Six percent teleworked as their primary mode.

**Current Mode, 2013 to 2019** – While the overall share of alternative mode use in 2019 was the same as in 2016, the 2019 distribution of commute modes used by current GRH registrants was different from that in 2016 and in 2013. As is clear from Figure 10, the share of current registrants who used carpool/vanpool as their primary mode increased between 2013 and 2016, then dropped back in 2019 to its 2013 level. Use of bus exhibited the reverse pattern, dropping between 2013 and 2016, then rising again in 2019. Use of subway/light rail, bike/walk, and telework remaining about the same from 2016 to 2019.

Note that the sample sizes for carpool and some other individual modes in the Baltimore GRH survey are small. Thus, year-to-year variations can occur, although the changes might not be statistically significant. The change in carpool/vanpool mode between 2016 and 2019 was significant. The change in bus use was not significant.

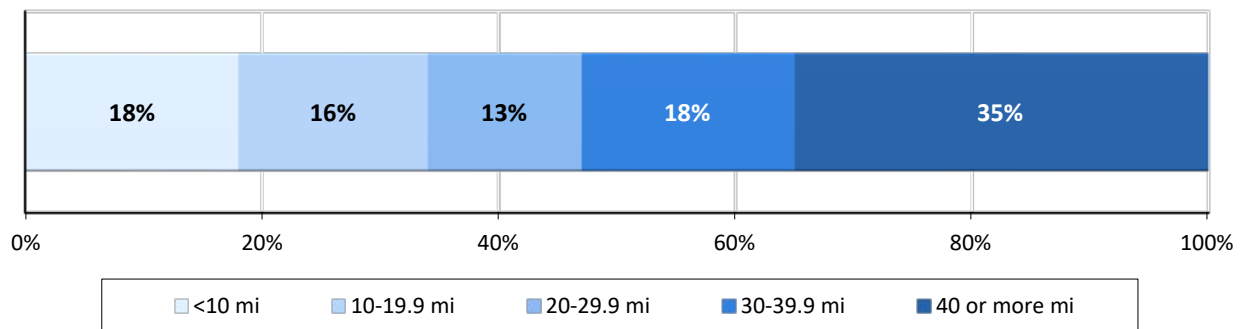
**Figure 10**  
**Primary Commute Modes Used by GRH Registrants in 2013 and 2016 – Current GRH Registrants**  
 (2013 n = 534, 2016 n = 329, 2019 n = 163)



Commute Length

**Commute Miles** – Commuters in the survey sample had a wide range of commute distances, from less than one mile to more than 120 miles. The average one-way distance for GRH respondents was 32.5 miles. More than half (53%) of respondents traveled 30 or more miles to work and 35% commuted 40 or more miles to work (Figure 11).

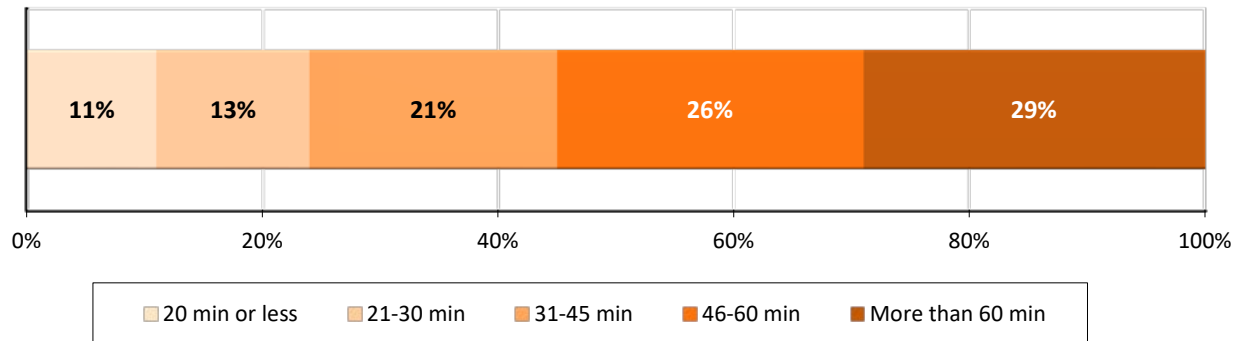
**Figure 11**  
**Commute Distance (miles) – All GRH Registrants**  
 (n = 215)



**Commute Time** – GRH participants commuted, on average, about 54 minutes one way. More than half (55%) of respondents commuted more than 45 minutes each way to work (Figure 12). Three in ten (29%) commuted more than one hour.

**Figure 12**  
**Commute Travel Time (minutes) – All GRH Registrants**

(n = 230)



#### Primary Roads Used on the Trip to Work

The GRH survey also included a question to identify the major Interstate, state, and arterial roadways that commuters use to get to work. The results from this question will primarily be used for regional planning purposes to explore the role that programs such as GRH play in mitigating congestion on specific roads in the Baltimore metropolitan region. Analysis of GRH data for this question will be described in appropriate regional reports as the data are used.

## Commuter Patterns Before and During Participation in GRH

The GRH survey was conducted in part to determine if and how commuters' participation in GRH had affected their commute patterns. In particular, did GRH encourage commuters who were driving alone to shift to alternative modes and did GRH encourage commuters who were using alternative modes to use them more days per week? Survey results pertaining to these questions are presented below.

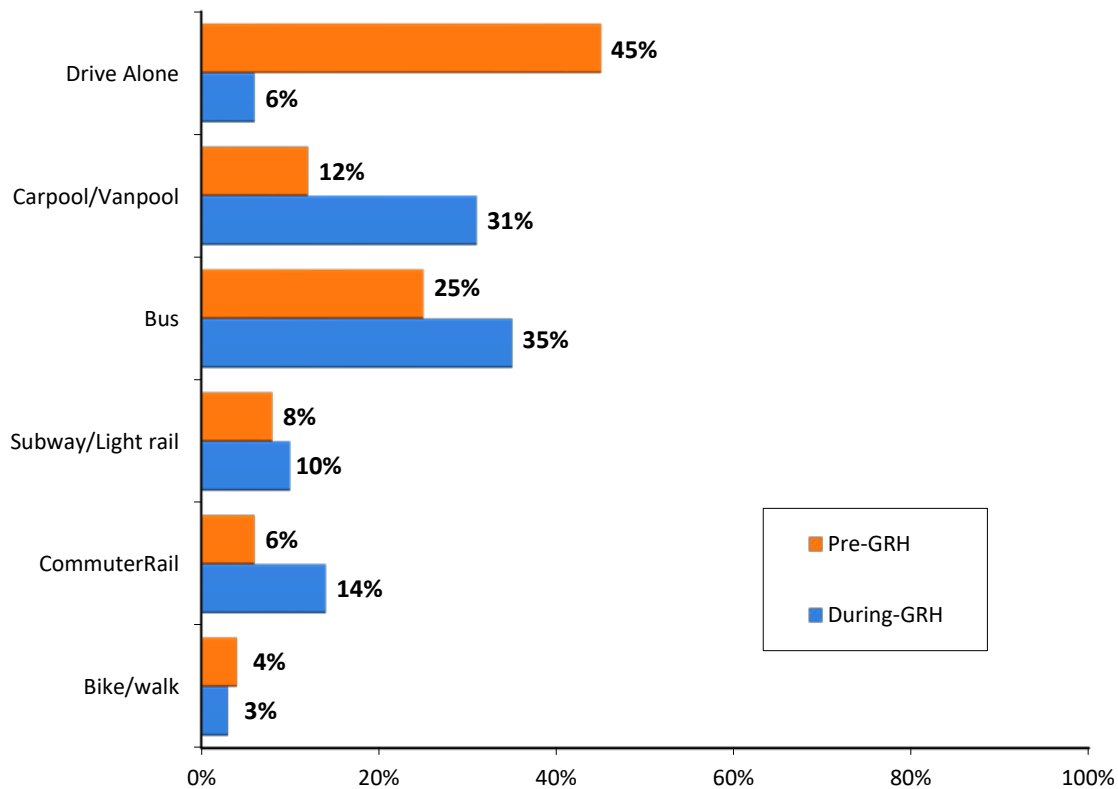
#### "During-GRH" Modes Compared with "Pre-GRH" Modes

All respondents also were asked about their "pre-GRH" modes. Current and past registrants were asked about the "time before you registered for the GRH Program." Because one-time exception users did not register, they were asked about the "time before you heard about the GRH Program."

Figure 13 compares respondents' primary modes before participating in GRH (pre-GRH) and while participating (during-GRH). Primary mode was defined as the mode used most days during a typical week: drive alone, subway/light rail, commuter rail, carpool/vanpool, bus, and bike/walk. The percentages shown are percentages of respondents who used the mode groups as their primary modes during the time period shown.

Note that the totals of these percentages might not add to 100%, because a small number of respondents said they primarily teleworked and that option is not shown. Additionally, 4% of respondents said they were not living or working in the Baltimore region before joining GRH. These respondents did not have a "pre-GRH" primary mode and were removed from the base.

**Figure 13**  
**Primary Modes Used Pre-GRH and During-GRH**  
 (During-GRH n = 241, Pre-GRH n = 232; note that figure excludes primary telework)



More than four in ten (45%) respondents primarily drove alone pre-GRH. The drive alone mode share dropped to just 6% for the “during-GRH” time period and the share of respondents primarily using each alternative mode increased. Primary use of carpool/vanpool increased from 12% pre-GRH to 31% during-GRH, bus use rose from 25% to 35%, and the share of respondents using commuter rail as their primary mode grew from 6% to 14%. Use of subway/light rail and bike/walk remained essentially the same.

Table 8 illustrates the mode changes respondents made from their pre-GRH primary mode to their during-GRH primary mode. As expected, drive alone users made the greatest mode changes. Four in ten (41%) drive alone respondents shifted to carpooling and 43% shifted to transit. About 13% of drive alone commuters said they continued to drive alone as their primary mode.

Respondents who were using alternative modes before they joined GRH largely remained in their pre-GRH modes after they joined GRH. Nearly all respondents who previously carpooled/vanpooled (88%) or rode a bus (92%) stayed in these modes. Train riders made somewhat more mode shifts; 68% continued using a train, but 14% started riding a bus, 12% shifted to carpool/vanpool, and 6% shifted to driving alone as their primary mode.

**Table 8**  
**Primary Mode During-GRH by Primary Mode Pre-GRH**

\* Pre-GRH and During-GRH mode shares and between mode shift percentages will not total to 100%, because bike/walk and telecommute are excluded due to small sample sizes

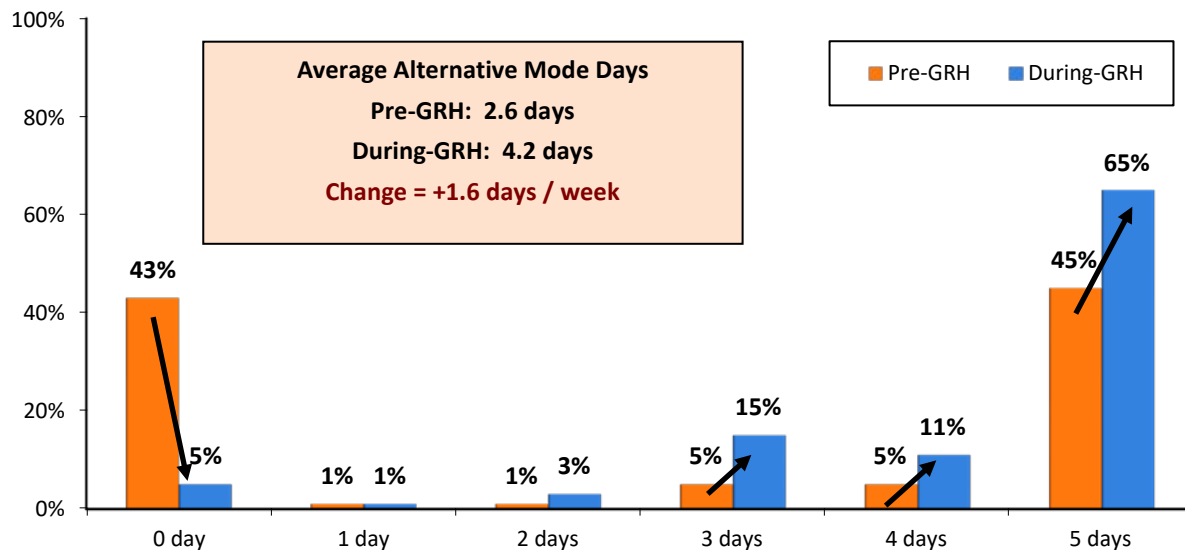
Pre-GRH Mode*	During-GRH Mode*			
	Drive Alone	Carpool / Vanpool	Bus	Train
Drive alone (n = 101)	13%	41%	21%	22%
<b>Alternative Modes</b>				
- Carpool/vanpool (n = 25)	0%	88%	0%	12%
- Bus (n = 63)	0%	4%	92%	5%
- Train (n = 34)	6%	12%	14%	68%

“During-GRH” Days in Alternative Modes Compared with “Pre-GRH” Days

The second research question in the survey focused on frequency of alternative mode use. Did participants who were using alternatives before joining the program increase the number of days they used these modes after registering for GRH? Only five respondents who were using an alternative mode prior to GRH said they increased alternative mode frequency, so it was not possible to analyze the data for this small sample. But the analysis examined the overall frequency of alternative mode use for all GRH respondents. These results are shown in Figure 14.

**Figure 14**  
**Days Using Alternative Modes Pre-GRH and During-GRH (All GRH Respondents)**

(Pre-GRH n = 232, During-GRH n = 241)





The average number of days all GRH participants used alternative modes increased, from 2.6 days per week to 4.2 days per week. But the majority of the increase came from respondents who did not use alternatives at all pre-GRH. In other words, the overall increase in the average frequency of alternative mode use resulted primarily from shifts from drive alone to alternatives, rather than from shifts by current alternative mode users.

On a positive note, since there was very little change in the one-day and two-days per week categories, it is clear that most of the respondents who never used alternatives before GRH started using alternatives at least three days per week during-GRH.

## Influence of GRH on Commute Pattern Decisions

### Types of Pre-GRH to During-GRH Commute Changes

The comparison of pre-GRH and during-GRH commute patterns is only part of the question of GRH's impact. Also important is the value of GRH in motivating these changes. Three types of pre-GRH and during-GRH commute pattern combinations were examined:

- Start alternative mode – Respondents who drove alone pre-GRH and started using alternative modes during-GRH
- Increase alternative mode – Commuters who were using an alternative pre-GRH and increased the frequency of alternative mode use during-GRH
- Maintain alternative mode – Commuters who were using an alternative mode pre-GRH and continued using it during-GRH, with no changes

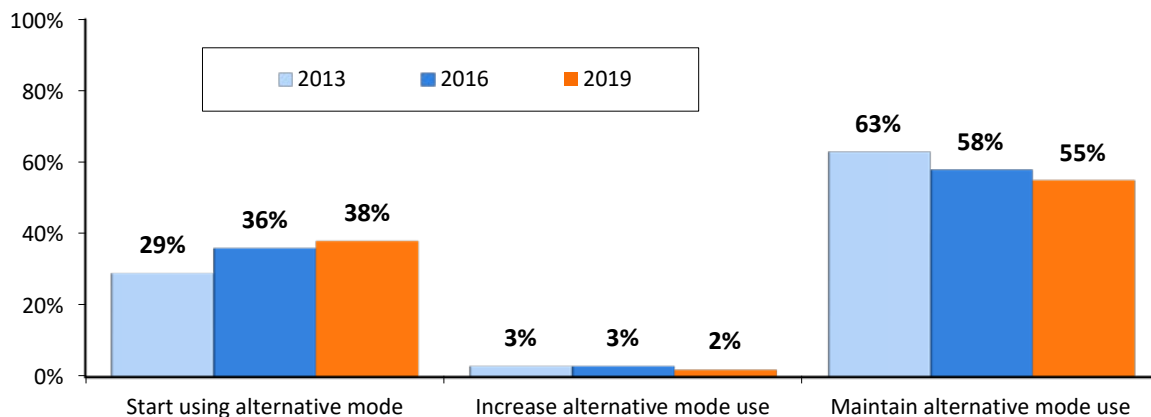
Figure 15 presents a breakdown of respondents into these alternative mode change groups. Nearly four in ten (38%) respondents started using alternative modes at the time they joined GRH. This was two percentage points higher than the 2016 percentage (36%) and nine percentage points higher than the 29% of 2013 survey respondents who said they had started using an alternative mode.

As noted earlier, 2% of respondents (5 respondents) increased the number of days they used alternative modes. The largest share of respondents (55%) said they maintained use of alternative modes they were using before GRH. This was as expected, since most respondents used an alternative pre-GRH and most used alternative modes four or five days per week pre-GRH.

