PEOPLE, PLANNING, AND PREPARING FOR THE FUTURE: YOUR 25 YEAR TRANSPORTATION PLAN

TECHNICAL REPORT #9:

2008 TOLL ROAD OPINION SURVEY

Prepared by:
Texas Transportation Institute
David Ungemah, Associate Research Scientist
Tina Geiselbrecht, Associate Transportation Researcher

December 2008

CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION

www.CAMPOTexas.org
505 Barton Springs Rd., Ste. 700, Austin, TX 78704
MAILING ADDRESS P.O. Box 1088, Austin, TX 78767
512 974 2275 512 974 6385

2008 TOLL ROAD OPINION SURVEY

AN EXAMINATION OF USE AND OPINION FOR TARGETED COMMUNITIES IN THE AUSTIN METROPOLITAN AREA

Prepared for:

Texas Department of Transportation, Austin District

Capitol Area Metropolitan Planning Organization

Prepared by:

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PURPOSE OF SURVEY

In refining and assessing the use of toll roads in the Austin area, the Environmental Justice (EJ) Work Group has discussed the need to collect data from members of the EJ community – roughly defined as those communities (either geographically based and/or demographically based) for whom there is concern of disproportionate impacts of tolling. In order to assess the accuracy of such concerns, the Work Group requested the Texas Transportation Institute (TTI) conduct a short survey as a means of data collection from these groups. The survey is shown in Appendix A.

The purpose of the survey is to assess the use of existing toll roads in the Austin area by members of EJ communities, and, perceived impacts and benefits of the planned toll roads. This survey will provide input into the Capital Area Metropolitan Planning Organization (CAMPO) EJ study and ultimately the CAMPO 2035 plan update.

SURVEY METHODOLOGY

SURVEY DEMOGRAPHICS AND WEIGHTING

Previous survey experience by TTI in Dallas and Houston determined drivers' license offices provided a successful in-field survey location for obtaining access to lower-income and disadvantaged populations. As a captive audience, drivers' license offices provide an opportunity to survey licensed and soon-to-be licensed drivers without significant demographic bias based upon income or geographic location.

In June 2008, research team members distributed a two-page survey instrument (Attachment A) in both English and Spanish to individuals waiting at the drivers' license offices in the following locations:

- South Congress. 4719 South Congress Avenue. Two people staffed this location for two and a half days.
- North Lamar. 6121 North Lamar Boulevard. Three people staffed this location for two and a half days.

An additional location was surveyed in order to obtain transit-dependent and/or regular transit users. This location was found within a reasonable proximity to the target geographic population:

- Highland Mall bus station. East Highland Mall Boulevard and Jonathan Drive, serving bus routes 7, 15, 300, 320, 339, and 350. Two people staffed this location for three hours one day.

The combination of sources yielded a total survey sample of 468 surveys, with geographical distribution determined by zip code. The figures below (Figure 1 and Figure 2) indicate the distribution of surveys relative to the geographies of interest to this analysis. Although the survey's distribution was regional, and there is no way to determine proximity to target corridors (US 290, US 183, I-35) simply by ZIP code, the distribution by ZIP code does indicate a sufficient base to concentrate upon likely corridor *users*, as opposed to *corridor residents*. These are incorporated in the analysis below.

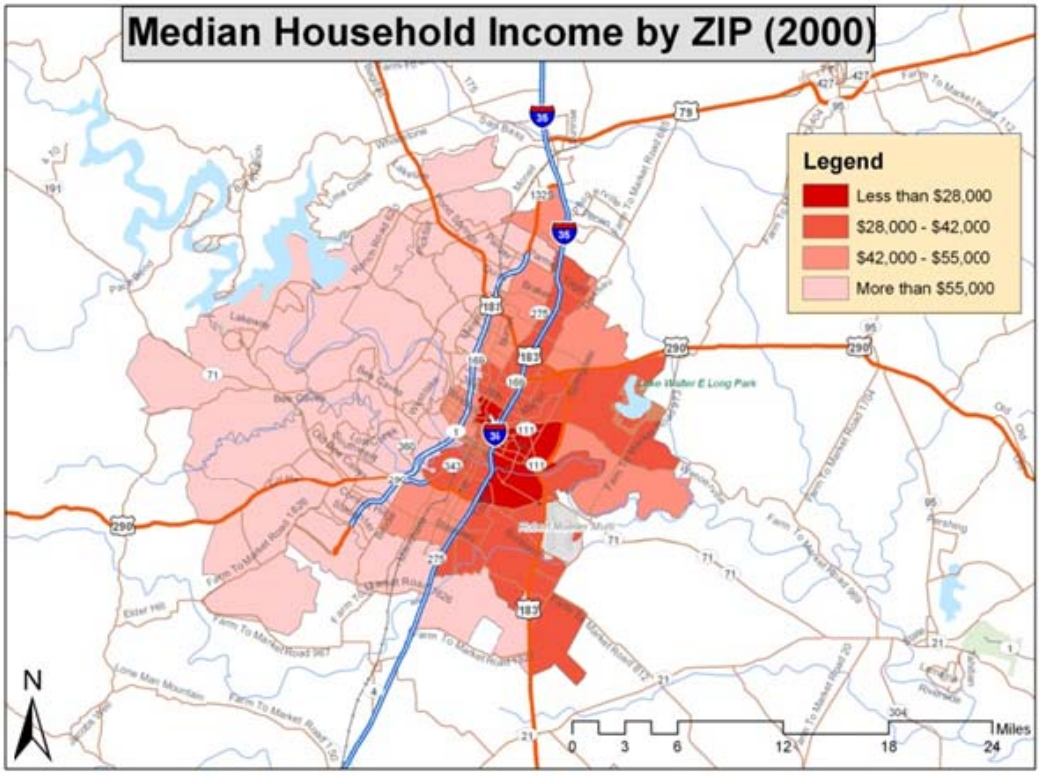


Figure 1: Geographic Distribution of Median Income, U.S. Census by ZIP, 2000.