**Figure 15**  
**Alternative Mode Changes from Pre-GRH to During-GRH**

(2013 n = 530, 2016 n = 318, 2019 n = 233)

Note: Totals will not add to 100% because some respondents said they did not use an alternative mode "During-GRH"



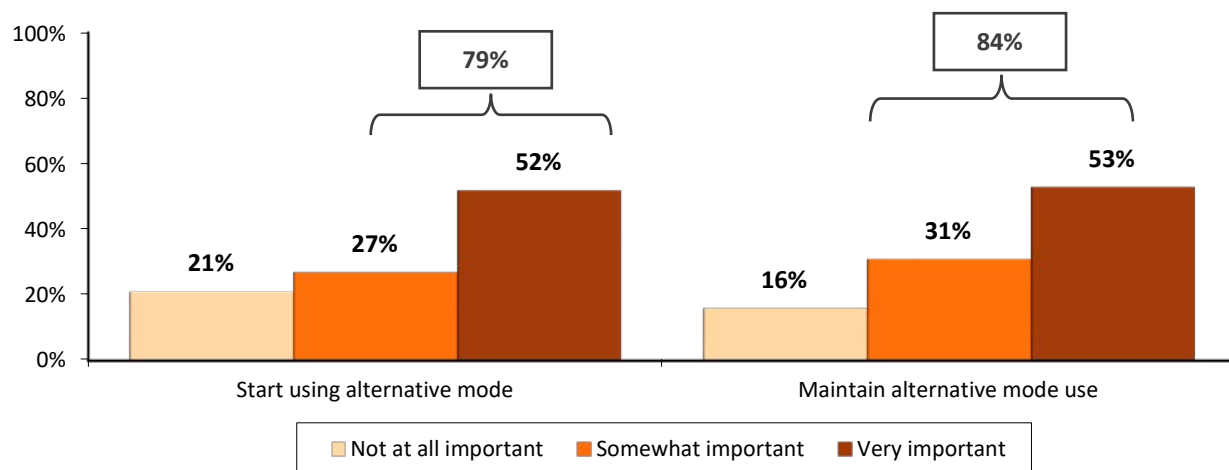
About 5% of respondents said they were not using an alternative mode while they were in GRH, even though the program requires them to be using an alternative mode to participate. This was about the same percentage as in 2016 (3%) and 2013 (4%). Respondents who were not using an alternative mode could be explained by the fact that most of these respondents said they were current registrants, thus their “during-GRH” travel was set equal to their current travel. But if these respondents had recently stopped using alternative modes, they might have said they were currently registered, even though they were no longer really eligible for the program.

#### Importance to Decision to Start or Maintain Use of Alternatives

For whichever of the three commute pattern categories applied, respondents were asked how important GRH was to their commute decision. Figure 16 presents the results for respondents who started or maintained alternative modes. The sample size for respondents who increased alternative mode use was too small for reliable analysis.

**Figure 16**  
**Importance of GRH to Start or Maintain Alternative Mode Use**

(Start n = 86, Maintain n = 126; Note: Sample size for “Increase alternative mode use” was too small to analyze)



**Start Using Alternative Mode** – Eight in ten respondents who drove alone pre-GRH and started using alternative modes during-GRH said GRH was important to their decision to make the change. Half (52%) said GRH was very important and 27% said it was somewhat important to the decision. The remaining 21% said GRH was not at all important.

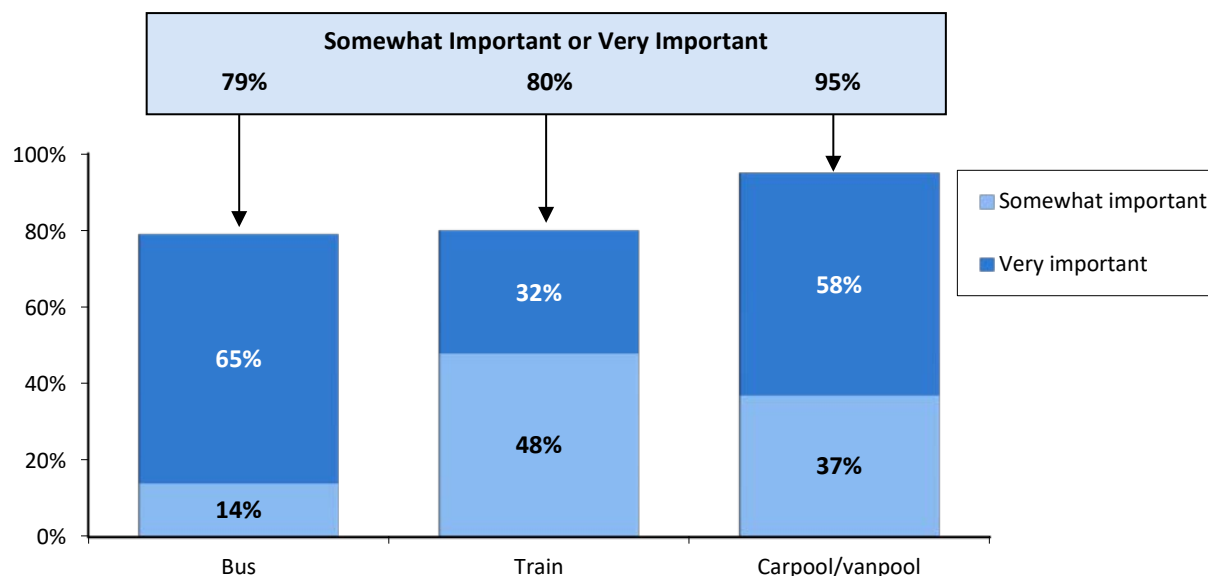
**Maintain Use of Alternative Mode** – GRH appeared to be similarly important for respondents who maintained alternative mode use as for those who started using alternative modes. Eight in ten respondents who maintained alternative mode use said GRH was very important (53%) or somewhat important (31%) to their decision.

**Importance of GRH to Maintain Alternative Modes by Pre-GRH Alternative Modes** – Respondents who were using alternative modes before they joined GRH differed slightly in their perceived value of GRH by the modes they were using pre-GRH. These results are shown in Figure 17.

Nearly all (95%) of respondents who were carpooling or vanpooling pre-GRH said GRH had been important to their decision to continue using these modes. Smaller shares of bus (79%) and train (80%) riders rated GRH as important, but a large majority of bus riders who said GRH was important said it was very important (65% very important and 14% somewhat important). Respondents who rode a train were more likely to consider GRH as “somewhat important.”

**Figure 17**  
**Importance of GRH to Maintain Alternative Mode Use by Alternative Mode used Pre-GRH**

(Carpool/Vanpool n = 25, Bus n = 63, Train n = 32)

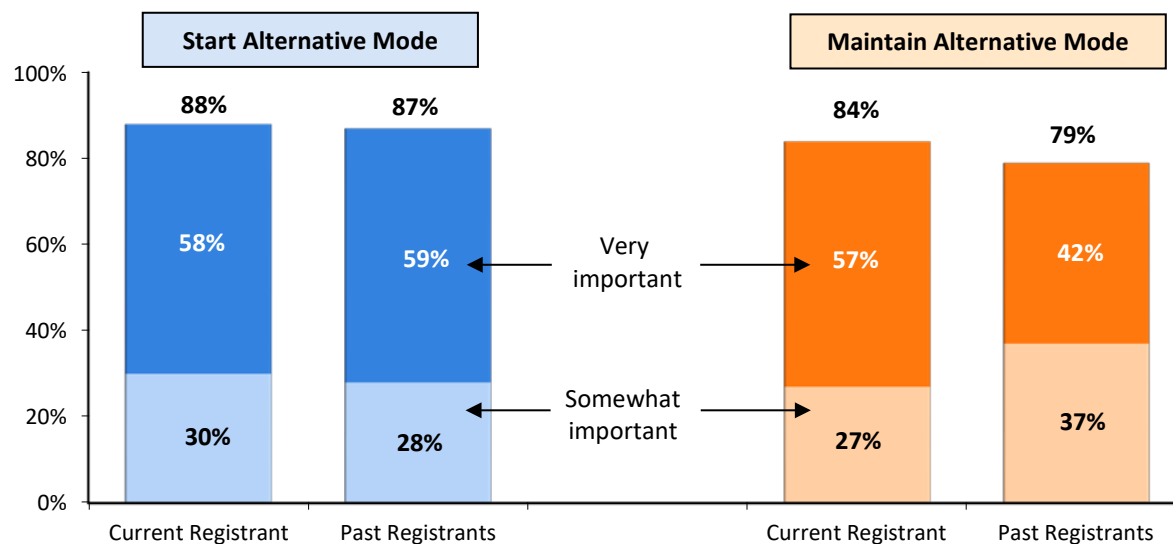


**Importance of GRH by Registration Status** – Figure 18 presents the relative importance of GRH to current registrants and past registrants. Among participants who started using an alternative mode, 88% of current registrants rated GRH as either important or very important. The share of past registrants who gave these high ratings was essentially the same as for current registrants (87%), but the sample of past registrants who started a new mode was very small (19 respondents).

**Figure 18**  
**Importance of GRH to Decision to Start or Maintain Alternative Mode by Registration Status**

(Start alternative mode: Current registrants n = 67; Past registrants n = 19 NOTE SMALL SAMPLE)

(Maintain alternative mode: Current registrants n = 87; Past registrants n = 42)



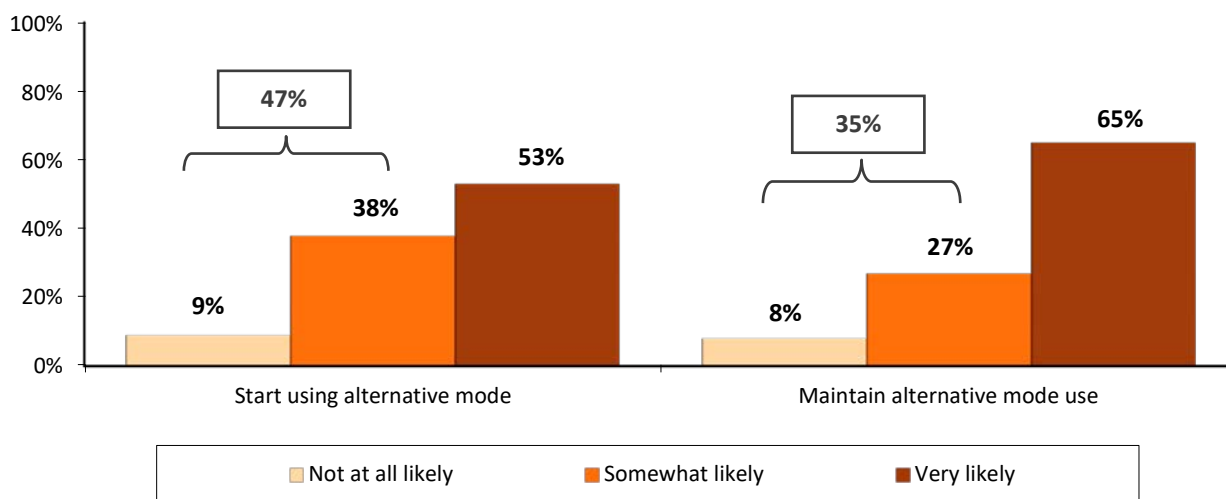
Respondents who maintained alternative mode use during-GRH also gave similar overall importance; 84% of current registrants and 79% of past registrants said GRH had been at least somewhat important to their decision. But current registrants were more likely to consider GRH as “very important;” 57% of current registrants who maintained alternative mode use said GRH was very important, compared with 42% of past respondents.

#### Likely to Make Alternative Mode Changes if GRH Not Available

Respondents also were asked how likely they would have been to make the same commute change decisions if GRH had not been available to them. Figure 19 shows the likelihood mentioned by respondents who started alternative modes and those who maintained use of alternative modes.

**Figure 19**  
**Likely to Start or Maintain Use of Alternative Modes if GRH Not Available**

(Start n = 84, Maintain n = 123; Note: Sample size for “Increase alternative mode use” was too small to analyze)



**Start Using Alternative Mode** – Nearly half of respondents who started using alternative modes said they were not at all likely (9%) or only somewhat likely (38%) to have made the change if GRH had not been available. The remaining 53% said they were very likely to have made the change even if they did not have access to GRH. In other words, GRH had little to no influence on about half of the respondents, a moderate influence for four in ten, and a substantial influence for one in ten of these respondents.

**Maintain Use of Alternative Mode** – GRH seemed to be slightly less valuable to registrants who were using alternative modes and did not make any changes during GRH (maintained alternative mode); 65% said they were very likely to have continued in this mode even if GRH had not been available. One-quarter (27%) said they were somewhat likely to have continued that mode and 8% were not at all likely to have continued that mode without GRH.

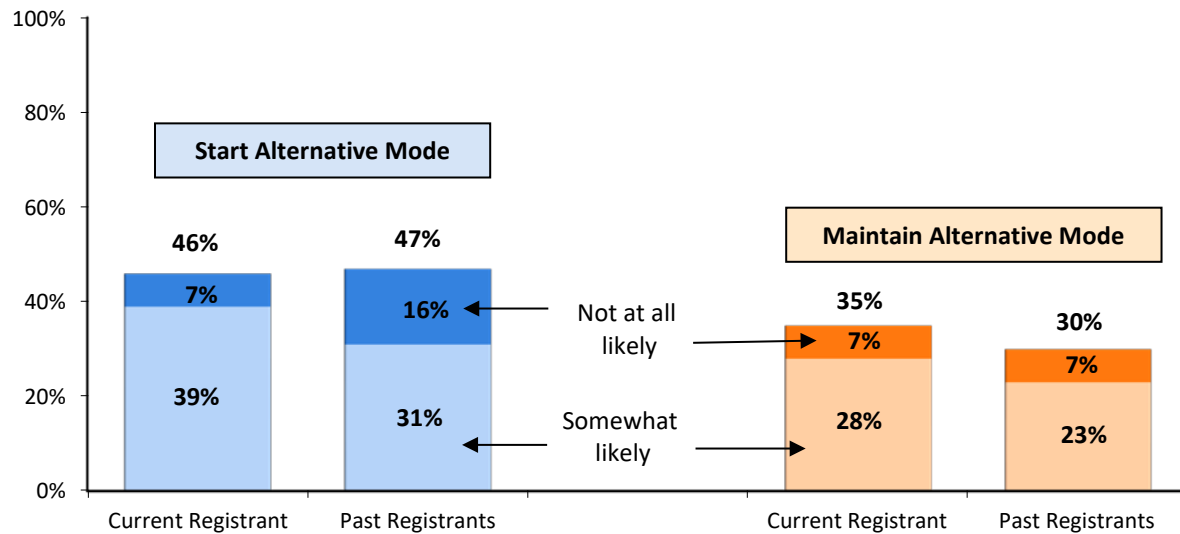
**Likelihood to Start or Continue Modes by Registration Status** – Finally, Figure 20 shows differences between current and past registrants in likelihood to start or maintain alternative modes without GRH. There was no statistical difference between current and past registrants for their likelihood to start alternative modes. Note that the sample size for past registrants who started alternative modes was just 19 respondents, so the apparent differences in the percentages of “somewhat likely” and “not at all likely” are statistically the same for the two groups.

Figure 20

**Likely to Start or Maintain Alternative Modes Without GRH by Registration Status**

(Start alternative mode: Current registrants n = 67, Past registrants n = 19 NOTE SMALL SAMPLE)

(Maintain alternative mode: Current registrants n = 87, Past registrants n = 42)



The results for respondents who maintained their pre-GRH alternative mode followed the same pattern as for current registrants. There was no difference between current and past registrants in likelihood to maintain alternative mode use, about one-third in each group said they were not at all likely or only somewhat likely to take this action without GRH.

**Other Influences Motivating Commute Changes**

Figures 16 through 20 presented an apparent contradiction. Despite the high percentage of respondents who rated GRH as very important or somewhat important to their decisions to use alternative modes, a large share of respondents said they were likely to have made these decisions even without GRH, implying that GRH was useful, but not essential, to their decisions. These results are consistent with other GRH evaluations. GRH users typically do rate GRH as a valuable service, but indicate that it is not “the reason” for which they made a change to an alternative mode. They were influenced by a variety of factors, including GRH, but other factors as well.

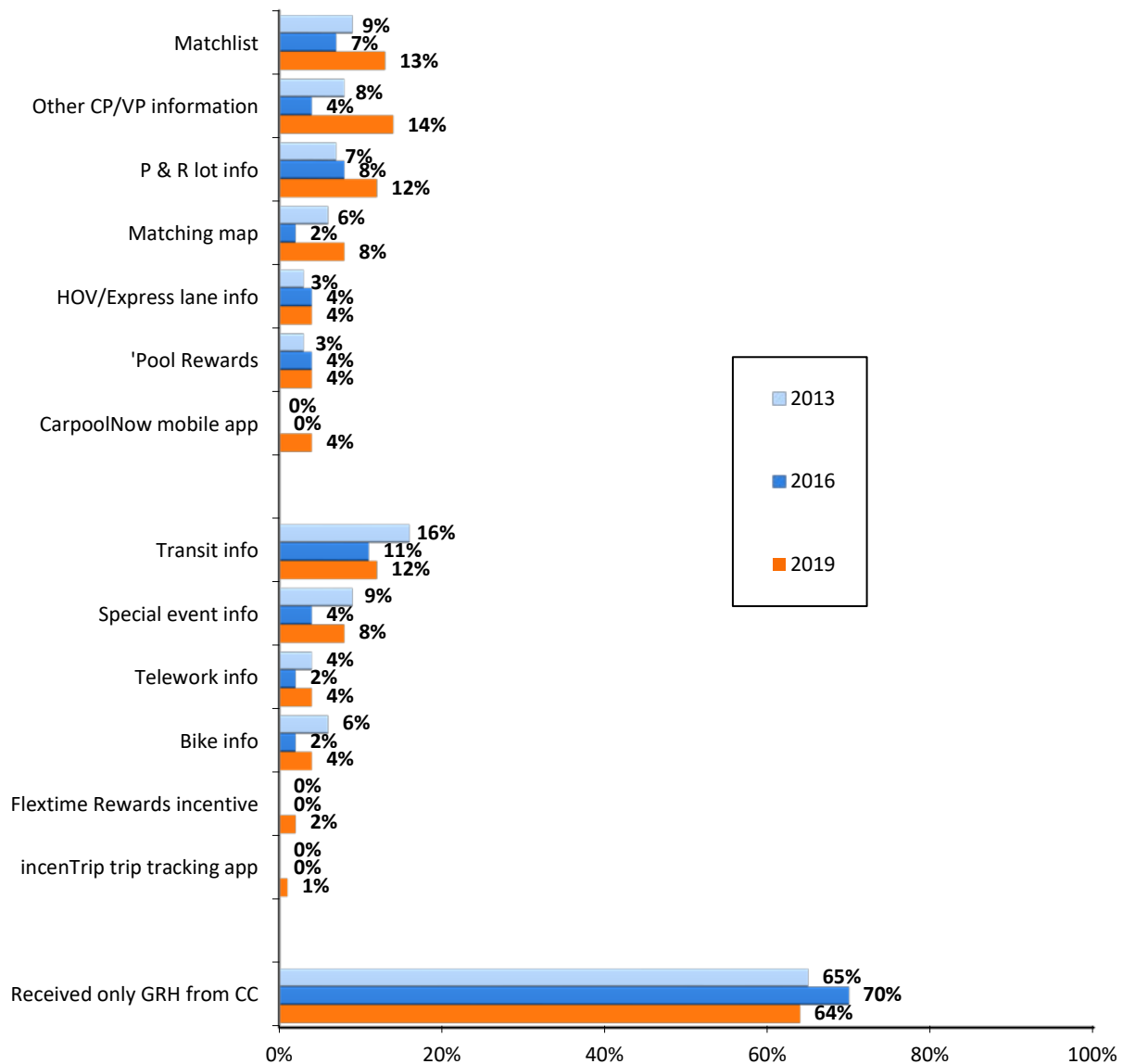
With this in mind, respondents were asked about other services or factors that could have influenced their mode choice decisions. First, all respondents were asked, “Do you recall receiving or accessing any of the following commute information or assistance services from Commuter Connections, in addition to GRH?” Then respondents who said they had made a commute change were asked three questions:

- Was any of the information or assistance that you received from Commuter Connections more important than GRH to your decision to make this change?
- Did you receive any commute assistance or benefits, in addition to GRH, from any source, that influenced your decision? If yes, what was the assistance or benefit?
- Were any other factors or circumstances important to your decision? If yes, what other factors or circumstances were more important to your decision?

**Other Assistance or Benefits Received from Commuter Connections** – Figure 21 lists the services that respondents mentioned receiving from Commuter Connections, in addition to GRH. About two-thirds (64%) of respondents said GRH was the only service they received from Commuter Connections. The other 36% noted one or more other services.

**Figure 21**  
**Assistance or Benefits Received from Commuter Connections, In Addition to GRH – All Respondents**

(2013 n = 543, 2016 n = 329, 2019 n = 241; Multiple responses permitted)



The top section of the table shows services focused primarily on carpool/vanpool assistance. About one in ten (13%) respondents received a matchlist with names of potential carpool/vanpool partners, 8% received a rideshare matching map, and 14% received “other” carpool or vanpool information. Twelve percent of respondents received information on Park & Ride lots from Commuter Connections, 4% received HOV/Express lane information, and 4% obtained information on the ‘Pool Rewards carpool and vanpool incentive program. Four percent of respondents said they had used the new CarpoolNow mobile application for real-time ridematching.

The shares of respondents who received matchlists, matching maps, and other carpool/vanpool information were higher in 2019 than in 2013. Use of other carpool/vanpool services, such as information on Park & Ride lots and HOV/Express lanes, and ‘Pool Rewards, was not statistically different in 2019 from 2016 and 2013.

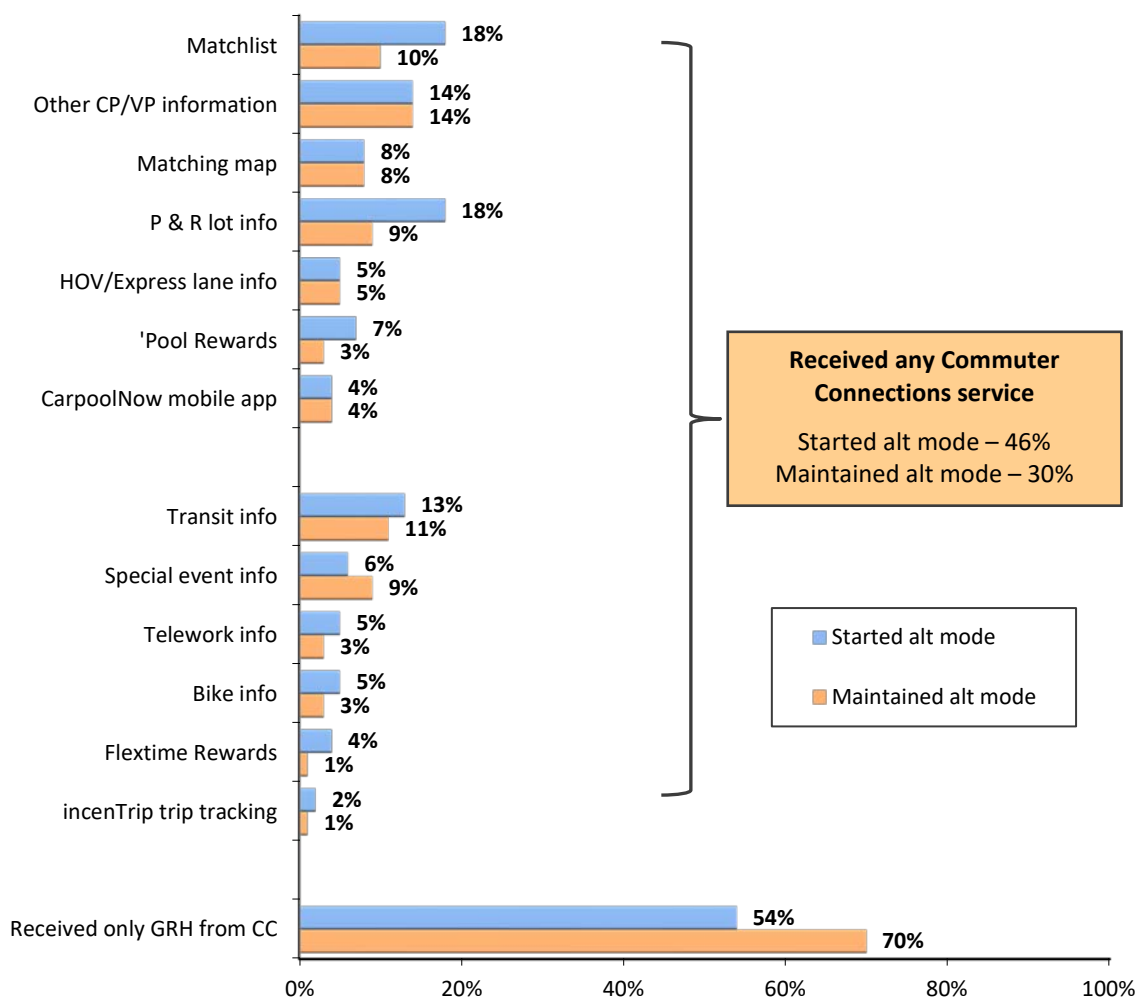
The middle section of the table shows use of transit, bike/walk, telework, and multi-modal services. One in ten (12%) respondents obtained transit route or schedule information and 8% had received information on a special event such as Bike-to-Work Day or Car Free Day. Four percent of respondents mentioned each of telework information and bike information. Small shares of respondents also noted two other Commuter Connections services that were initiated in 2018; 2% had used the Flextime Rewards incentive and 1% had used the incenTrip trip tracking and points application. The percentages of 2019 survey respondents who received each of the transit/multi-modal services were similar to the percentages noted in the 2016 and 2013 surveys.

Figure 22 shows the same services, with respondents grouped by the type of commute change they reported from the pre-GRH to during-GRH time period: started alternative mode or maintained alternative mode. Respondents who reported starting a new alternative mode received non-GRH Commuter Connections services at a higher rate than did respondents who maintained alternative mode use (46% of respondents who started vs 30% of respondents who maintained). They had higher use rates for most individual services, but the differences generally were small. Two notable exceptions were that respondents who started alternative modes were twice as likely to receive a matchlist and Park & Ride lot information than were those who maintained alternative mode use.

**Figure 22**

**Assistance or Benefits Received from Commuter Connections In Addition to GRH – By Type of Commute Change**

(Started alt mode n = 85, Maintained alt mode n = 127, Multiple responses permitted)

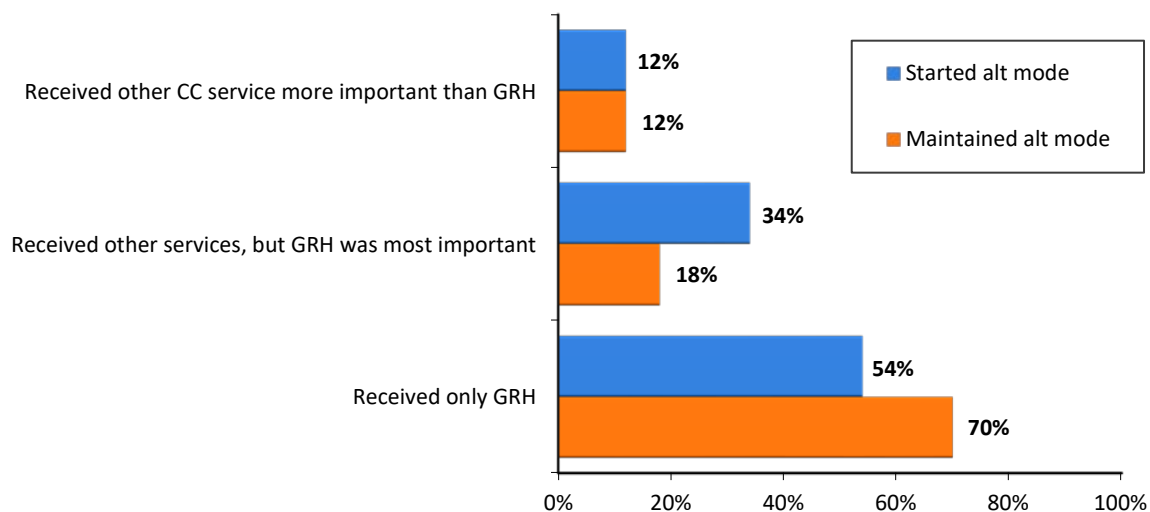


**Commuter Connections Assistance or Benefits that Were More Important than GRH** – Respondents who also had received non-GRH services from Commuter Connections were asked if any of these services had been more important than GRH in influencing their use of alternative modes.

As was noted above, 54% of respondents who started a new alternative mode and 70% who maintained alternative mode use said GRH was the only Commuter Connections service they received. But as illustrated in Figure 23, even among respondents who did receive other Commuter Connections services, GRH was typically the most important of these services. Only 12% of respondents who started an alternative mode and the same percentage of respondents who maintained alternative mode use said another Commuter Connections service was more important to their commute decision.

**Figure 23**  
**Commuter Connections Assistance or Benefits – More Important than GRH to Mode Decisions**

(Started n = 85, Maintained n = 127)



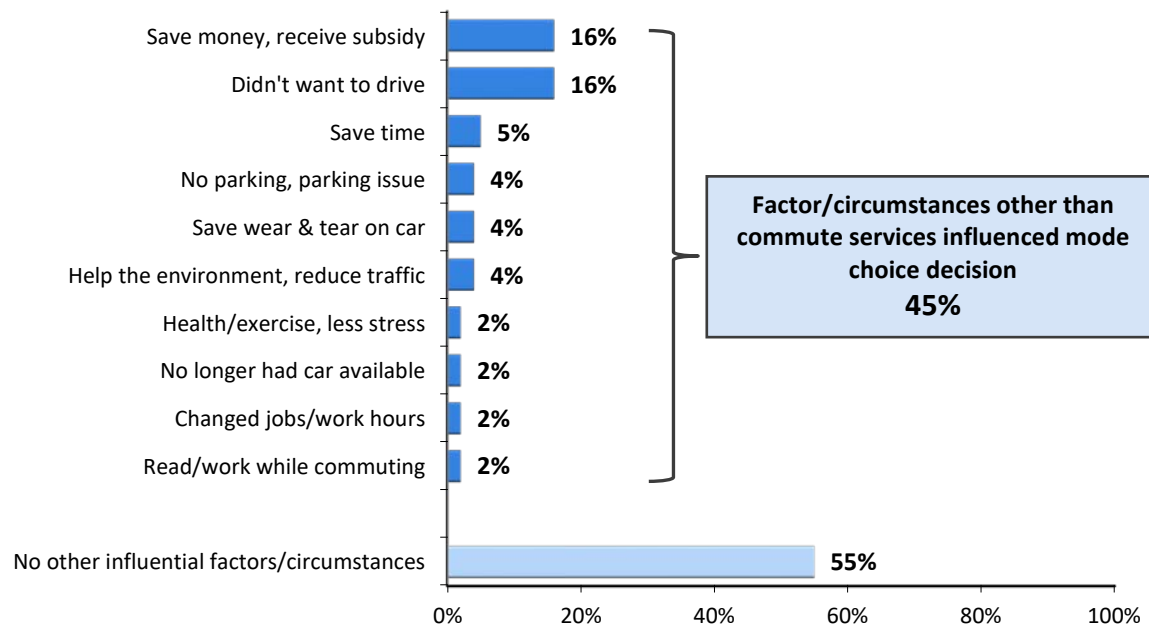
**Influential Assistance or Benefits Received from Another Organization** – Respondents also were asked about services they received from other organizations that influenced their mode choice decisions. About one-third (32%) mentioned a service that had influenced their decision. All of these respondents said the influential service was a transit pass, transit subsidy, or pre-tax payroll deduction for commute travel costs.

**Other Factors or Circumstances That Influenced Decision** – Lastly, respondents were asked if any other factors or circumstances, other than GRH and other than the assistance or benefits mentioned above, had been important to their mode choice decision. More than half (55%) said no other factors or circumstances influenced their decision, but 45% mentioned one or more other factors (Figure 24). The most common factors were a desire to save money (16%) or avoid driving (16%). Smaller shares of respondents noted other motivations.



**Figure 24**  
**Other Factors/Circumstances Important to Decision to Make a Change in Alternative Modes**

(n = 241, multiple responses permitted)



## Use of and Satisfaction With GRH

### Characteristics of Participants Who Used GRH Trips

**Used GRH Trip by Registration Status** – Three in ten (30%) respondents said they had taken a GRH trip (Table 9). This was higher than the 21% reported in 2016 and the 10% reported in 2013, but the program was much newer at the time of these earlier surveys.

**Table 9**  
**Used GRH Trip**  
All Respondents, Current Registrants, and Past Registrants

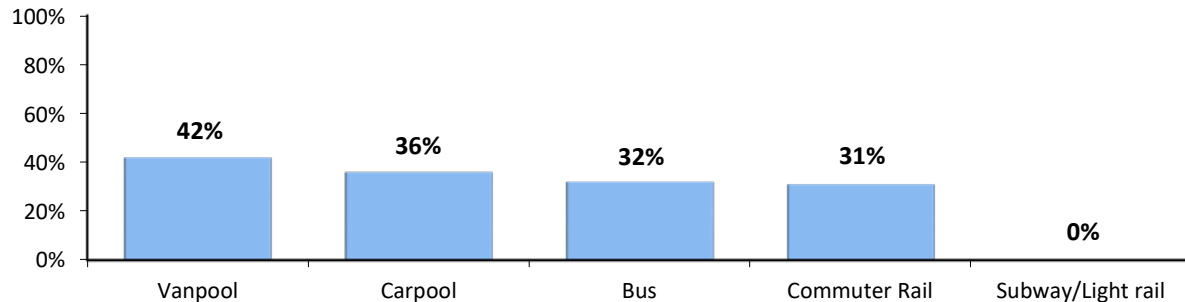
Taken a GRH Trip	All Respondents (n = 241)	Current Registrants (n = 163)	Past Registrants (n = 77)
Yes	30%	33%	24%
No	70%	67%	76%

Current registrants used GRH trips at a higher rate than did past registrants (33% of current, 24% of past). The higher use among current registrants could be related to their having participated for a longer time. But it also is possible that current registrants have simply encountered situations in which they would need a GRH trip, illustrating the value of the program and making them more likely to renew their registration. As was noted in an early section of the report, some past participants said they had not re-registered for GRH because they found they had not needed to use a GRH trip.

**Used GRH Trip by During-GRH Modes** – Figure 25 compares use of GRH by five “during-GRH” mode groups: vanpool, carpool, bus, commuter rail, and subway/light rail. Vanpoolers were most likely to have used a GRH trip; 42% of respondents who vanpooled while they were registered for GRH had taken a GRH trip. About one-third of carpoolers, bus riders, and commuter rail riders took a trip. Subway/light rail riders had the lowest usage; no respondents in this category had taken a GRH trip.

**Figure 25**  
**Used GRH Trip by Primary Mode During-GRH**

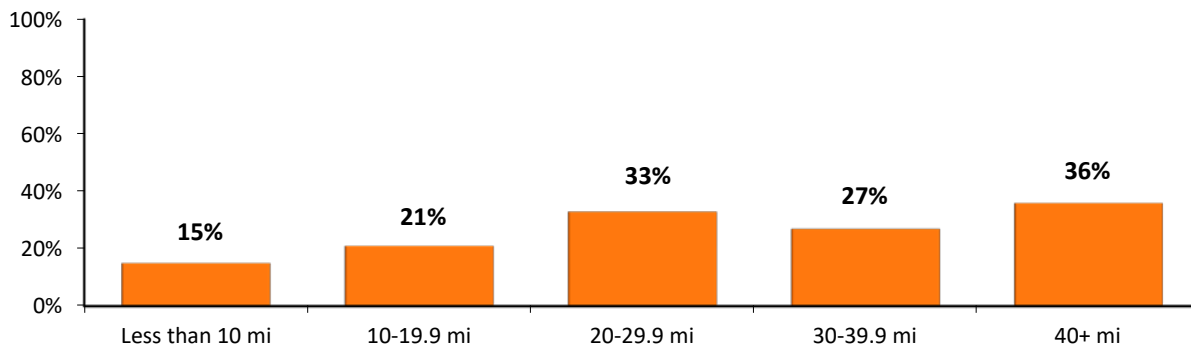
(Vanpool n = 58, Carpool n = 17, Bus n = 86, Commuter rail n = 33, Subway/Light rail n = 21)  
(Bike/walk not shown due to very small sample size)



**Used GRH Trip by Commute Distance** – Figure 26 presents a comparison of the use of GRH by how far respondents traveled to work. The average one-way distance of a respondent who used a GRH trip was 39.9 miles one-way, considerably longer than the 30.2 miles for GRH respondents who had not taken a trip. GRH trips were less often used by respondents who traveled fewer than 20 miles to work. But GRH use was not statistically different for respondents who traveled 20 or more miles.