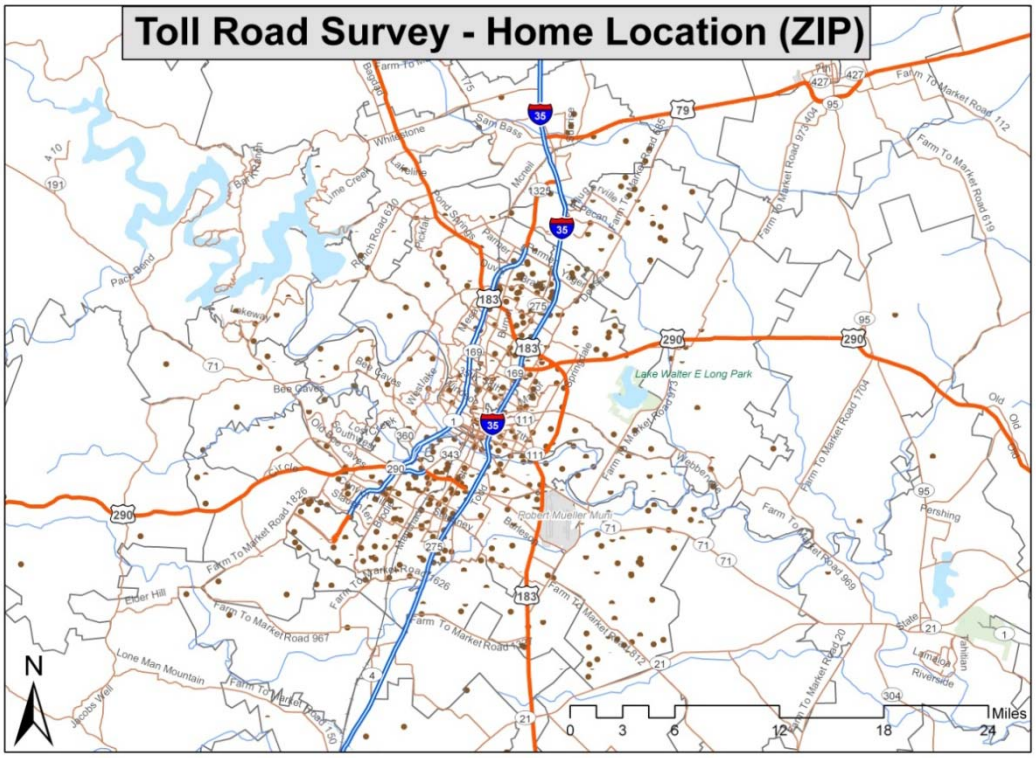


Figure 2: Geographic Distribution of Survey Respondents,

COMPARISON OF SURVEY DEMOGRAPHICS TO REGIONAL CENSUS ESTIMATES

The current estimate of Austin regional demographics is found in the 2006 American Community Survey (2006 ACS), conducted annually by the U.S. Census Bureau. Unlike the official U.S. Census conducted every ten years, the 2006 ACS is a statistical estimation of population characteristics.[1]

TTI compared the 2006 ACS estimates for two demographic categories contained in the 2008 Survey – ethnicity and income.

- **Ethnicity**: As seen in the ethnic distribution on Figure 3, the 2008 Austin Survey achieved its objective of oversampling potentially disadvantaged communities from an ethnic perspective.
- **Income**: Similar to ethnicity, the survey achieved an oversample of lower income individuals relative to the 2006 ACS regional estimate, with an oversample of those making $50,000 or less across three categories (Figure 4).

[1] The Austin/Round Rock estimate is based upon a final sample size of 10,819 individuals throughout the state of Texas. The US Census Bureau does not provide an estimate of sample size for the area.