**Figure 26**  
**Used GRH Trip by Commute Distance (miles)**

(Less than 10 mi n = 37, 10-19.9 mi n = 33, 20-29.9 mi n = 26, 30-39.9 mi n = 43, 40 mi or more n = 75)  
(Note small sample sizes for most distance groups)

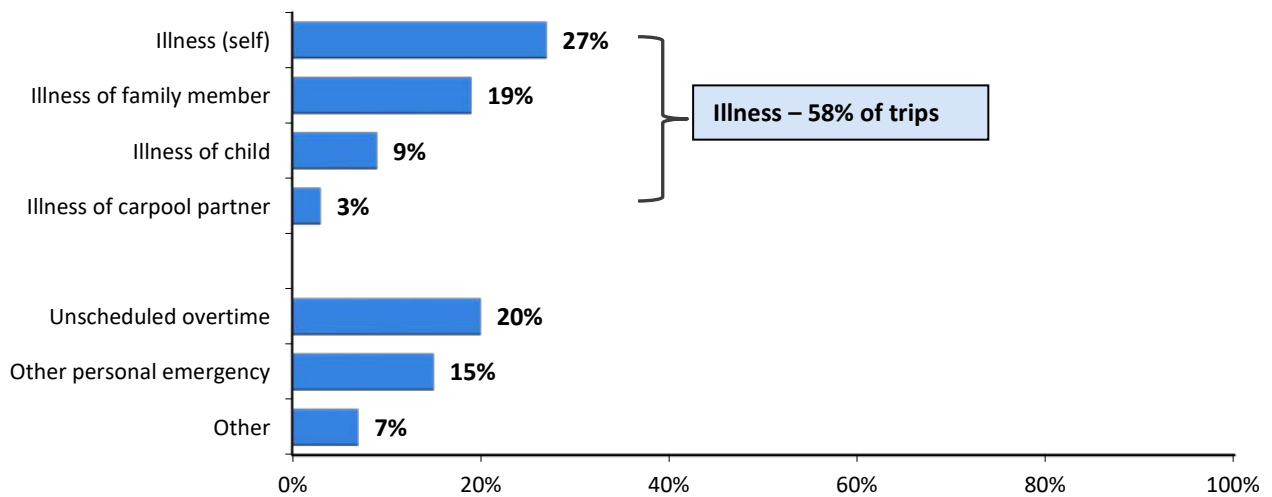


#### Reasons for Taking GRH Trip

Figure 27 lists the reasons for which participants used the service. If respondents had taken more than one trip, they were asked to report on the reason for their most recent trip. Six in ten GRH trips were taken to address an illness: respondent (27%), another family member (19%), a child (9%), or a carpool partner (3%). Unscheduled overtime (20%) was another common reason.

**Figure 27**  
**Reason for Taking Most Recent GRH Trip**

(n = 67)



#### Satisfaction with the Trip

Participants, who had taken a GRH trip were asked if the service was satisfactory. The overwhelming majority (88%) said they were satisfied. The primary reason given by unsatisfied respondents was that they waited too long for the taxi (5 of 6 dissatisfied respondents).

Respondents waited an average of 27 minutes for a taxi, about the same as the wait times calculated in the 2016 survey (28 minutes) and 2013 survey (27 minutes). In 2019, about half (47%) said the taxi arrived within 20 minutes, but almost one-quarter (23%) of respondents waited more than 30 minutes (Table 10).

**Table 10**  
**Time Waited for Taxi**

(n = 67)

Wait Time	Percentage	Cumulative Percentage
5 minutes or less	14%	14%
6 to 10 minutes	9%	23%
11 to 20 minutes	24%	47%
21 to 30 minutes	30%	77%
31 to 45 minutes	8%	85%
46 or more minutes	15%	100%

Desired Improvements to the GRH Program

Overall, participants appeared generally quite satisfied with the GRH Program. Sixteen percent of respondents said no improvement was necessary for the GRH program. An additional 33% of participants did not provide any suggestions for improvements. The remaining 51% mentioned various suggestions (Table 11).

**Table 11**  
**Suggested Improvements to GRH Program**

<b>Desired Improvement</b>	<b>2013 GRH (n = 543)</b>	<b>2016 GRH (n = 329)</b>	<b>2019 GRH (n = 241)</b>
More advertising/more program information	15%	16%	19%
Quicker response for ride requests	4%	5%	7%
Easier/faster approval/online registration	2%	4%	7%
Email reminder for renewal	3%	5%	5%
Relax conditions/supervisor approval	5%	3%	4%
Don't require registration	---	---	3%
Allow more GRH trips per year	2%	1%	3%
Use ride-hail services in addition to taxi	---	---	1%
Other *	11%	10%	9%
No improvement needed	10%	8%	16%
Don't know/no suggestions provided	49%	49%	33%

Percentages might add to more than 100% due to multiple responses

\* Each other response was mentioned by fewer than one percent of respondents

The most frequently mentioned improvement was more advertising or more program information, named by 19% of respondents, about the same percentage as mentioned it in 2016 (16%) and in 2013 (15%). All other responses were cited by small shares of respondents and the results were similar to those of the 2016 and 2013 surveys.

## **Social Networking and Travel Information Applications**

The 2019 GRH survey added two new questions to examine the growing use of social networking and traveler information mobile applications.

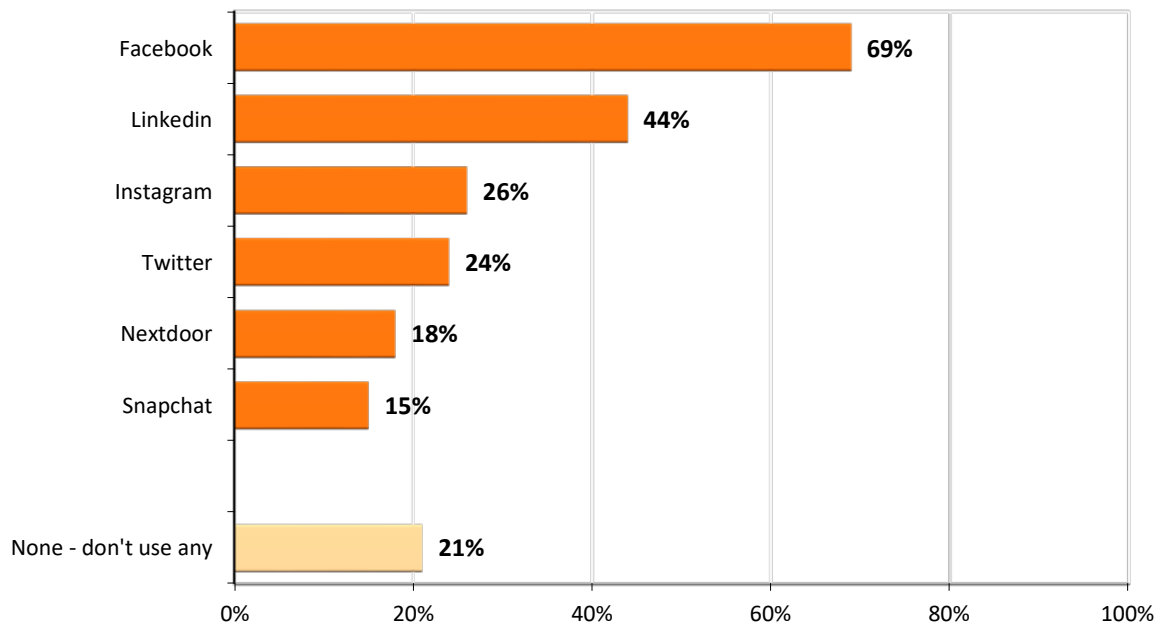
### Social Networking

Use of social networking applications has become a daily part of life for many people and the networking apps have become a common source of information. In both the GRH and SOC surveys, survey respondents were shown a list of six applications and asked to indicate those with which they had accounts.

About eight in ten (79%) GRH respondents said they had an account with at least one of the six applications (Figure 28). The most common application was Facebook, used by 69% of respondents. LinkedIn, used primarily for work-related/professional interactions, was noted by 44% of respondents. About one-quarter had accounts with Instagram (26%) and Twitter (24%). Two in ten (18%) mentioned having a Nextdoor account and 15% said they had a Snapchat account.

**Figure 28**  
**Social Networking Applications – Percentage with Accounts**

(n = 237)



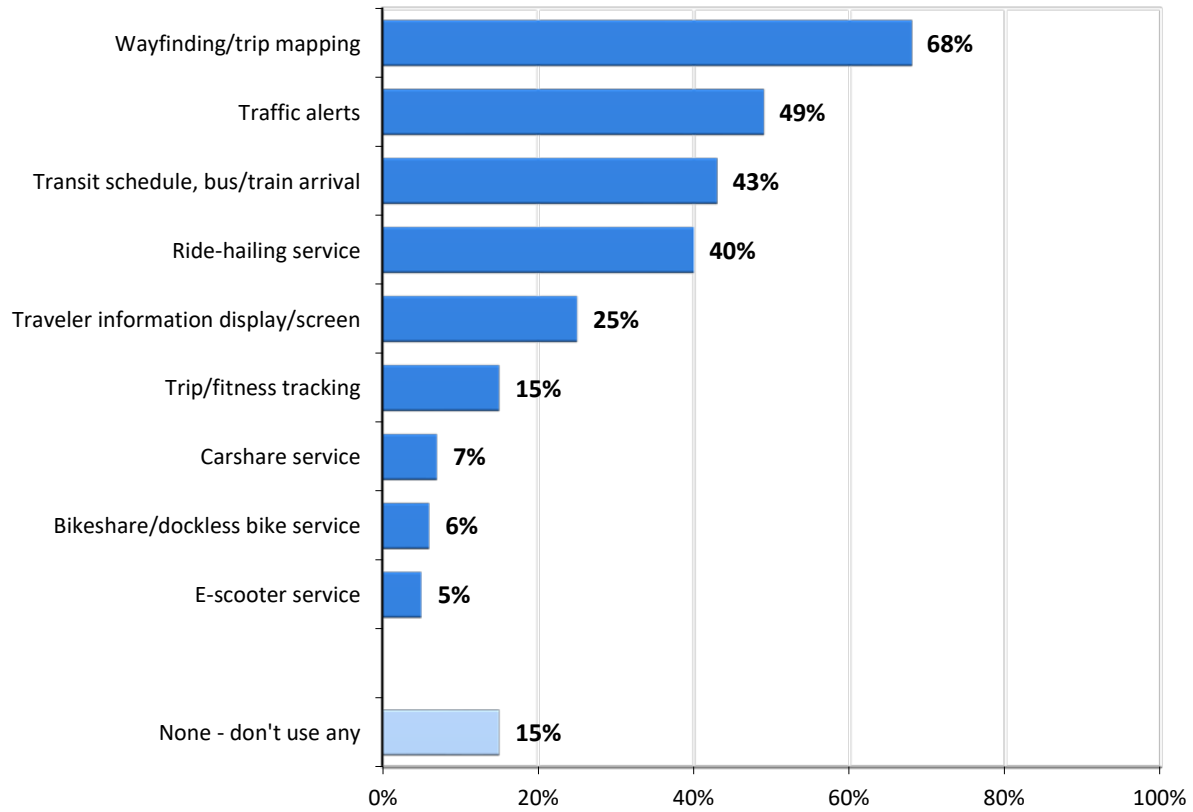
#### Travel/Trip Information Applications

Wide-scale availability of smartphones and other mobile devices also has created an opportunity for commute information and service organizations to deliver an extensive range of traveler information via mobile applications, enhancing commuters' access to travel information in real time and before and during a trip. The 2019 GRH survey added a question to identify applications that GRH registrants used. Survey respondents were shown a list of nine applications and asked to indicate those they had used.

More than eight in ten (85%) GRH respondents had used at least one of the listed applications (Figure 29). The most common application, used by nearly seven in ten respondents was wayfinding or trip mapping apps, such as Google maps and Waze. About half (49%) of respondents had used traffic alerts delivered via text message or other means.

More than four in ten (43%) GRH registrants had used an application that tracked transit schedules or provided "next bus/train" information on arrival time and 40% had used an application for a ride-hailing service such as Uber, Lyft, or Via. One-quarter had used a traveler information display or screen located in a public location and 15% had used a trip or fitness tracking app. Smaller shares of respondents had used applications for carshare (7%), bikeshare (6%), and e-scooter (5%) services.

**Figure 29**  
**Travel/Trip Information Applications – Percentage Using Apps**  
(n = 235)



## **APPENDICES**

Appendix A – Survey Questionnaire

Appendix B – Respondent Alert Letters

Appendix C – Disposition of Final Dialing Results

Appendix D – Results from 2019, 2016, 2013 GRH Surveys – Comparison on Key Questions

## APPENDIX A – SURVEY QUESTIONNAIRE

MWCOG 2019 Guaranteed Ride Home Survey - Internet Version

### INTRODUCTION

Commuter Connections is conducting this online survey of commuters who have registered for or participated in the Baltimore and St. Mary's County Regional Guaranteed Ride Home (GRH) program. Commuter Connections is offering a drawing for five \$100 Amazon gift cards for commuters who complete the survey. If you would like to participate in the drawing for one of the gift cards, please provide your name and email address at the end of the survey. Thank you for your participation.

### REGISTRATION INFORMATION

Q1. In what year did you first register for the Baltimore and St. Mary's County GRH program?

- 1 Before 2014 (**SKIP TO Q2**)
- 2 2014 (**SKIP TO Q2**)
- 3 2015 (**SKIP TO Q2**)
- 4 2016 (**SKIP TO Q2**)
- 5 2017 (**SKIP TO Q2**)
- 6 2018 (**SKIP TO Q2**)
- 7 2019 (**SKIP TO Q2**)
- 8 Never registered, don't recall registering (**SKIP TO Q3**)
- 9 Don't remember/don't know year registered (**ASK Q1a**)
- 89 Left blank (**ASK Q1a**)

Q1a Do you recall that you did register for the GRH program at some time?

- 1 Yes (**CONTINUE TO Q2**)
- 2 No (**RECODE Q1 = 8, THEN SKIP TO Q3**)
- 9 Don't know (**RECODE Q1 = 8, THEN SKIP TO Q3**)
- 89 Left blank (**RECODE Q1 = 8, THEN SKIP TO Q3**)

Q2 Are you currently registered for the GRH program?

- 1 Yes (**SKIP TO Q6**)
- 2 No (**SKIP TO Q4**)
- 9 Don't know (**SKIP TO Q4**)
- 89 Left blank (**ASK Q3**)

Q3 Have you ever taken a GRH trip provided by the Baltimore and St. Mary's County GRH program?

- 1 Yes
- 2 No (**THANK and TERMINATE**)
- 89 Left blank (**THANK AND TERMINATE**)

Q3a For what reason did you not register for the GRH program after you took this one-time GRH trip?

OPEN ENDED \_\_\_\_\_

**SKIP TO Q8**



Q4 How long were you registered in the GRH program?

- 1 Less than 1 year
- 2 1 year
- 3 2 years
- 4 3 years
- 5 More than 3 years
- 9 Don't remember/don't know
- 89 Left blank

Q5 Why did you not re-register when your registration expired?

OPEN ENDED \_\_\_\_\_

Q6 Did you participate in another GRH program before registering for the Baltimore and St. Mary's County GRH program?

- 1 Yes (**ASK Q7**)
- 2 No (**SKIP TO Q8**)
- 9 Don't know (**SKIP TO Q8**)
- 89 Left blank (**SKIP TO Q8**)

Q7 Who offered/sponsored that program?

- 1 My employer
- 2 County or city government (please specify) \_\_\_\_\_
- 3 VRE
- 9 Other \_\_\_\_\_
- 89 Left blank

**CURRENT COMMUTE PATTERNS (Asked of all respondents)**

Q8 Next, think about your travel to work. First, in a TYPICAL week, how many weekdays (Monday-Friday) are you assigned to work?

- 1 1 day per week
- 2 2 days per week
- 3 3 days per week
- 4 4 days per week
- 5 5 days per week
- 8 0 weekdays (not currently working or work only on weekends) (**SKIP TO INTRO TO DEMOGRAPHICS – BEFORE Q60**)

Q10 Which of the following best represents your work schedule? (**SHOW RESPONSES ON SCREEN**)

1. Full-time, 5 or more days per week
2. Part-time
3. 4/40 compressed schedule (four 10-hour days per week, 40 hours)
4. 9/80 compressed schedule (9 days every 2 weeks, 80 hours)
5. 3/36 compressed schedule (three 12-hour days per week, 36 hours)
- 9 Other (SPECIFY) \_\_\_\_\_
- 89 Question left blank

Q10a Do you telecommute or telework. 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 Q10c**)
- 9 Don't know (**SKIP TO Q10c**)
- 89 *Left blank*

Q10b How often do you usually telecommute?

- 1 1 day per week
- 2 2 days per week
- 3 3 days per week
- 4 4 days per week
- 5 5 or more days per week
- 6 Occasionally for special projects
- 7 Less than one time per month/only in emergencies
- 8 1-3 times a month
- 9 Other (SPECIFY) \_\_\_\_\_
- 19 Not sure
- 89 *Left blank*

Q10c In a typical week, how often are you away from your usual work location **for an entire day** for business / work travel (e.g., meetings/ visits to clients or customers)?

- 1 Never, I don't ever travel for work
- 2 Occasionally, but less than 1 day per week
- 3 Regularly, 1 or more days per week
- 9 Not sure
- 89 *Left blank*

Q14 Thinking about a TYPICAL week, how do you get to work, Monday through Friday? In the table below, enter the number of weekdays you typically use each of the listed types of transportation. If you use more than one type on a single day (e.g., walk to the bus stop, then ride the bus), count only the type you use for the **longest distance part** of your trip.

**IF Q10c = 3, ALSO SHOW:** “For days that you typically would be on business / work travel, please report the type of transportation you would use to get to work if you worked at your usual work location.”

Indicate also how many weekdays you do NOT travel to your usual work location and the reasons (e.g., regular day off, telecommute, compressed work schedule day off) for not traveling to work.

**Q14 PROGRAMMER NOTES:**

**CHECK SUM OF Q14 DAYS. IF TOTAL OF Q14 RESPONSES 1-21 IS LESS THAN 5, SHOW MESSAGE:** “Please report for all days Monday – Friday, including telework days, compressed schedule days, and days you do not work.” **IF TOTAL OF Q14 RESPONSES 1-21 IS GREATER THAN 5, SHOW MESSAGE:** “You’ve reported more than five days. Please report only for Monday – Friday and only one type of transportation per day.”

**IF Q10 = 3, 4 OR 5 AND RESPONDENT DOES NOT CHECK "CWS day off" (RESPONSE 1), SHOW MESSAGE** “You said you typically work a compressed work schedule. How many compressed schedule days do you typically have off in a week?” **ACCEPT 0 AS VALID RESPONSE**

**IF Q10b = 1, 2, 3, 4, OR 5 AND RESPONDENT DOES NOT CHECK "Telecommute" (RESPONSE 2), SHOW MESSAGE:** “You said you typically telework. How many days do you telework in a typical week? **ACCEPT 0 AS VALID RESPONSE**

Type of Transportation	Number of Days (Mon-Fri) Used (0 to 5)
<b>Days you travel to your usual work location</b>	
3 Drive alone in a car, truck, van, or SUV	
4 Motorcycle	
5 Carpool, including carpool w/family member, dropped off (ride or drive with others in a car, truck, van, or SUV)	
6 Casual carpool (slugging)	
7 Vanpool	
8 Baltimore Metro Subway	
9 Bus (public or private bus, shuttle, buspool, commuter bus, express bus)	
10 Metrorail	
11 MARC (MD Commuter Rail)	
12 VRE	
13 AMTRAK / other train	
14 Bicycle/e-scooter (entire trip or longest distance part of trip from home to work)	
15 Walk (entire trip from home to work)	
16 Taxi	
18 Uber, Lyft, Via	
19 Light rail	
<b>Days you do not travel to your usual work location</b>	
1 Compressed work schedule day off	
2 Telecommute/telework all day	
17 Regular day off	
21 Other (describe) _____	
<b>Total Days (DO NOT SHOW THIS LINE ON SCREEN)</b>	<b>Sum of 1-21</b>

**IF Q14 = 5, 6, OR 7 (carpool or vanpool), ASK Q14a, OTHERWISE SKIP TO DEFINE CALTDAYS**

Q14a Including yourself, how many people usually ride in your <carpool or vanpool>? **(IF MORE THAN ONE ANSWER IN Q14, SELECT ONE USING THIS PRIORITY: vanpool, carpool, casual carpool.)**

\_\_\_\_\_ total people in pool

89 Left blank

**DEFINE CALTDAYS (days currently using alternative modes)**

CALTDAYS = TOTAL Q14 DAYS USING MODES 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19

**DEFINE CMCA (Current Most Common Alternate)**

Set CMCA using Q14 alt mode used most days (responses 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19)

IF CALTDAYS = 0, SET CMCA = 99 (no MCA)

IF CALTDAYS > 0, SET CMCA AS FOLLOWS:

IF GREATEST NUMBER OF Q14, RESPONSES 5-15, 19 =

Q14\_05, SET CMCA = 05 (Carpool)

Q14\_06, SET CMCA = 06 (Casual Carpool / Slug)

Q14\_07, SET CMCA = 07 (Vanpool)

Q14\_08, SET CMCA = 08 (Baltimore Metro Subway)

Q14\_09, SET CMCA = 09 (Bus)

Q14\_10, SET CMCA = 10 (Metrorail train)

Q14\_11, SET CMCA = 11 (MARC train)

Q14\_12, SET CMCA = 12 (VRE train)

Q14\_13, SET CMCA = 13 (AMTRAK / Other train)

Q14\_14, SET CMCA = 14 (Bicycle)

Q14\_15, SET CMCA = 15 (Walk)

Q14\_19, SET CMCA = 19 (Light rail)

IF TIE FOR MOST Q14 DAYS USED, SELECT IN THIS ORDER: VANPOOL, CARPOOL, BUS, VRE, MARC, BALTIMORE METRO SUBWAY, LIGHT RAIL, METRORAIL, AMTRAK, CASUAL CARPOOL, BIKE, WALK.

**DEFINITION OF REGISTRATION STATUS (GRHTYPE)**

IF Q1 = 1, 2, 3, 4, 5, 6, 7, 9, OR 89 AND Q2 = 1 AND CALTDAYS > 0, GRHTYPE = 1 (CURR\_REG)

IF Q1 = 1, 2, 3, 4, 5, 6, 7, 9, OR 89 AND Q2 = 1 AND CALTDAYS = 0, GRHTYPE = 2 (PAST\_REG)

IF Q1 = 1, 2, 3, 4, 5, 6, 7, 9, OR 89 AND Q2 = 2 OR 9, GRHTYPE = 2 (PAST\_REG)

IF Q1 = 8 AND Q3 = 1 AND CALTDAYS = 0, GRHTYPE = 2 (PAST\_REG)

IF Q1 = 8 AND Q3 = 1 AND CALTDAYS > 0, GRHTYPE = 3 (ONE\_TIME)

IF CALTDAYS > 0, SKIP TO Q15

IF CALTDAYS = 0 (Q14 = ONLY 1, 2, 3, 4, 16, 17, 18, AND 21), ASK Q14b

IF CALTDAYS = 0 AND Q2 = 1, START Q14b WITH "You said you're currently registered for the GRH Program but you drive alone all the days you travel to work,"

Q14b <You said you're currently registered for the GRH Program but you typically drive alone or ride in a taxi/Uber/Lyft/Via all the days that you travel to work.> Do you occasionally use any of the following types of transportation to get to work?

(Check all that apply) **(DO NOT ALLOW MULTIPLES WITH RESPONSE 5)**

- 1 Carpool or casual carpool (slug)
- 2 Vanpool
- 3 Bus or train
- 4 Bike or walk
- 5 Don't use any of these modes
- 89 Left blank

Q15 About how many miles do you usually travel from home to work one way? **(ALLOW DECIMALS)**

\_\_\_\_\_ miles one way

899 Left blank

Q16 And about how many minutes does it take you to get to work?

\_\_\_\_\_ minutes

899 Left blank

Q16a At what time do you typically arrive at work?

1 12:00 am (midnight) – 5:59 am

2 6:00 am – 6:59 am

3 7:00 am – 7:59 am

5 8:00 am – 8:59 am

7 9:00 am – 9:59 am

9 10:00 am – 2:59 pm

10 3:00 pm – 6:59 pm

11 7:00 pm – 11:59 pm

99 Don't know

89 Left blank

INSTRUCTIONS BEFORE Q16b

**Check sum of days using Personal vehicle (DA/ MC /Taxi, Uber/Lyft, CP, VP) – Show different form of Q16b question depending on sum of vehicle days**

**IF SUM OF (Q14\_3 + Q14\_4 + Q14\_5 + Q14\_6 + Q14\_7 + Q14\_16 + Q14\_18) = 4 OR 5, INSERT V1 “What Interstate highways or major U.S. or state routes do you use on your trip to work?”**

**IF SUM OF (Q14\_3 + Q14\_4 + Q14\_5 + Q14\_6 + Q14\_7 + Q14\_16 + Q14\_18) = 1, 2, OR 3, INSERT V2, “On days that you drive or ride to work in a personal vehicle, what Interstate highways or major U.S. or state routes do you use?”**

**IF SUM OF (Q14\_3 + Q14\_4 + Q14\_5 + Q14\_6 + Q14\_7 + Q14\_16 + Q14\_18) = 0, INSERT V3, “If you were to drive to work, what Interstate highways or major U.S. or state routes would you use?”**

Q16b **V1** – “What Interstate highways or major U.S. or state routes do you use on your trip to work? Select all that apply.”

**V2** – “On days that you drive or ride to work in a personal vehicle, what Interstate highways or major U.S. or state routes do you use? Select all that apply.”

**V3** – “If you were to drive to work, what Interstate highways or major U.S. or state routes would you use? Select all that apply.”

**THEN SHOW LIST BELOW TO ALL RESPONDENTS. ACCEPT MULTIPLES FOR 1 - 22 AND 99, DO NOT ALLOW MULTIPLES WITH 98**

**Interstate Highways**

- 1 I-70 (MD)
- 2 I-83 (Jones Falls Expressway, JFX)
- 3 I-95 (MD - Kennedy Highway)
- 4 I-95 (VA – south of Washington DC)
- 5 I-97 (MD)
- 6 I-195 (Metropolitan Blvd / BWI Airport)
- 7 I-270 (MD)
- 8 I-295 (DC / MD)
- 9 I-395 (MD - Cal Ripken Way)
- 10 I-395 (VA – Shirley Highway)
- 11 I-495 (Capital Beltway – Washington region)
- 12 I-695 (Baltimore Beltway)
- 13 I-795 (Northwest Expressway)
- 14 I-895 (Harbor Tunnel Thruway)

**Major U.S./State Routes**

- 15 US Route 1 (Belair Road, Baltimore Pike, Bel Air Bypass, Conowingo Road)
- 16 US Route 29 (Columbia Pike, Colesville Road)
- 17 US Route 40 (Pulaski Highway)
- 18 MD 295, BW Parkway, Baltimore-Washington Parkway)
- 19 US Route 50 (John Hanson Highway)
- 20 US Route 301
- 21 MD 32
- 22 MD 100

98 No Interstate or U.S. or state routes

99 Other (specify) \_\_\_\_\_

899 Left blank

**IF CMCA = 99 (no alt mode), SKIP TO INSTRUCTIONS BEFORE Q21**

**IF CMCA = 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, CONTINUE WITH Q17**

Q17 About how long have you been using < CMCA > for your trip to work? Please enter the number of MONTHS.

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

999 Don't know

899 Left blank

**INSTRUCTIONS BEFORE Q19**

**IF Q14 NE 5, 6, 7, 8, 9, 10, 11, 12, 13, OR 19, SKIP TO INSTRUCTIONS BEFORE Q21.**

**IF Q14 = 5, 6, 7, 8, 9, 10, 11, 12, 13, OR 19, ASK Q19-Q20, INSERTING <Q14 MODE> NAME DEFINED BY Q14 MOST DAYS USED AS FOLLOWS:**

- Q14\_R5 + Q14\_R6 = carpool

- Q14\_R7 = vanpool

- Q14\_R9 = bus

- Q14\_R10 + Q14\_R11 + Q14\_R12 + Q14\_R13 + Q14\_R8 + Q14\_R19 = train

**IF TIE FOR Q14 MOST DAYS, SELECT MODE IN THIS PRIORITY ORDER: VANPOOL, CARPOOL, TRAIN, BUS.**

**IF Q14 MODE = bus or train (Q14, responses 8, 9, 10, 11, 12, 13, 19), DO NOT SHOW Q19 RESPONSES 1, 2 OR 8 ON THE SCREEN – SHOW ONLY 3, 4, 5, 6, 7, 9, 10, 11, 19**

Q19 How do you get from home to where you meet your <Q14 MODE: carpool, vanpool, bus, train>?

- 1 Picked up at home by car/vanpool (or car/vanpool leaves from my home) **(SKIP TO INSTRUCTIONS BEFORE Q21)**
- 2 Drive alone to driver's home or drive alone to passenger's home
- 3 Drive to a central location, like a park & ride or bus stop/train station
- 4 Dropped off (including by household member)
- 5 Bicycle (personal bike or Capital Bikeshare bike)
- 6 Motorcycle
- 7 Walk
- 8 I am always the driver of carpool/vanpool **(SKIP TO INSTRUCTIONS BEFORE Q21)**
- 9 Bus/transit
- 10 Taxi
- 11 Uber, Lyft, Via
- 19 Other (SPECIFY) \_\_\_\_\_
- 89 Left blank

Q20 How many miles is it one way from your home to where you meet your < Q14 MODE: carpool, vanpool, bus, train>?

\_\_\_\_\_ miles **(ALLOW DECIMALS)**

899 Left blank

### **MODE DURING GRH (Past Registrants)**

#### **INSTRUCTIONS BEFORE Q21**

**IF GRHTYPE = 2 (PAST\_REG) AND Q2 = 2 OR 9, ASK Q21-23, INSERT "registered"**

**IF GRHTYPE = 2 (PAST\_REG) AND Q3 = 1, ASK Q21-Q23, INSERT "eligible"**

**IF GRHTYPE = 1 (CURR\_REG), SKIP TO Q27**

**IF GRHTYPE = 3 (ONE\_TIME), SKIP TO Q24**

Q21 Next, think back to the time that you were <registered, eligible> for the GRH program. During that time, how many days, Monday – Friday, were you assigned to work in a typical week?

- 1 1 day per week
- 2 2 days per week
- 3 3 days per week
- 4 4 days per week
- 5 5 days per week

Q23 And while you were <registered, eligible> for GRH, how did you get to work? Enter the number of days, Monday through Friday, that you typically used each of the listed types of transportation. If you used more than one type on a single day (e.g., walked to the bus stop, then rode the bus), count only the type you used for the **longest distance part** of your trip.

Indicate also how many weekdays you did NOT travel to your usual work location and the reasons (e.g., regular day off, telecommute, compressed work schedule day off) for not traveling to work.

**Q23 PROGRAMMER NOTES:**

**CHECK SUM OF Q23 DAYS. IF TOTAL OF Q23, RESPONSES 1-21 IS LESS THAN 5, SHOW MESSAGE:** "Please report for all days Monday – Friday, including telework days, compressed schedule days, and days you did not work." **IF TOTAL OF Q23 RESPONSES 1-21 IS GREATER THAN 5, SHOW MESSAGE:** "You've reported more than five days. Please report only for Monday – Friday and only one type of transportation per day."

**IF Q14 = 1 AND RESPONDENT DOES NOT REPORT "CWS day off" (RESPONSE 1), SHOW MESSAGE:** "You said you typically work a compressed work schedule now. Please indicate the number of compressed schedule days you had during the time you were registered for the GRH program." **ACCEPT "0" AS THE RESPONSE.**

**IF Q14 = 2 AND RESPONDENT DOES NOT REPORT "Telecommute/telework" (RESPONSE 2), SHOW MESSAGE:** "You said you typically telecommute now. Please indicate the number of days you telecommuted during the time you were registered for the GRH program?" **ACCEPT "0" AS RESPONSE.**

Type of Transportation – While <i>Registered or Eligible</i> for GRH	Number of Days (Mon-Fri) Used (0 to 5)
<b>Days you traveled to your usual work location</b>	
3 Drive alone in a car, truck, van, or SUV	
4 Motorcycle	
5 Carpool, including carpool w/family member, dropped off (ride or drive with others in a car, truck, van, or SUV)	
6 Casual carpool (slugging)	
7 Vanpool	
8 Baltimore Metro Subway	
9 Bus (public or private bus, shuttle, buspool, commuter bus, express bus)	
10 Metrorail	
11 MARC (MD Commuter Rail)	
12 VRE	
13 AMTRAK / other train	
14 Bicycle/e-scooter (entire trip or longest distance part of trip from home to work)	
15 Walk (entire trip from home to work)	
16 Taxi	
18 Uber, Lyft, Via	
19 Light rail	
<b>Days you did not travel to your usual work location</b>	
1 Compressed work schedule day off	
2 Telecommute/telework all day	
17 Regular day off	
21 Other (describe) _____	
<b>Total Days (DO NOT SHOW THIS LINE ON SCREEN)</b>	<b>Sum of 1-21</b>



**DEFINE DALTDAYS (Days using alt modes during GRH – past registrants only)****DALTDAYS = TOTAL Q23 DAYS USING MODES 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19****DEFINE DMCA (During Most Common Alternate)****Set DMCA using Q23 alt mode used most days (responses 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19)****IF DALTDAYS = 0, SET DMCA = 99 (no MCA)****IF DALTDAYS > 0, SET DMCA AS FOLLOWS:****IF GREATEST NUMBER OF Q23, R5-15, R19 =****Q23\_05, SET DMCA = 05 (Carpool)****Q23\_06, SET DMCA = 06 (Casual Carpool / Slug)****Q23\_07, SET DMCA = 07 (Vanpool)****Q23\_08, SET DMCA = 08 (Baltimore Metro Subway)****Q23\_09, SET DMCA = 09 (Bus)****Q23\_10, SET DMCA = 10 (Metrorail)****Q23\_11, SET DMCA = 11 (MARC)****Q23\_12, SET DMCA = 12 (VRE)****Q23\_13, SET DMCA = 13 (AMTRAK / Other)****Q23\_14, SET DMCA = 14 (Bicycle)****Q23\_15, SET DMCA = 15 (Walk)****Q23\_19, SET DMCA = 19 (Light rail)****IF TIE FOR MOST DAYS USED, SELECT DCMA IN THIS ORDER: VANPOOL, CARPOOL, BUS, VRE, MARC, BALTIMORE METRO SUBWAY, LIGHT RAIL, METRORAIL, AMTRAK, CASUAL CARPOOL, BIKE, WALK.****IF GRHTYPE = 2 (PAST\_REG) AND Q3 = 1, CONTINUE WITH Q24****OTHERWISE SKIP TO Q27****MODE BEFORE HEARD ABOUT GRH (OTE only)*****(One-Time Exceptions mode before GRH)*****Q24** Think back to the time before you heard about the GRH program. At that time, how many days Monday – Friday were you assigned to work in a typical week?