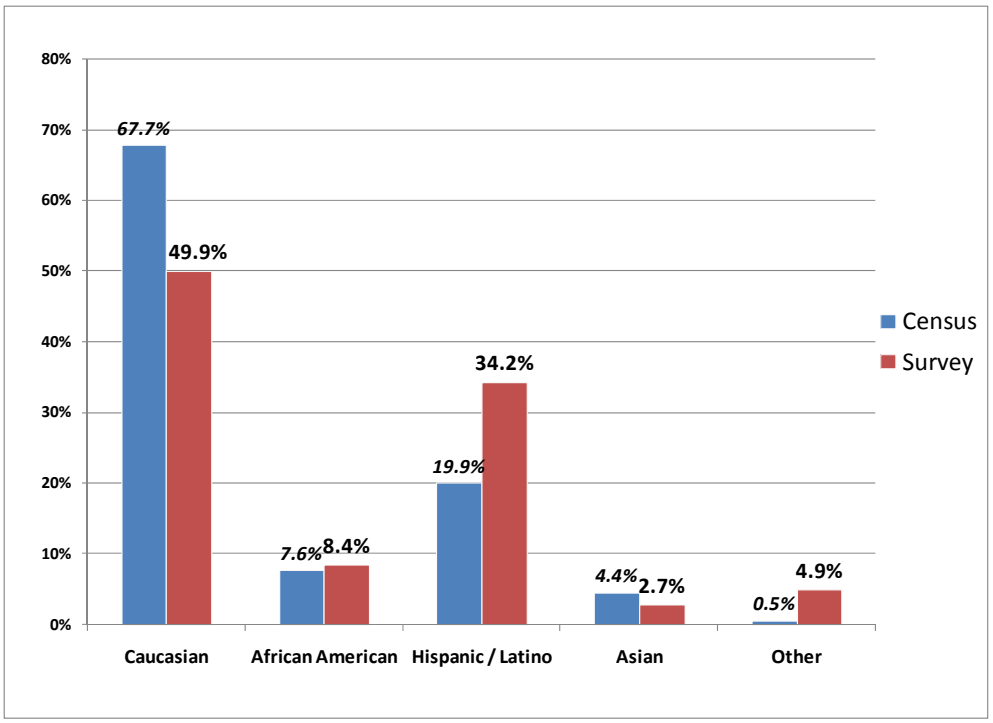


Figure 3: Ethnic Comparison Between Survey and Census

Figure 4: Income Comparison Between Survey and Census

STATISTICAL ANALYSIS

Non-Caucasian respondents accounted for approximately 70 percent each of the first two income categories and 60 percent of the third category. The Core Study group, defined as non-Caucasian and lower-to-middle income residents, contains demographic criteria at most concern for environmental justice analysis. This group, hereafter referred to as the "Core" group in the analysis, comprised one quarter of the survey sample (23.5 percent, or, 110 cases out of 468). The Core group is the primary focus of analysis in order to determine differential impacts upon this community.

Accordingly, the survey sample was weighted appropriately by income and ethnicity in order to provide regionally-significant findings as a comparison point to the Core group. As a result, whenever "regional" or "all" survey respondents are shown, this is the weighted survey sample, eliminating the effect of oversampling.

SURVEY FINDINGS

MODE OF TRAVEL

Non-discretionary trips – those that are most susceptible to inequity from tolling and pricing implementation – can be described as those that must be made by the individual in question, with substantial consequences if the trip cannot be made. These constitute the following trip purposes: *commute to/from work*, *work-related* (including freight, delivery, site-visits, taxis, and other trips taken as a component of work), and *commute to/from school*. Although the purposes of other trips can be critical, such as the delivery of children to school, the trip itself may be conducted by others (such as walking and/or school bus) or involve variation of a trip (such as shopping and other errands).

As seen, the distribution of all trips favors those who drive alone. However, substantial portions of the survey report carpooling and riding the bus for all three typical, non-discretionary trip types. Interestingly, these rates exceed the reported regional average for the Austin metropolitan area, as found in the 2006 ACS. Those who selected "none" did not have a transportation need for the specified trip purpose.