- 0 did not work any days Monday-Friday then, did not work in Baltimore area then
- 1 1 day per week
- 2 2 days per week
- 3 3 days per week
- 4 4 days per week
- 5 5 days per week

**IF Q24 = 0, AUTOCODE Q26, RESPONSE 20 (did not work then) = 5, THEN SKIP TO DEFINE BHALTDAYS**

Q26 And before you heard about GRH, how did you get to work? Enter the number of days, Monday through Friday, that you typically used each of the listed types of transportation. If you used more than one type on a single day (e.g., walked to the bus stop, then rode the bus), count only the type you used for the **longest distance part** of your trip.

Indicate also how many weekdays you did NOT travel to your usual work location and the reasons (e.g., regular day off, telecommute, compressed work schedule day off) for not traveling to work.

**Q26 PROGRAMMER NOTES:**

**CHECK SUM OF DAYS. IF TOTAL OF Q26, RESPONSES 1-21 IS LESS THAN 5, SHOW MESSAGE:** "Please report for all days Monday – Friday, including telework days, compressed schedule days, and days you did not work." **IF TOTAL OF Q26 RESPONSES 1-21 IS GREATER THAN 5, SHOW MESSAGE:** "You've reported more than five days. Please report only for Monday – Friday and only one type of transportation per day."

**IF Q14 = 1 AND RESPONDENT DOES NOT REPORT "CWS day off" (RESPONSE 1), SHOW MESSAGE:** "You said you typically work a compressed work schedule now. Please indicate the number of compressed schedule days you had before you heard about the GRH program." **ACCEPT "0" AS VALID RESPONSE**

**IF Q14 = 2 AND RESPONDENT DOES NOT REPORT "Telecommute/telework" (RESPONSE 2), SHOW MESSAGE:** "You said you typically telecommute now. Please indicate the number of days you telecommuted before you heard about the GRH program?" **ACCEPT "0" AS VALID RESPONSE.**

Type of Transportation – Before Hearing About GRH	Number of Days Mon-Fri Used (0 to 5)
<b>Days you traveled to your usual work location</b>	
3 Drive alone in a car, truck, van, or SUV	
4 Motorcycle	
5 Carpool, including carpool w/family member, dropped off (ride or drive with others in a car, truck, van, or SUV)	
6 Casual carpool (slugging)	
7 Vanpool	
8 Baltimore Metro Subway	
9 Bus (public or private bus, shuttle, buspool, commuter bus, express bus)	
10 Metrorail	
11 MARC (MD Commuter Rail)	
12 VRE	
13 AMTRAK / other train	
14 Bicycle/e-scooter (entire trip or longest distance part of trip from home to work)	
15 Walk (entire trip from home to work)	
16 Taxi	
18 Uber, Lyft, Via	
19 Light rail	

<b>Days you did not travel to your usual work location</b>	
1 Compressed work schedule day off	
2 Telecommute/telework all day	
17 Regular day off	
21 Other (describe) _____	
20 Did not work Monday-Friday then, did not work in Baltimore area then	
<b>Total Days (DO NOT SHOW THIS LINE ON SCREEN)</b>	<b>Sum of 1-21</b>

**DEFINE BHALTDAYS (Days using alt modes before heard about GRH - OTE)**

BHALTDAYS = TOTAL Q26 DAYS USING MODES 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19

**DEFINE BHMCA (Most Common Alternative before respondent heard about GRH - OTE)**

Set BHMCA using Q26 alt mode used most days (responses 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19)

IF BHALTDAYS = 0, SET BHMCA = 99 (no MCA)

IF BHALTDAYS > 0, SET BHMCA AS FOLLOWS:

IF GREATEST NUMBER OF Q26, R5-15, 19 =

Q26\_05, SET BHMCA = 05 (Carpool)

Q26\_06, SET BHMCA = 06 (Casual Carpool / Slug)

Q26\_07, SET BHMCA = 07 (Vanpool)

Q26\_08, SET BHMCA = 08 (Baltimore Metro Subway)

Q26\_09, SET BHMCA = 09 (Bus)

Q26\_10, SET BHMCA = 10 (Metrorail)

Q26\_11, SET BHMCA = 11 (MARC)

Q26\_12, SET BHMCA = 12 (VRE)

Q26\_13, SET BHMCA = 13 (AMTRAK / Other)

Q26\_14, SET BHMCA = 14 (Bicycle)

Q26\_15, SET BHMCA = 15 (Walk)

Q26\_19, SET BHMCA = 19 (Light rail)

IF TIE FOR MOST DAYS USED, SELECT BHCMA IN THIS ORDER: VANPOOL, CARPOOL, BUS, VRE, MARC, BALTIMORE METRO SUBWAY, LIGHT RAIL, METRO RAIL, AMTRAK, CASUAL CARPOOL, BIKE, WALK.

NOW SKIP TO Q29a (DEFINE GRH CHANGE)

**MODE BEFORE REGISTERED FOR GRH (Current Registrants, Past Registrants)**

*(Current Registrants and Past Registrants mode before GRH)*

Q27 Now, please think back to the time before you registered for the GRH program. At that time, how many days, Monday - Friday were you assigned to work in a typical week?

- 0 0, did not work any days Monday – Friday then, did not work in Baltimore area then
- 1 1 day per week
- 2 2 days per week
- 3 3 days per week
- 4 4 days per week
- 5 5 days per week

IF Q27 = 0, AUTOCODE Q29, RESPONSE 20 (not working M-F) = 5, THEN SKIP TO BRALTDAYS

Q29 And before you registered for GRH, how did you get to work? Enter the number of days, Monday through Friday, that you typically used each of the listed types of transportation. If you used more than one type on a single day (e.g., walked to the bus stop, then rode the bus), count only the type you used for the **longest distance part** of your trip.

Indicate also how many weekdays you did NOT travel to your usual work location and the reasons (e.g., regular day off, telecommute, compressed work schedule day off) for not traveling to work.

**Q29 PROGRAMMER NOTES:**

**CHECK SUM OF DAYS. IF TOTAL OF Q29, RESPONSES 1-21 IS LESS THAN 5, SHOW MESSAGE:** "Please report for all days Monday – Friday, including telework days, compressed schedule days, and days you did not work." **IF TOTAL OF Q29 RESPONSES 1-21 IS GREATER THAN 5, SHOW MESSAGE:** "You've reported more than five days. Please re-report only for Monday – Friday and only one type of transportation per day."

**IF Q14 = 1 AND RESPONDENT DOES NOT REPORT "CWS day off" (RESPONSE 1), SHOW MESSAGE:** "You said you typically work a compressed work schedule now. Please indicate the number of compressed schedule days you had before you registered for the GRH program?" **ACCEPT "0" AS VALID RESPONSE.**

**IF Q14 = 2 AND RESPONDENT DOES NOT REPORT "Telecommute/telework, SHOW MESSAGE:** "You said you typically telecommute now. Please indicate the number of days you telecommuted before you registered for the GRH program?" **ACCEPT "0" AS VALID RESPONSE**

Type of Transportation – Before Registering for GRH	Number of Days Mon-Fri Used (0 to 5)
<b>Days you traveled to your usual work location</b>	
3 Drive alone in a car, truck, van, or SUV	
4 Motorcycle	
5 Carpool, including carpool w/family member, dropped off (ride or drive with others in a car, truck, van, or SUV)	
6 Casual carpool (slugging)	
7 Vanpool	
8 Baltimore Metro Subway	
9 Bus (public or private bus, shuttle, buspool, commuter bus, express bus)	
10 Metrorail	
11 MARC (MD Commuter Rail)	
12 VRE	
13 AMTRAK / other train	
14 Bicycle/e-scooter (entire trip or longest distance part of trip from home to work)	
15 Walk (entire trip from home to work)	
16 Taxi	
18 Uber, Lyft, Via	
19 Light rail	
<b>Days you did not travel to your usual work location</b>	
1 Compressed work schedule day off	
2 Telecommute/telework all day	
17 Regular day off	
21 Other (describe) _____	
20 Did not work Monday-Friday then, did not work in Baltimore area then	
<b>Total Days (DO NOT SHOW THIS LINE ON SCREEN)</b>	<b>Sum of 1-21</b>

**DEFINE BRALTDAYS (Days using alt modes before registered for GRH (Current, Past)**

**BRALTDAYS = TOTAL Q29 DAYS USING MODES 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19**

**DEFINE BRMCA (Most Common Alt Mode before registering for GRH (Current, Past))**

Set BRMCA using Q29 alt mode used most days (responses 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19)

IF BRALTDAYS = 0, SET BRMCA = 99 (no MCA)

IF BRALTDAYS > 0, SET BRMCA AS FOLLOWS:

IF GREATEST NUMBER OF Q29, R5-15, 19 =

Q29\_05, SET BRMCA = 05 (Carpool)

Q29\_06, SET BRMCA = 06 (Casual Carpool / Slug)

Q29\_07, SET BRMCA = 07 (Vanpool)

Q29\_08, SET BRMCA = 08 (Baltimore Metro Subway)

Q29\_09, SET BRMCA = 09 (Bus)

Q29\_10, SET BRMCA = 10 (Metrorail)

Q29\_11, SET BRMCA = 11 (MARC)

Q29\_12, SET BRMCA = 12 (VRE)

Q29\_13, SET BRMCA = 13 (AMTRAK / Other)

Q29\_14, SET BRMCA = 14 (Bicycle)

Q29\_15, SET BRMCA = 15 (Walk)

Q29\_19, SET BRMCA = 19 (Light rail)

IF TIE FOR MOST DAYS USED, SELECT BRMCA IN THIS ORDER: VANPOOL, CARPOOL, BUS, VRE, MARC, BALTIMORE METRO SUBWAY, LIGHT RAIL, METRORAIL, AMTRAK, CASUAL CARPOOL, BIKE, WALK.

**Q29a – DEFINE GRH CHANGE – AUTOCODE ONLY – DO NOT ASK****COMPARE MODE WHILE IN GRH TO MODE BEFORE GRH TO DETERMINE CHANGE**

IF GRHTYPE = 1 (CURR\_REG) AND IF CALTDAYS > 0 AND BRALTDAYS = 0, SET Q29a = 1

IF GRHTYPE = 2 (PAST\_REG) AND IF DALTDAYS > 0 AND BRALTDAYS = 0, SET Q29a = 1

IF GRHTYPE = 3 (ONE\_TIME) AND IF CALTDAYS > 0 AND BHALTDAYS = 0, SET Q29a = 1

IF GRHTYPE = 2 (PAST\_REG) AND IF DALTDAYS > 0 AND BHALTDAYS = 0, SET Q29a = 1

IF GRHTYPE = 1 (CURR\_REG) and IF CALTDAYS > 0 AND BRALTDAYS > 0 AND CALTDAYS > BRALTDAYS, SET Q29a = 2

IF GRHTYPE = 2 (PAST\_REG) and IF DALTDAYS > 0 AND BRALTDAYS > 0 AND DALTDAYS > BRALTDAYS, SET Q29a = 2

IF GRHTYPE = 3 (ONE\_TIME) and IF CALTDAYS > 0 AND BHALTDAYS > 0 AND CALTDAYS > BHALTDAYS, SET Q29a = 2

IF GRHTYPE = 2 (PAST\_REG) and IF DALTDAYS > 0 AND BHALTDAYS > 0 AND DALTDAYS > BHALTDAYS, SET Q29a = 2

IF GRHTYPE = 1 (CURR\_REG) AND CALTDAYS > 0 AND BRALTDAYS > 0 AND CALTDAYS <= BRALTDAYS, SET Q29a = 3

IF GRHTYPE = 2 (PAST\_REG) and DALTDAYS > 0 AND BRALTDAYS > 0 AND DALTDAYS <= BRALTDAYS, SET Q29a = 3

IF GRHTYPE = 3 (ONE\_TIME) and CALTDAYS > 0 AND BHALTDAYS > 0 AND CALTDAYS <= BHALTDAYS, SET Q29a = 3

IF GRHTYPE = 2 (PAST\_REG) and IF DALTDAYS > 0 AND BHALTDAYS > 0 AND DALTDAYS <= BHALTDAYS, SET Q29a = 3

IF GRHTYPE = 1 (CURR\_REG) AND CALTDAYS = 0, SET Q29a = 4

IF GRHTYPE = 2 (PAST\_REG) and DALTDAYS = 0, SET Q29a = 4

IF GRHTYPE = 3 (ONE\_TIME) and CALTDAYS = 0, SET Q29a = 4

IF GRHTYPE = 1 (CURR\_REG) AND Q29, RESPONSE 20 > 0, SET Q29a = 9

IF GRHTYPE = 2 (PAST\_REG) AND Q29, RESPONSE 20 > 0, SET Q29a = 9

IF GRHTYPE = 3 (ONE\_TIME) AND Q26, RESPONSE 20 > 0, SET Q29a = 9

- 1 Started alt mode
- 2 Increased alt mode
- 3 Continued alt mode
- 4 No alt mode while in GRH
- 9 Unknown – no previous mode reported

IF Q29a = 1, CONTINUE TO INSTRUCTIONS BEFORE Q30  
 IF Q29a = 2, SKIP TO INSTRUCTIONS BEFORE Q35  
 IF Q29a = 3, SKIP TO INSTRUCTIONS BEFORE 40  
 IF Q29a = 4 OR 9, SKIP TO Q44a

### **GRH INFLUENCE IN STARTING, CONTINUING, OR INCREASING USE OF ALTERNATIVE MODES**

#### **Two questions asked of respondents who use / used alt modes while in GRH**

- Ask about the importance of GRH in their decision to start, increase, or continue alt mode use
- Ask about the likelihood of starting, increasing, or continuing alt mode use if GRH wasn't available

#### **Note slight wording differences by registration status (Current, Past, OTE)**

#### Started alt mode – previously drove alone all the time (Q30 – Q34)

- **Current registrants** who previously DA all the time – Q30 and Q33, THEN SKIP TO Q44a (Other services used)
- **Past registrants** who previous DA all the time – Q31 and Q34, THEN SKIP TO Q44a (Other services used)
- **OTE** who previous DA all the time – Q32 and Q33, THEN SKIP TO Q44a (Other services used)

#### Increased alt mode (Q35 – Q39)

- **Current registrants** who increased alt mode – Q35 and Q38, THEN SKIP TO Q44a (Other services used)
- **Past registrants** who increased alt mode – Q36 and Q39, THEN SKIP TO Q44a (Other services used)
- **OTE** who increased alt mode – Q37 and Q38, THEN SKIP TO Q44a (Other services used)

#### Continued alt mode (Q40 – Q44)

- **Current registrants** who continued alt mode – Q40 and Q43, THEN SKIP TO Q44a (Other services used)
- **Past registrants** who continued alt mode – Q41 and Q43, THEN SKIP TO Q44a (Other services used)
- **OTE** who continued alt mode – Q42 and Q44, THEN SKIP TO Q44a (Other services used)

### **INSTRUCTIONS BEFORE Q30**

#### **Skip instruction for previous Drive Alone by registration status**

#### **FOR Q30 – Q34, INSERT MODE NAME USING CMCA, DMCA**

IF GRHTYPE = 1 (CURR\_REG), USE CMCA  
 IF GRHTYPE = 2 (PAST\_REG), USE DMCA  
 IF GRHTYPE = 3 (ONE\_TIME), USE CMCA

IF CMCA, DMCA = 5 OR 6, INSERT carpooling  
 IF CMCA, DMCA = 7, INSERT vanpooling  
 IF CMCA, DMCA = 8, 9, 10, 11, 12, 13, OR 19, INSERT using transit  
 IF CMCA, DMCA = 14, INSERT biking  
 IF CMCA, DMCA = 15, INSERT walking

#### Current Registrants

IF GRHTYPE = 1 (CURR\_REG) AND IF CALTDAYS > 0 AND BRALTDAYS = 0, ASK Q30, THEN SKIP TO Q33.

#### Past Registrants

IF GRHTYPE = 2 (PAST\_REG) AND IF DALTDAYS > 0 AND BRALTDAYS = 0, ASK Q31, THEN SKIP TO Q34.

#### One-time Exception users

IF GRHTYPE = 3 (ONE\_TIME) AND IF CALTDAYS > 0 AND BHALTDAYS = 0, ASK Q32, THEN ASK Q33 .  
 IF GRHTYPE = 2 (PAST\_REG) AND IF DALTDAYS > 0 AND BHALTDAYS = 0, ASK Q32, THEN ASK Q33.

IF Q29a = 4 OR 9, SKIP TO Q44a  
 ALL OTHERS, SKIP TO INSTRUCTIONS BEFORE Q35

**SHIFT FROM DRIVING ALONE – GRH IMPORTANCE (Current, Past, OTE)*****(Current Registrants who always drove alone to work before registering)***

Q30 You said that you regularly drove alone to work before you registered for GRH. How important was the availability of GRH to your decision to start <CMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q14)>?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Not sure
- 89 Left blank

**NOW SKIP TO Q33**

***(Past Registrants who always drove alone to work before registering)***

Q31 You said that you regularly drove alone to work before you registered for GRH. How important was the availability of GRH to your decision to start <DMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q23)>?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Not sure
- 89 Left blank

**SKIP TO Q34**

***(One-Time Exceptions who always drove alone to work before learning about GRH)***

Q32 You said that you regularly drove alone to work before you heard about GRH. How important was the availability of GRH to your decision to start <CMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q14)>?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Not sure
- 89 Left blank

**CONTINUE WITH Q33**

**SHIFT FROM DRIVING ALONE – LIKELY TO SHIFT WITHOUT GRH (Current, Past, OTE)*****(Current Registrants or One-Time exceptions who always drove alone to work before registering)***

Q33 If GRH had not been available, how likely would you have been to start <CMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q14)>?