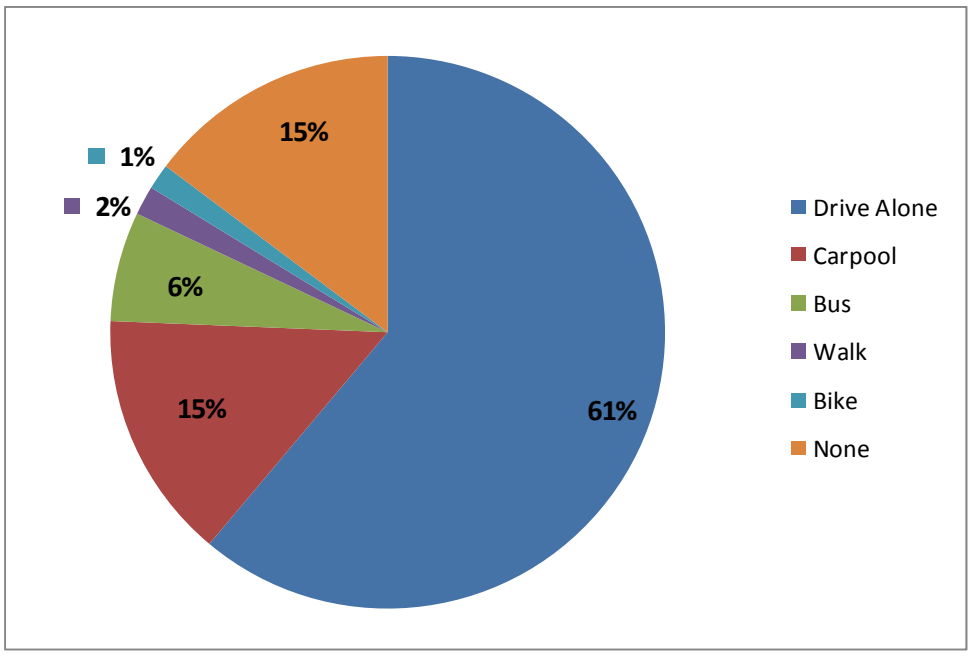


Figure 5: Mode for Commute to/from Work

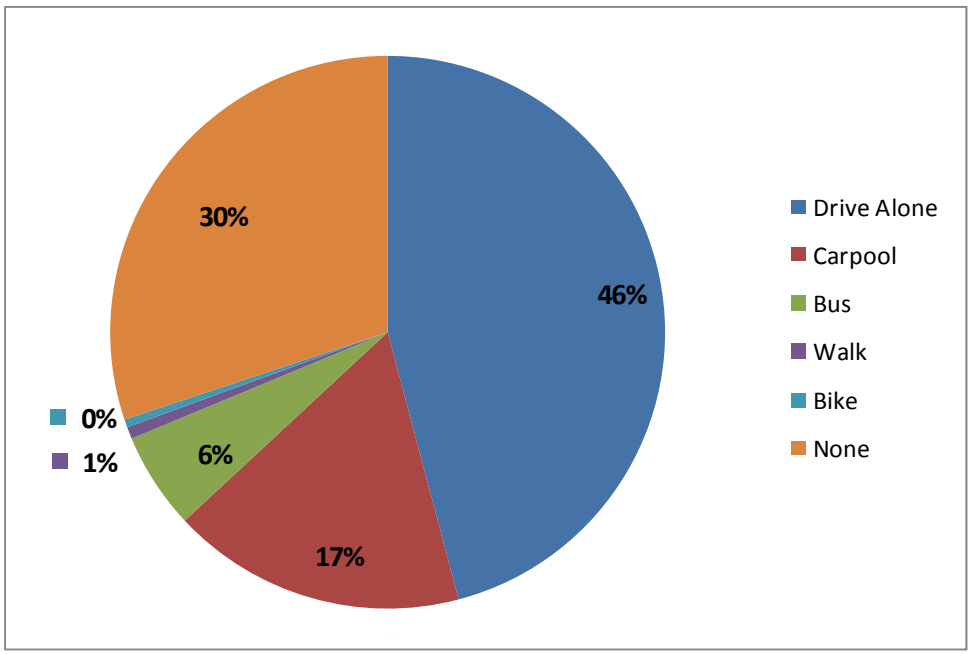


Figure 6: Mode for Work-Related Trips

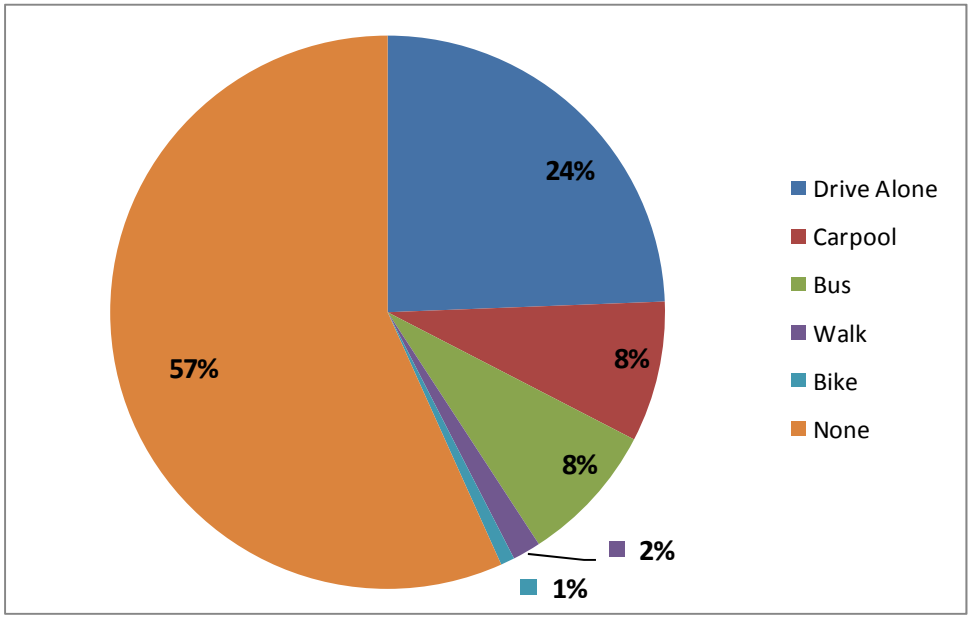


Figure 7: Mode for Commute to/from School

MODE OF TRAVEL: CORE GROUP COMPARISONS TO ALL OTHER REGIONAL TRAVELERS

The core analysis group (Core) has a generally similar pattern of mode use for non-discretionary trips as all others from the regional sample (All Others). The Core group is more inclined to ride the bus for work-related and work-commute trips, yet, interestingly, more inclined to drive alone for school-commute trips.

For those reporting carpool trips, Core group respondents were slightly more likely to carpool to work with other adult family members, and, less likely to ride with fellow co-workers or neighbors / friends. This indicates that any detrimental impacts from tolling for commute trip purposes may have an opportunity for mitigation through targeted carpool matching and incentive programs for non-household members.

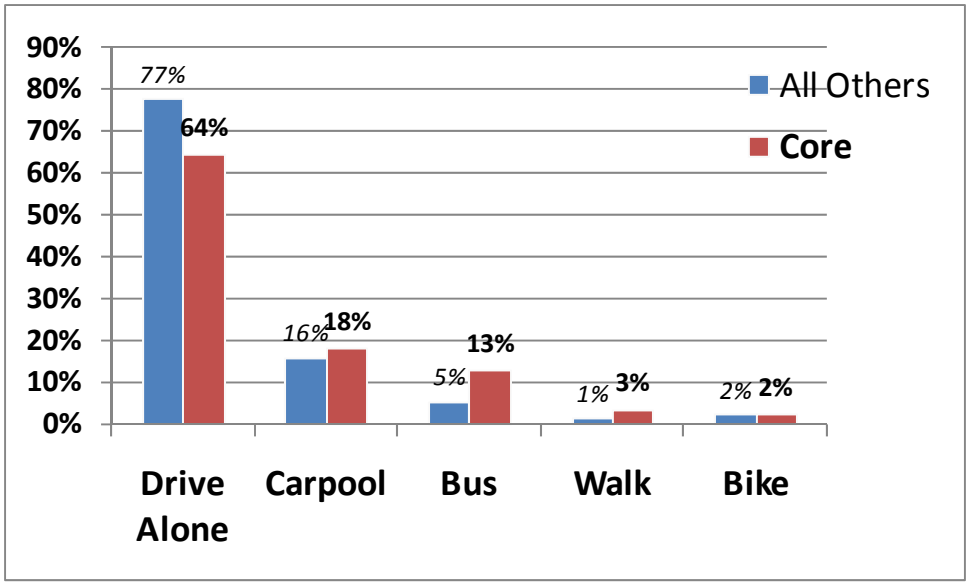


Figure 8: Comparisons of Mode for Commute to/from Work

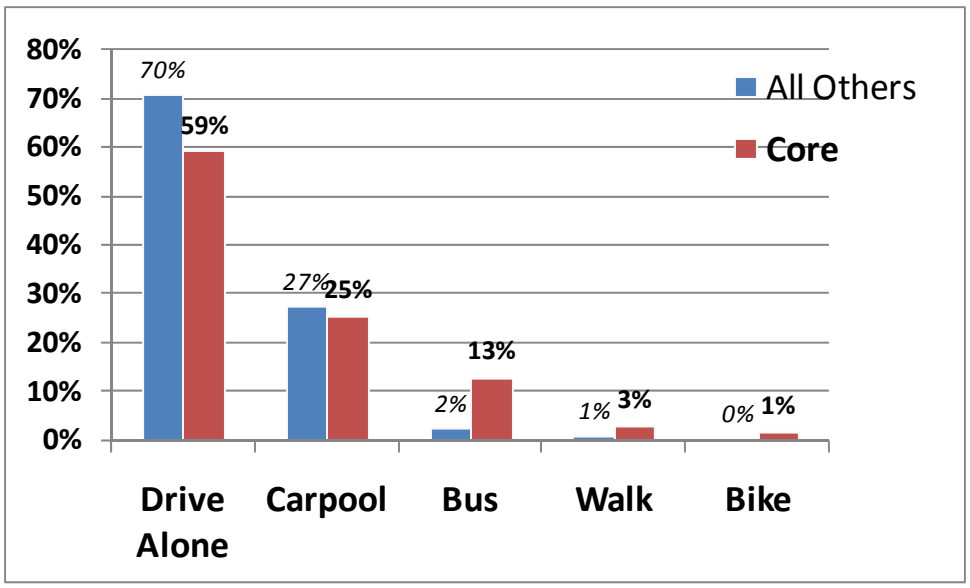


Figure 9: Comparisons of Mode for Work-Related Trips

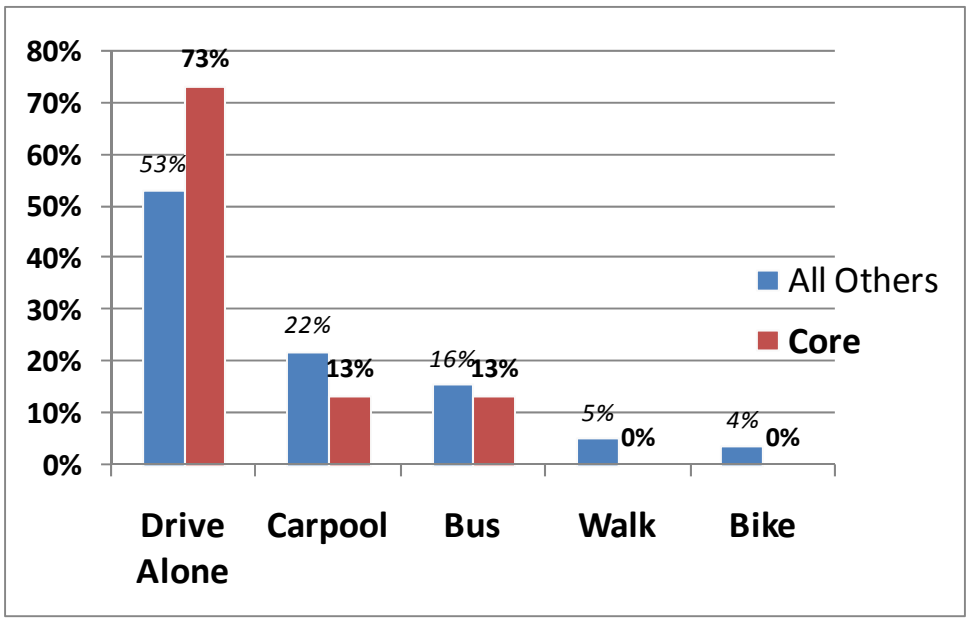


Figure 10: Comparisons of Mode for Commute to/from School

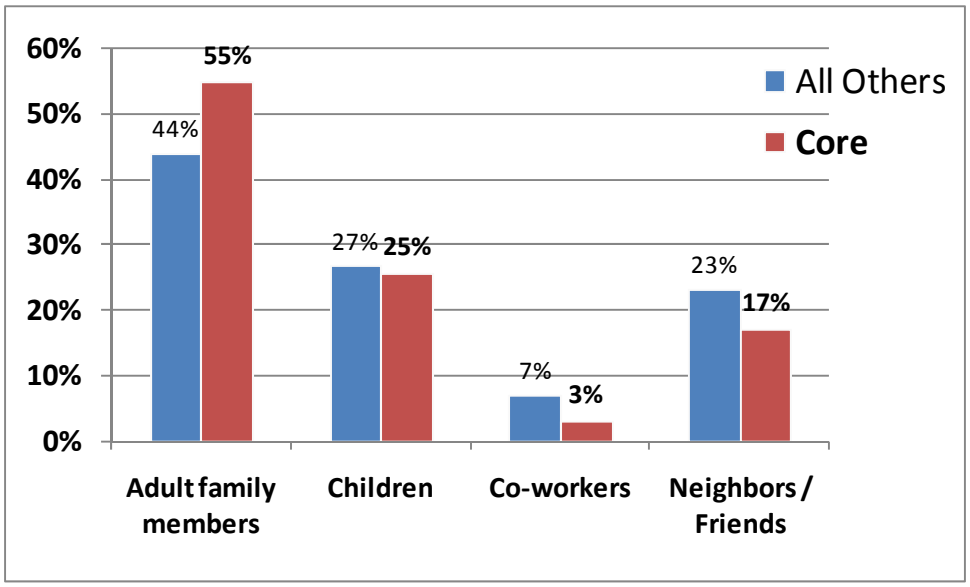


Figure 11: Carpool Use Characteristics

USE OF ROADS AND TRANSIT IN AUSTIN

One of the key questions concerning the Core group is their use of regional transportation facilities and services as compared to the regional population.

The predominant travel corridors (sized by proportion of population, with respondents able to answer more than one) is dominated by the north-south connections, shown in Figure 12: I-35 south of downtown (34%), Loop 1 (29%), I-35 north of downtown (28%), and US 183 east of I-35 (20%).

In terms of toll road usage, Core group respondents have similar patterns of use to the remaining regional population, with differences within the margin of error (Figure 13). In essence, Core group individuals use toll roads to the same extent as all other regional travelers.

As would be expected, Core group respondents were more likely to use transit and use it frequently, shown in Figure 14. As seen, almost 20 percent of all Core respondents claim to use transit once a week (or more frequently). By comparison, only nine percent of all other regional travelers claim to use transit at least once a week.