- 1 Very likely
- 2 Somewhat likely
- 3 Not at all likely
- 9 Don't know
- 89 Left blank

**SKIP TO Q44a*****(Past Registrants who always drove alone to work before registering)***

Q34 If GRH had not been available, how likely would you have been to start <DMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q23)>?

- 1 Very likely
- 2 Somewhat likely
- 3 Not at all likely
- 9 Don't know
- 89 Left blank

**SKIP TO Q44a**INSTRUCTIONS BEFORE Q35

**Skip instruction for increased alt mode days, by registration status**

Current Registrants

**IF GRHTYPE = 1 (CURR\_REG) and IF CALTDAYS > 0 AND CALTDAYS > BRALTDAYS, ASK Q35, THEN SKIP TO Q38**

Past Registrants

**IF GRHTYPE = 2 (PAST\_REG) and IF DALTDAYS > 0 AND DALTDAYS > BRALTDAYS, ASK Q36, THEN SKIP TO Q39**

One-time Exceptions

**IF GRHTYPE = 3 (ONE\_TIME) and IF CALTDAYS > 0 AND CALTDAYS > BHALTDAYS, ASK Q37, THEN SKIP TO Q38**

**IF GRHTYPE = 2 (PAST\_REG) and IF DALTDAYS > 0 AND DALTDAYS > BHALTDAYS, ASK Q37, THEN SKIP TO Q38**

**ALL OTHERS SKIP TO INSTRUCTIONS BEFORE Q40**

**INCREASED ALT MODE USE SINCE GRH – GRH IMPORTANCE (Current, Past, OTE)*****(Current Registrants who increased use of alternative modes after registering)***

Q35 You said that since you registered for GRH, you've increased the number of days per week that you use types of transportation OTHER than driving alone for your trip to work. How important was GRH to your decision to make this change?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Don't know
- 89 Left blank

**SKIP TO Q38**



***(Past Registrants who increased use of alternative modes after registering)***

Q36 You said that while you were registered for GRH, you increased the number of days per week that you used types of transportation OTHER than driving alone for your trip to work. How important was GRH to your decision to make this change?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Don't know
- 89 Left blank

**SKIP TO Q39**

***(One-Time Exceptions who increased use of alternative modes after registering)***

Q37 You said that since you heard about GRH, you've increased the number of days per week that you use types of transportation OTHER than driving alone for your trip to work. How important was GRH to your decision to make this change?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Don't know
- 89 Left blank

**CONTINUE WITH Q38**

**INCREASED ALT MODE USE SINCE GRH – LIKELY TO MAKE CHANGE WITHOUT GRH (Current, Past, OTE)*****(Current Registrants, or One-time Exceptions)***

Q38 If GRH had not been available, how likely would you have been to make this change?

- 1 Very likely
- 2 Somewhat likely
- 3 Not at all likely
- 9 Don't know
- 89 Left blank

**SKIP TO Q44a**

***(Past Registrants)***

Q39 If GRH had not been available, how likely would you have been to make this change?

- 1 Very likely
- 2 Somewhat likely
- 3 Not at all likely
- 9 Don't know
- 89 Left blank

**SKIP TO Q44a**

INSTRUCTIONS BEFORE Q40

**Skips for Respondents who used alt modes before GRH and did not increase alt mode days, by registration status**

**FOR Q40 – Q42, INSERT MODE NAME USING BHMCA, BRMCA**

**IF GRHTYPE = 1 (CURR\_REG), USE BRMCA**

**IF GRHTYPE = 2 (PAST\_REG), USE BRMCA**

**IF GRHTYPE = 3 (ONE\_TIME), USE BHMCA**

**IF BHMCA, BRMCA = 5 OR 6, INSERT carpooling**

**IF BHMCA, BRMCA = 7, INSERT vanpooling**

**IF BHMCA, BRMCA = 8, 9, 10, 11, 12, 13, OR 19, INSERT using transit**

**IF BHMCA, BRMCA = 14, INSERT biking**

**IF BHMCA, BRMCA = 15, INSERT walking**

Current Registrants

**IF GRHTYPE = 1 (CURR\_REG) AND CALTDAYS > 0 AND BRALTDAYS > 0 AND CALTDAYS <= BRALTDAYS, ASK Q40, THEN SKIP TO Q43.**

Past Registrants

**IF GRHTYPE = 2 (PAST\_REG) and DALTDAYS > 0 AND BRALTDAYS > 0 AND DALTDAYS <= BRALTDAYS, ASK Q41,**

**IF GRHTYPE = 2 (PAST\_REG) AND Q29a = 3 (CONTINUED MODE), ASK Q41**

**THEN SKIP TO Q43.**

One-Time exceptions

**IF GRHTYPE = 3 (ONE\_TIME) and CALTDAYS > 0 AND BHALTDAYS > 0 AND CALTDAYS <= BHALTDAYS, ASK Q42, THEN SKIP TO Q44.**

**IF GRHTYPE = 2 (PAST\_REG) and DALTDAYS > 0 AND BHALTDAYS > 0 AND DALTDAYS <= BHALTDAYS, ASK Q42, THEN SKIP TO Q44.**

**ALL OTHERS, SKIP TO Q44a**

**CONTINUED ALT MODE USE SINCE GRH (NO CHANGE) – GRH IMPORTANCE (Current, Past, OTE)**

*(Current Registrants who were ridesharing/using transit at least some days before registering)*

**Q40** You said that you were <BRMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q29)> before you registered for GRH. How important was the availability of GRH to your decision to continue using a type of transportation other than driving alone for your trip to work?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Don't know
- 89 Left blank

**SKIP TO Q43**

***(Past Registrants who were ridesharing/using transit at least some days before registering)***

Q41 You said that you were <BRMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q29)> before you registered for GRH. How important was the availability of GRH to your decision to continue using a type of transportation other than driving alone for your trip to work?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Don't know
- 89 Left blank

**SKIP TO Q43*****(One-Time Exceptions who were ridesharing/using transit at least some days before hearing about GRH)***

Q42 You said that you were <BHMCA - carpooling, vanpooling, using transit, biking, or walking (FROM Q26)> before you heard about GRH. How important was the availability of GRH to your decision to continue using a type of transportation other than driving alone for your trip to work?

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 9 Don't know
- 89 Left blank

**SKIP TO Q44****CONTINUED ALT MODE SINCE GRH (NO CHANGE) – LIKELY TO CONTINUE WITHOUT GRH (Current, Past, OTE)*****(Current Registrants or Past Registrants)***

Q43 If GRH had not been available, how likely would you have been to continue using a non-drive alone type of transportation?

- 1 Very likely
- 2 Somewhat likely
- 3 Not at all likely
- 9 Don't know
- 89 Left blank

**SKIP TO Q44a*****(One-Time Exceptions)***

Q44 If GRH had not been available, how likely would you have been to continue using a non-drive alone type of transportation?

- 1 Very likely
- 2 Somewhat likely
- 3 Not at all likely
- 9 Don't know
- 89 Left blank

**OTHER SERVICES RECEIVED THAT COULD HAVE INFLUENCED DECISIONS (Current, Past, OTE)****ASK ALL RESPONDENTS Q44a**

Q44a Do you recall receiving or accessing any of the following commute information or assistance services from Commuter Connections, in addition to GRH?

**ROTATE RESPONSES 1-13, SHOW "90-no services" AT THE END OF THE LIST. ACCEPT MULTIPLES FOR 1-13, DO NOT ALLOW MULTIPLES WITH 90**

- 1 Names of people you could contact to form a carpool or vanpool (matchlist)
- 2 Map showing home and work locations of people you could contact to form a carpool or vanpool
- 3 Other carpool / vanpool information
- 4 HOV lane, Express lane information
- 5 'Pool Rewards carpool/vanpool financial incentive
- 6 Transit schedule / route / fare information
- 7 Park & Ride lot information
- 8 Telework information, telework center information, co-working center
- 9 Bicycling information, online bicycle route planning
- 10 Special events information (e.g., Bike to Work Day, Car Free Day)
- 11 CarpoolNow mobile application (real-time ridematching)
- 12 incenTrip trip tracking/points application
- 13 Flextime Rewards incentive program
- 90 Did not receive or access any of these services (**PROGRAMMER: GREY OUT THIS BOX IF ANY OTHER RESPONSE IS CHECKED**)
- 89 *Left blank*

**INSTRUCTIONS BEFORE Q44b**

**IF Q29a = 4 OR 9, SKIP TO Q49**

**IF Q44a = ONLY 90 OR IS LEFT ENTIRELY BLANK OR IF Q44a NE ANY OF 1-13, SKIP TO INSTRUCTIONS BEFORE Q45**

**IF Q44a = ANY OF 1-13, CONTINUE**

**IF GRHTYPE = 1 OR 3 (CURR\_REG OR ONE\_TIME) AND CALTDAYS = 0, SKIP TO INSTRUCTIONS BEFORE Q45**

**IF GRHTYPE = 2 (PAST\_REG) AND DALTDAYS = 0, SKIP TO INSTRUCTIONS BEFORE Q45**

**IF GRHTYPE = 1 OR 3 (CURR\_REG OR ONE\_TIME) AND Q29a = 1, 2, OR 3, ASK Q44b**

**IF GRHTYPE = 2 (PAST\_REG) AND Q29a = 1, 2, OR 3, SKIP TO Q44c**

**FOR Q44b – Q44c, INSERT MODE NAME USING CMCA, DMCA**

**IF GRHTYPE = 1 (Current Registrant), USE CMCA**

**IF GRHTYPE = 2 (Past Registrant), USE DMCA**

**IF GRHTYPE = 3 (OTE), USE CMCA**

**IF CMCA, DMCA = 5 OR 6, INSERT carpool**

**IF CMCA, DMCA = 7, INSERT vanpool**

**IF CMCA, DMCA = 8, 9, 10, 11, 12, 13, OR 19, INSERT use transit**

**IF CMCA, DMCA = 14, INSERT bike**

**IF CMCA, DMCA = 15, INSERT walk**

**(Current Registrants or One-Time Exceptions)**

Q44b Was any of the information or assistance that you received from Commuter Connections more important than GRH to your decision to <CMCA - carpool, vanpool, use transit, bike, or walk (FROM Q14)>?

**SHOW RESPONSES 1-13 ONLY IF THEY WERE CHECKED IN Q44a, ALSO SHOW RESPONSE 98**

- 1 Names of people you could contact to form a carpool or vanpool (matchlist)
- 2 Map showing home and work locations of people you could contact to form a carpool or vanpool
- 3 Other carpool / vanpool information
- 4 HOV lane, Express lane information
- 5 'Pool Rewards carpool/vanpool financial incentive
- 6 Transit schedule / route / fare information
- 7 Park & Ride lot information
- 8 Telework information, telework center information, co-working center
- 9 Bicycling information, online bicycle route planning
- 10 Special events information (e.g., Bike to Work Day, Car Free Day)
- 11 CarpoolNow mobile application (real-time ridematching)
- 12 incenTrip trip tracking/points application
- 13 Flextime Rewards incentive program
- 98 No, services were not important
- 89 *Left blank*

**SKIP TO INSTRUCTIONS BEFORE Q45****(Past Registrants)**

Q44c Was any of the information or assistance that you received from Commuter Connections more important than GRH to your decision to <DMCA - carpool, vanpool, use transit, bike, or walk (FROM Q23)>?

**SHOW RESPONSES 1-13 ONLY IF THEY WERE CHECKED IN Q44a, ALSO SHOW RESPONSE 98**

- 1 Names of people you could contact to form a carpool or vanpool (matchlist)
- 2 Map showing home and work locations of people you could contact to form a carpool or vanpool
- 3 Other carpool / vanpool information
- 4 HOV lane, Express lane information
- 5 'Pool Rewards carpool/vanpool financial incentive
- 6 Transit schedule/ route / fare information
- 7 Park & Ride lot information
- 8 Telework information, telework center information, co-working center
- 9 Bicycling information, online bicycle route planning
- 10 Special events information (e.g., Bike to Work Day, Car Free Day)
- 11 CarpoolNow mobile application (real-time ridematching)
- 12 incenTrip trip tracking/points application
- 13 Flextime Rewards incentive program
- 98 No, services were not important
- 89 *Left blank*

**INSTRUCTIONS BEFORE Q45****IF GRHTYPE = 1 OR 3 (CURR\_REG OR ONE\_TIME) AND CALTDAYS > 0, ASK Q45****IF GRHTYPE = 2 (PAST\_REG) AND DALTDAYS > 0, ASK Q46****OTHERWISE, SKIP TO Q49****FOR Q45 – Q46, INSERT MODE NAME USING CMCA, DMCA****IF GRHTYPE = 1 (Current Registrant), USE CMCA****IF GRHTYPE = 2 (Past Registrant), USE DMCA****IF GRHTYPE = 3 (OTE), USE CMCA****IF CMCA, DMCA = 5 OR 6, INSERT carpool****IF CMCA, DMCA = 7, INSERT vanpool****IF CMCA, DMCA = 8, 9, 10, 11, 12, 13, OR 19, INSERT use transit****IF CMCA, DMCA = 14, INSERT bike****IF CMCA, DMCA = 15, INSERT walk*****(Current Registrants or One-Time Exceptions)***

Q45 Did you receive any other commute assistance or benefits, from any source, that influenced your decision to <CMCA - carpool, vanpool, use transit, bike, or walk (FROM Q14)>?

1 Yes (**SKIP TO Q46a**)2 No (**SKIP TO Q47a**)9 Don't know (**SKIP TO Q47a**)89 Left blank (**SKIP TO Q47a**)***(Past Registrants)***

Q46 Did you receive any other commute assistance or benefits, from any source, that influenced your decision to <DMCA - carpool, vanpool, use transit, bike, or walk (FROM Q23)>?

1 Yes (**CONTINUE WITH Q46a**)2 No (**SKIP TO Q47a**)9 Don't know (**SKIP TO Q47a**)89 Left blank (**SKIP TO Q47a**)

Q46a What was that assistance or benefit?

OPEN ENDED \_\_\_\_\_

Q47a Were any other factors or circumstances important to your decision?

1 Yes (**CONTINUE WITH Q48**)2 No (**SKIP TO Q49**)9 Don't know (**SKIP TO Q49**)89 Left blank (**SKIP TO Q49**)

Q48 What other factors or circumstances were important to your decision?

OPEN ENDED \_\_\_\_\_

**REFERRAL SOURCES FOR GRH, GRH ADVERTISING RECALL**

Q49 How did you hear about the GRH Program?

OPEN ENDED \_\_\_\_\_

Q50 Have you heard, seen, or read any advertising about GRH?

- 1 Yes
- 2 No **(SKIP TO Q54)**
- 9 Don't know **(SKIP TO Q54)**
- 89 Left blank **(SKIP TO Q54)**

Q52 Had you registered for GRH before you saw or heard this advertising?

- 1 Yes **(SKIP TO Q54)**
- 2 No
- 9 Don't know
- 89 Left blank

Q53 Did the advertising encourage you to seek information about GRH or to register for GRH?

- 1 Yes
- 2 No
- 9 Don't know
- 89 Left blank

#### **USE OF GRH**

**IF Q3 = 1, AUTOCODE Q54 = 1, THEN SKIP TO Q55**

Q54 Have you taken a GRH trip since you registered for GRH?

- 1 Yes
- 2 No **(SKIP TO Q59)**
- 9 Don't know **(SKIP TO Q59)**
- 89 Left blank **(SKIP TO Q59)**

Q55 **IF Q3 = 1, SHOW**, "You said you had taken a GRH trip. For what reason did you take the trip? If you have taken more than one trip, report about the most recent trip.

**IF Q3 NE 1 (BLANK / SYSTEM MISSING), SHOW**, "For what reason did you take the trip?" If you have taken more than one trip, report about the most recent trip.

**(ACCEPT ONLY ONE RESPONSE)**

- 1 Illness (self)
- 2 Illness of family member
- 3 Other personal emergency
- 4 Illness of child
- 5 Child care problem
- 6 Illness of carpool partner
- 7 Unscheduled overtime
- 8 Missed carpool/vanpool
- 9 Other (SPECIFY) \_\_\_\_\_
- 89 Left blank

Q56 Was the service satisfactory?

- 1 Yes **(SKIP TO Q58)**
- 2 No
- 9 Don't know **(SKIP TO Q58)**
- 89 Left blank **(SKIP TO Q58)**

Q57 Why was it not satisfactory? Select all that apply.

- 1 Waited too long
- 2 Hard to get approval
- 3 Didn't like taxi/driver
- 4 Other (SPECIFY) \_\_\_\_\_
- 89 Left blank

Q58 About how long did you wait for the taxi to arrive?

\_\_\_\_\_ minutes  
899 Left blank

Q59 In what ways could Commuter Connections improve the GRH program?

OPEN ENDED \_\_\_\_\_

*Code responses in the following categories in survey post-processing*

- 1 Quicker response for GRH ride requests
- 2 Don't require registration
- 3 Allow use of GRH if ridesharing/using transit less than twice per week
- 4 Allow more GRH trips in a year
- 5 Easier/faster approval process
- 6 Wider area for trips
- 88 No improvement needed
- 99 Other (SPECIFY)
- 98 DK
- 89 Left blank

#### **SOCIAL MEDIA, TRAVEL APPS, AND DRIVERLESS CARS**

Q59a With which of the following social networking applications do you currently have an account? Select all that apply.

- 1 Facebook
- 2 Twitter
- 3 LinkedIn
- 4 Instagram
- 5 Snapchat
- 6 Nextdoor
- 97 Other (Please specify) \_\_\_\_\_
- 9 None of these, I don't use social networking
- 99 Left blank



Q59b Which of the following types of travel or trip applications have you used? Select all that apply.