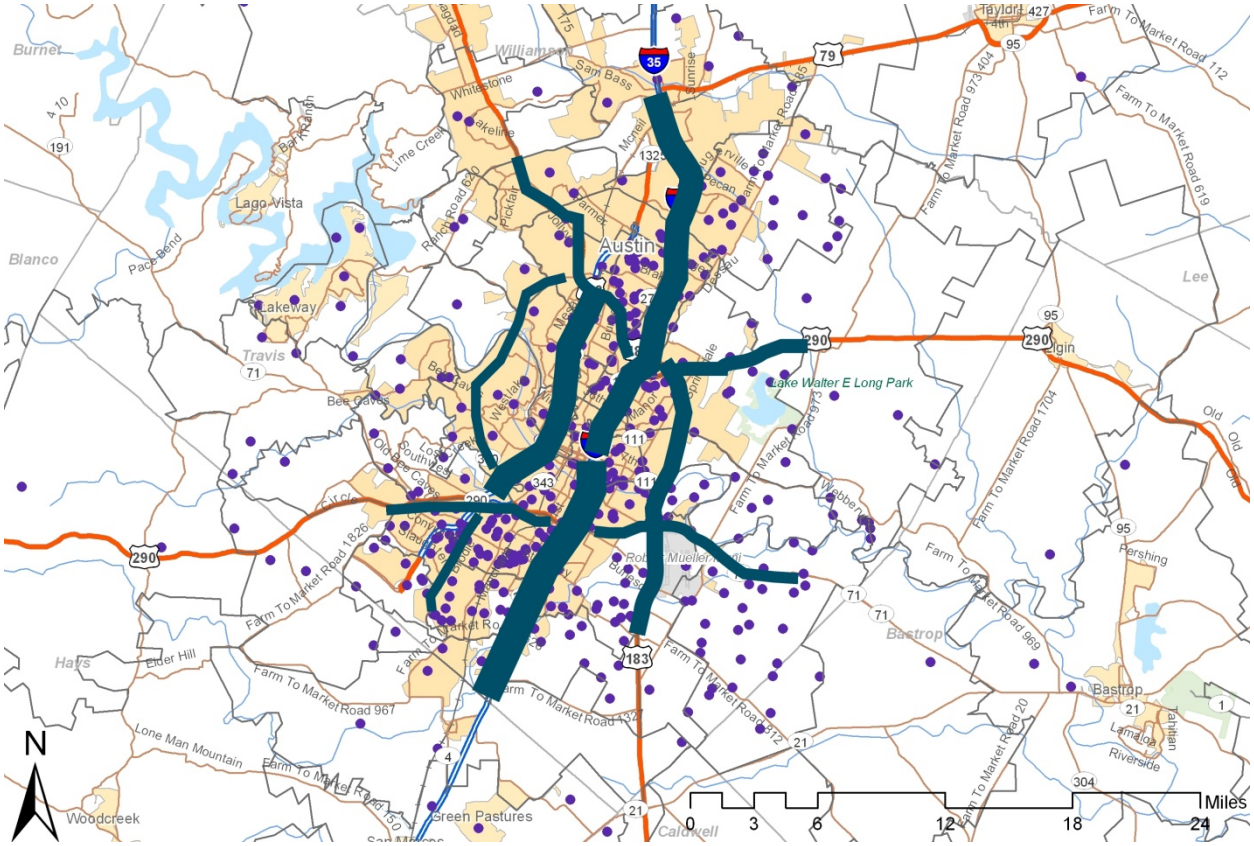
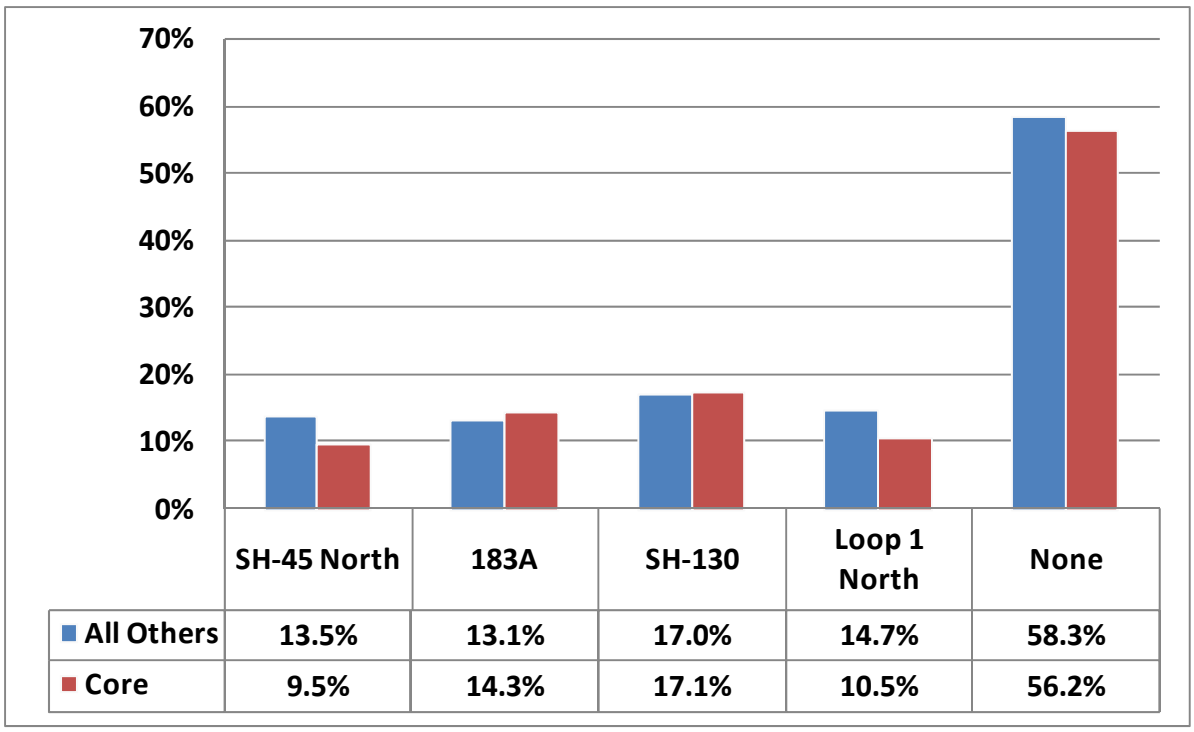
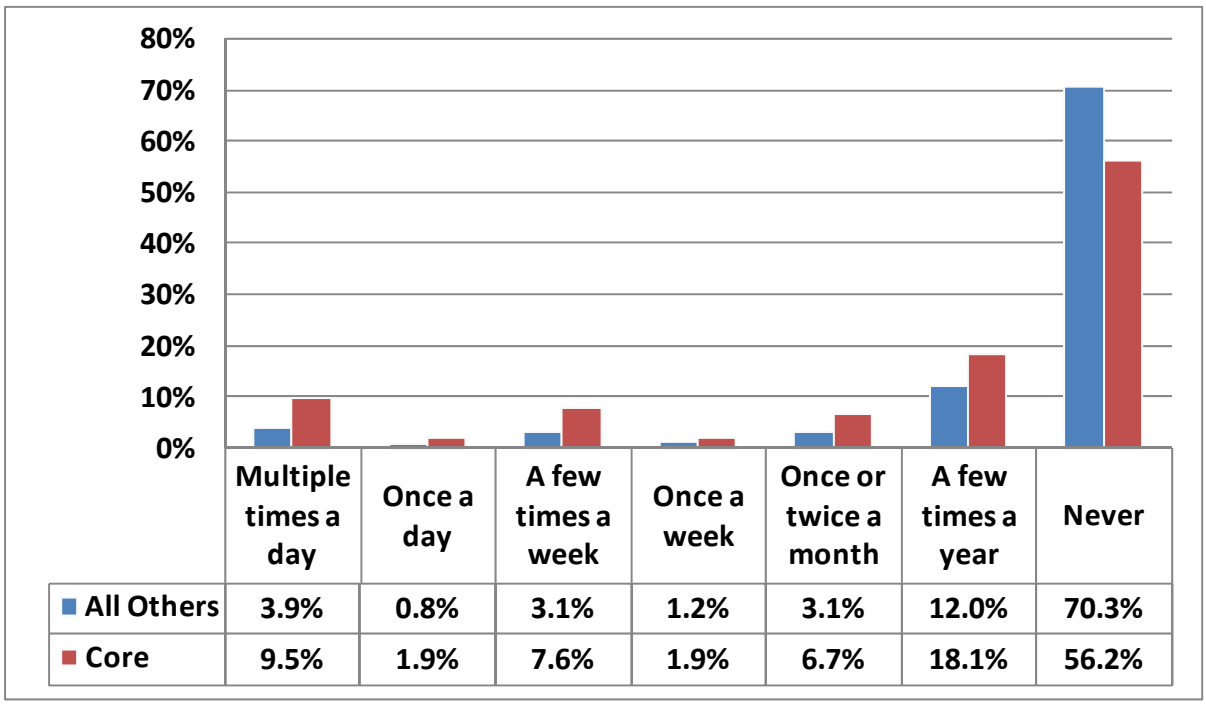