- 1 Traffic alerts (e.g., radio, TV, text)
- 2 Ridehailing apps (ex., Uber, Lyft, Via)
- 3 Wayfinding apps (ex., Waze, Google maps)
- 4 Trip/fitness tracking apps (ex., Strava, Map My Ride)
- 5 Transit schedule, bus/train arrival mobile app (ex. Next Bus, Next Train)
- 6 Traveler information display (e.g. screen at workplaces and public locations)
- 7 Bikeshare/ dockless bike service app (e.g., Capital Bikeshare, Jump)
- 8 E-scooter service app (e.g., Bird, Skip, Lime, Spin)
- 9 Carshare service apps (e.g., Zipcar, car2go)
- 97 Other (Please specify) \_\_\_\_\_
- 77 None of these, I don't use those types of services or applications
- 99 Left blank

### **DEMOGRAPHICS**

Now just a few last questions to help us group your answers with those of others. These questions will not be used to identify you in any way.

Q60 Which of the following groups includes your age?

- 1 under 18
- 2 18 - 24
- 3 25 - 34
- 4 35 - 44
- 5 45 - 54
- 6 55 - 64
- 7 65 or older
- 89 Left blank

Q61 Do you consider yourself to be Latino, Hispanic, or Spanish?

- 1 Yes
- 2 No
- 89 Left blank

Q62 Which one of the following best describes your racial background? (**ALLOW ONLY ONE RESPONSE**)

- 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) \_\_\_\_\_
- 89 Left blank

Q63 Finally, please indicate the category that best represents your household's total annual income.

- 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 - \$179,999
- 11 \$180,000 - \$199,999
- 12 \$200,000 or more
- 89 Left blank

Q64 Are you female or male?

- 1 Female
- 2 Male
- 3 Other
- 89 Left blank

Q65 Commuter Connections is offering a drawing for five \$100 Amazon gift cards. If you would like to participate in the drawing for one of these gift cards, please provide your name and email address. Please be assured that we will not sell or use your information for anything other than the drawing. Would you like to participate in the drawing?

- 1 Yes (**ASK Q66**)
- 2 No (**SKIP TO END**)
- 89 Left blank (**SKIP TO END**)

Q66 Please provide your name and email address so we can contact you if you are one of the 5 winners.

First Name:

Last Name:

Email Address:

---

**END**

**Thank you** for taking the time to fill out our survey. Your input is very important to us!  
Please click on "SUBMIT" to submit your responses.

AFTER SUBMIT, REDIRECT TO COMMUTER CONNECTIONS HOME PAGE.

## APPENDIX B

### Respondent Alert Letters

#### Telephone Survey for Phone Only Participants (Baltimore CIC Sample) – Alert Letter Sent by postal mail

Dear Sir/Madam:

Commuter Connections is conducting a brief survey of people who have used and/or registered with the Baltimore and St. Mary's County Regional Guaranteed Ride Home (GRH) program. The Metropolitan Washington Council of Governments (COG) will be overseeing this survey on behalf of *Commuter Connections* and the Maryland Transit Administration, and I'm writing to request your participation.

You will be contacted by telephone within the next few days by CIC Research, Inc., an independent research firm hired by COG. An interviewer will ask you questions for just a few minutes about your experience with the GRH program.

Your input is very important to us even if you are no longer registered in the program and/or have not used a GRH trip. If you have recently taken a GRH trip and completed a feedback survey about that trip, please note that this is a different survey.

The information you provide will be kept completely confidential, and will be used only to help improve the regional GRH program. Thank you in advance for your help. If you have any questions about this study, please contact me at (202) 962-3200.

Sincerely,

Nicholas W. Ramfos  
Director, Commuter Connections

Internet Survey for Active Participants (Baltimore Commuter Connections sample) - Alert Letter  
Sent by email

Dear Sir/Madam:

Commuter Connections is conducting a brief survey of people who have used and/or registered with the Baltimore and St. Mary's County Regional Guaranteed Ride Home (GRH) program. The Metropolitan Washington Council of Governments (COG) will be overseeing this survey on behalf of *Commuter Connections* and the Maryland Transit Administration, and I'm writing to request your participation.

Shown below is the internet link that will take you directly to the Commuter Connections web site where you will log into your account to take the survey. The survey will take just a few minutes to complete and will ask about your experience with the GRH program. You might also have seen a pop-up notice for this survey when you logged-in to your Commuter Connections account. If you already completed the survey from that notice, thank you for your participation.

<https://tdm.commuterconnections.org/mwcog/>

If you cannot log in to your account, please contact us at 800-745-RIDE, (Monday through Friday from 8:30 a.m. – 4:30 p.m.)

Your input is very important to us even if you are no longer registered in the program and/or have not used a GRH trip. If you have recently taken a GRH trip and completed a feedback survey about that trip, please note that this is a different survey.

The information you provide will be kept completely confidential, and will be used only to help improve the regional GRH program. Thank you in advance for your help. If you have any questions about this study, please contact me at (202) 962-3200.

Sincerely,

Nicholas W. Ramfos  
Director, Commuter Connections

**Internet Survey for Inactive Participants (Baltimore CIC Sample) – Alert Letter  
Sent by email**

Dear Sir/Madam:

Commuter Connections is conducting a brief survey of people who have used and/or registered with the Baltimore and St. Mary's County Regional Guaranteed Ride Home (GRH) program. The Metropolitan Washington Council of Governments (COG) will be overseeing this survey on behalf of *Commuter Connections* and the Maryland Transit Administration, and I'm writing to request your participation.

Shown below is the internet link that will take you directly to the survey. The survey will take just a few minutes to complete and will ask about your experience with the GRH program.

<https://proj.cicresearch.com/GRH19B.asp?id=XXXXXXXX>

Your input is very important to us even if you are no longer registered in the program and/or have not used a GRH trip. If you have recently taken a GRH trip and completed a feedback survey about that trip, please note that this is a different survey.

The information you provide will be kept completely confidential, and will be used only to help improve the regional GRH program. Thank you in advance for your help. If you have any questions about this study, please contact me at (202) 962-3200.

Sincerely,

Nicholas W. Ramfos  
Director, Commuter Connections

**APPENDIX C – DISPOSITION OF FINAL DIALING RESULTS**

Dialing Disposition at Conclusion of Survey	Telephone Survey	
	Number	Percent
Interviews Completed by Telephone	131	11.5%
Interviews Completed by Internet	67	5.9%
No Answer	115	10.1%
Answering Machine	497	43.6%
Busy	21	1.8%
Arranged Call Back	51	4.5%
Respondent Never Available	6	0.5%
Not In Service	94	8.2%
Wrong Number	13	1.1%
Fax	1	0.1%
Other Language	1	0.1%
Refused	94	8.2%
Respondent Terminated	3	0.3%
Lives Outside of Study Area	11	1.0%
Retired	3	0.3%
Prefers to Complete Survey Online	32	2.8%
Total	1,140	100.0%
<hr/>		
Total Dialings	5,852	
Average Dialings Per Complete	44.7	

## APPENDIX D

### Results from 2019, 2016, and 2013 Surveys

#### Comparison on Key Questions

##### Registration Information

- **Registration status as defined in the GRH database** – Percentage of all respondents

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Current registrant	39%	36%	56%
Past registrant	61%	64%	44%
One-time exception	0%	0%	0%

- **Length of time in GRH** – Percentage of all registrants

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Less than 1 year	11%	10%	28%
1 year	15%	21%	40%
2 years	16%	15%	20%
3 years	14%	11%	4%
More than 3 years	44%	43%	8%

- **Reasons for not re-registering** – Past registrants only

	<u>2019</u>	<u>2016</u>	<u>2013</u>
<u>Program Related Reasons</u>			
Forgot, didn't get around to it	23%	24%	14%
Didn't know I had to re-register	14%	24%	12%
Dissatisfied, bad experience	6%	6%	2%
Too much effort to use program	7%	2%	2%
Had a problem with registering	7%	1%	6%
<u>Personal Circumstance Reasons</u>			
Never used program	6%	20%	21%
Couldn't CP/VP/use transit 2+ day/week	9%	9%	10%
Stopped/changed mode	8%	---	---
Changed job/work hours	15%	7%	7%
Moved to different residence	5%	6%	5%
Needed car for work/other purpose	0%	5%	0%

**GRH Information Sources**• **How heard about GRH – Percentage of all respondents**

	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
Word of mouth – referral	36%	36%	27%
Employer/employee survey	23%	21%	23%
Internet	15%	7%	11%
Other rideshare/transit org	2%	7%	8%
Bus/train sign	9%	5%	11%
Radio	3%	3%	2%
Commuter Connections (other)	0%	2%	1%
Brochure/promo materials	3%	2%	3%
Bus/train schedule	0%	2%	0%
On-site fair/event	3%	2%	0%
Direct mail/postcard from CC	1%	1%	2%
Other	2%	4%	6%

• **Awareness/influence of GRH advertising – Percentage of all respondents**

	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
Heard or saw GRH ad	45%	41%	46%
Registered after hearing ads	27%	24%	28%
Ad encouraged registration	24%	20%	24%

**Current Travel Information**• **Current mode split – Primary mode**

<b><u>Current Registrants</u></b>	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
Drive alone/motorcycle/taxi	2%	1%	1%
Bus	35%	28%	33%
Vanpool	30%	45%	29%
Commuter Rail	15%	10%	11%
Subway/Light rail	9%	10%	9%
Carpool	6%	4%	9%
Bike/walk	2%	1%	7%
Telework	1%	1%	1%

<b><u>Past Registrants</u></b>	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
Drive alone/motorcycle/taxi	38%	33%	41%
Bus	22%	23%	24%
Vanpool	4%	18%	13%
Commuter Rail	7%	0%	3%
Subway/Light rail	9%	12%	6%
Carpool	10%	6%	3%
Bike/walk	4%	4%	8%
Telework	6%	4%	2%



- Average length of commute**

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Distance (miles)	32.5 mi	35.3 mi	29.9 mi
Time (minutes)	54 min	56 min	53 min

- “Pre-GRH” Modes vs “During-GRH” Modes (3+ days per week)** – Percentage of all registrants – modes used before registering/participating in GRH and the modes used while registered/participating in GRH (excludes telework as primary mode)

<u>Pre-GRH</u>	<u>2019</u>	<u>2016</u>	<u>2013</u>
Drive alone/motorcycle/taxi	45%	39%	34%
Carpool/Vanpool	12%	17%	16%
Bus	25%	26%	28%
Subway/Light rail	8%	10%	8%
Commuter Rail	6%	5%	7%
Bike/Walk	4%	3%	7%

<u>During-GRH</u>	<u>2019</u>	<u>2016</u>	<u>2013</u>
Drive alone/motorcycle/taxi	6%	4%	5%
Carpool/Vanpool	31%	42%	34%
Bus	35%	31%	33%
Subway/Light rail	10%	11%	9%
Commuter Rail	14%	9%	11%
Bike/Walk	3%	3%	7%

- Average Days Using Alternative Modes “Pre-GRH” and “During GRH”** – Percentage of all registrants – number of days using carpool, vanpool, transit, bike, or walk for commuting before registering/participating in GRH and the modes used while registered/participating in GRH

<u>Pre-GRH</u>	<u>2019</u>	<u>2016</u>	<u>2013</u>
0 days/week	43%	41%	34%
1 day/week	1%	0%	1%
2 days/week	1%	1%	2%
3 days/week	5%	4%	4%
4 days/week	5%	6%	9%
5 days/week	45%	48%	50%
Average days/week	2.6	2.8	3.1

<u>During-GRH</u>	<u>2019</u>	<u>2016</u>	<u>2013</u>
0 days/week	5%	3%	3%
1 day/week	1%	0%	1%
2 days/week	3%	2%	2%
3 days/week	15%	9%	11%
4 days/week	11%	16%	14%
5 days/week	65%	70%	69%
Average days/week	4.2	4.5	4.4

**Influence of GRH on Commute Pattern Decisions**

- **Alternative mode changes from “Pre-GRH” to “With-GRH” – All respondents\***

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Started using alternative mode	38%	36%	29%
Increased alt mode use (frequency)	2%	3%	3%
Maintained use of alternative mode	55%	58%	63%
No alt mode “with-GRH”	5%	3%	4%

Note this table does not include respondents who said they did not commute in the Baltimore metropolitan area before they joined GRH.

- **Importance of GRH to Decision to Start Using Alternative Mode – Respondents who started alt modes when they registered for GRH**

	<u>2019</u>	<u>2016</u>	<u>2013</u>
n=	86	120	163
Very important	52%	42%	54%
Somewhat important	27%	36%	30%
Not at all important	21%	22%	16%

- **Importance of GRH to Decision to Maintain Use of Alternative Mode – Respondents who were using alt modes before they registered for GRH**

	<u>2019</u>	<u>2016</u>	<u>2013</u>
n=	126	151	323
Very important	53%	54%	34%
Somewhat important	31%	25%	32%
Not at all important	16%	21%	34%

- **Likely to Start Using Alternative Mode if GRH not available – Respondents who started alt modes when they registered for GRH**

	<u>2019</u>	<u>2016</u>	<u>2013</u>
n=	84	119	163
Very likely	53%	64%	54%
Somewhat likely	38%	25%	32%
Not at all likely	9%	11%	14%

- **Likely to Maintain Use of Alternative Mode if GRH not available – Respondents who were using alt modes before they registered for GRH**

	<u>2019</u>	<u>2016</u>	<u>2013</u>
n=	123	149	317
Very likely	65%	81%	70%
Somewhat likely	27%	16%	21%
Not at all likely	8%	3%	9%

- **Other factors or circumstances that influenced decision to start, continue, or increase use of alternative mode** – All respondents

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Save money	16%	15%	19%
Didn't want to drive	16%	12%	8%
Save time	5%	4%	4%
Save wear and tear on vehicle	4%	6%	6%
Parking issues	4%	3%	0%
Help environment/reduce traffic	4%	0%	7%
Stress/health/exercise	2%	4%	5%
No longer had a car	2%	2%	2%
Changed jobs/work hours	2%	0%	0%
Read/work while commuting	2%	0%	0%
Commute ease/flexibility/convenience	1%	3%	4%
Consistent/reliable, other options not reliable	0%	2%	0%
None	55%	60%	52%

#### Use of and Satisfaction with GRH

- **Used GRH trip** – all respondents, by registration status and by mode used

	<u>2019</u>	<u>2016</u>	<u>2013</u>
All respondents	30%	21%	10%
<u>By Registration Status</u>			
- Current registrants	33%	24%	12%
- Past registrants	24%	16%	5%
<u>By Mode Used "During-GRH"</u>			
- Vanpool	42%	26%	15%
- Carpool	36%	---	9%
- Bus	32%	20%	12%
- Commuter rail	31%	14%	12%
- Subway/Light rail	0%	13%	0%

- **Reasons for taking a GRH trip** – Respondents who took a trip

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Illness (self)	27%	29%	40%
Illness of family member	19%	26%	8%
Illness of child	9%	5%	3%
Illness of carpool partner	3%	2%	0%
Unscheduled overtime	20%	27%	26%
Other personal emergency	15%	5%	18%
Missed CP/VP	0%	3%	0%
Other	7%	3%	5%

- **Time waiting for taxi** – Respondents who took a trip using a taxi

	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
5 minutes or less	14%	11%	5%
6 – 10 minutes	9%	9%	12%
11 – 20 minutes	24%	29%	44%
21 – 30 minutes	30%	19%	10%
31 – 45 minutes	8%	12%	11%
46 or more minutes	15%	20%	18%
Average (minutes)	27 min	28 min	27 min

- **Improvements desired to GRH Program (multiple responses permitted)**

	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
None needed	16%	8%	10%
More advertising/more program information	19%	16%	15%
Quicker response for ride requests	7%	5%	4%
Notify when time to re-register	5%	5%	3%
Easier/faster approval	7%	4%	2%
Relax conditions/supervisor approval	4%	3%	5%
Wider area for trips	1%	2%	2%
Allow more trips per year	3%	1%	2%
Don't require registration	3%	0%	0%
Extend the hours	0%	0%	4%
Difficult to get/use/return rental cars	0%	4%	0%
Use Uber/Lyft in addition to taxi	1%	0%	0%
Other	33%	10%	11%
Don't know/no suggestions	9%	49%	49%

### **Demographics**

- **States of Residence and Employment** – all respondents

<b><u>Residence</u></b>	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
Delaware	0%	1%	2%
District of Columbia	2%	1%	2%
Maryland	85%	71%	72%
New Jersey	1%	6%	3%
Pennsylvania	7%	6%	6%
Virginia	4%	15%	14%
Other/Ref	1%	0%	1%

<b><u>Employment</u></b>	<b><u>2019</u></b>	<b><u>2016</u></b>	<b><u>2013</u></b>
Delaware	0%	0%	0%
District of Columbia	3%	1%	<1%
Maryland	96%	98%	100%
New Jersey	0%	0%	0%
Pennsylvania	0%	0%	0%
Virginia	<1%	1%	<1%
Other/Ref	0%	0%	0%

- **Ethnicity/Racial background** – all respondents

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Hispanic/Latino	4%	7%	4%
White	57%	61%	64%
Black/African-American	27%	24%	21%
Asian	11%	6%	8%
Other	1%	2%	3%

- **Income** – all respondents

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Under \$40,000	9%	8%	9%
\$40,000 – \$79,999	32%	19%	27%
\$80,000 – \$119,999	23%	35%	32%
\$120,000 – \$159,999	22%	24%	20%
\$160,000 or more	14%	14%	12%

- **Gender** – all respondents

	<u>2019</u>	<u>2016</u>	<u>2013</u>
Female	59%	47%	46%
Male	41%	53%	54%

- **Age** – all respondents

	<u>2019</u>	<u>2016</u>	<u>2013</u>
18 – 24	1%	0%	3%
25 – 34	11%	13%	16%
35 – 44	22%	17%	24%
45 – 54	29%	31%	32%
55 – 64	32%	31%	21%
65 or older	5%	8%	4%