Figure 12: Predominant Travel Corridors (line width proportionate to response; dots indicate survey responses)



	SH-45 North	183A	SH-130	Loop 1 North	None
All Others	13.5%	13.1%	17.0%	14.7%	58.3%
Core	9.5%	14.3%	17.1%	10.5%	56.2%

Figure 13: Use of Toll Roads in Austin



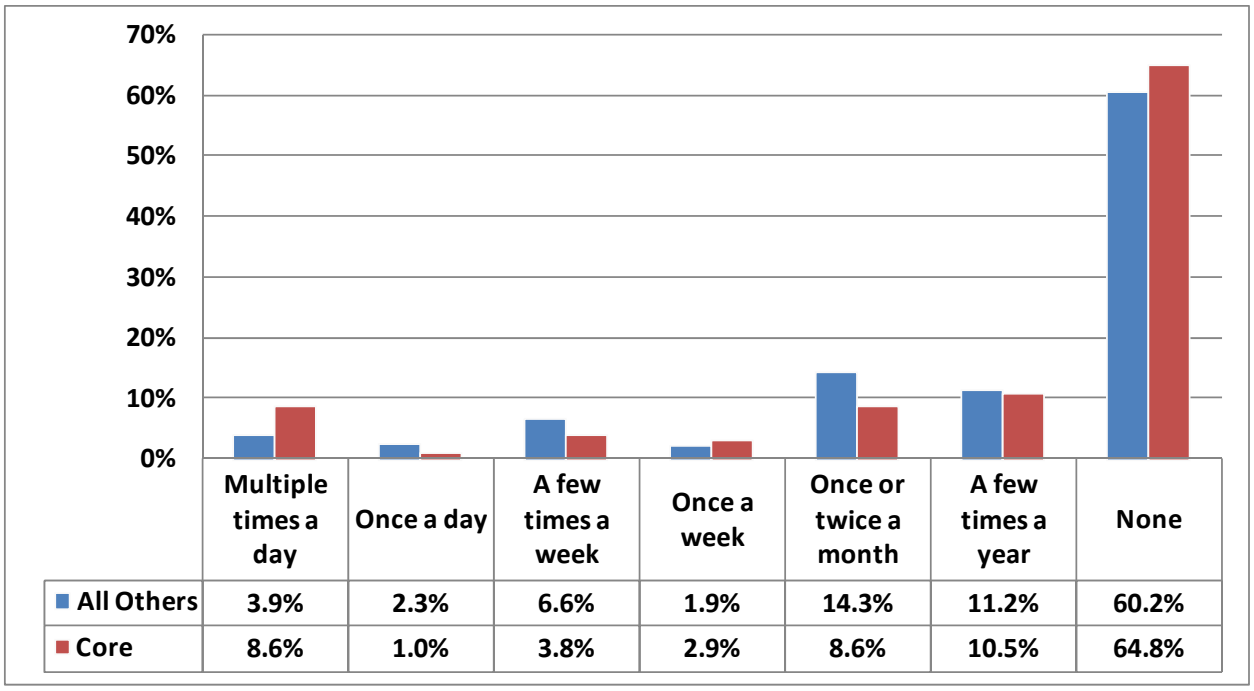
	Multiple times a day	Once a day	A few times a week	Once a week	Once or twice a month	A few times a year	Never
All Others	3.9%	0.8%	3.1%	1.2%	3.1%	12.0%	70.3%
Core	9.5%	1.9%	7.6%	1.9%	6.7%	18.1%	56.2%

Figure 14: Use of Transit in Austin

CHARACTERISTICS OF TOLL ROAD USE IN AUSTIN

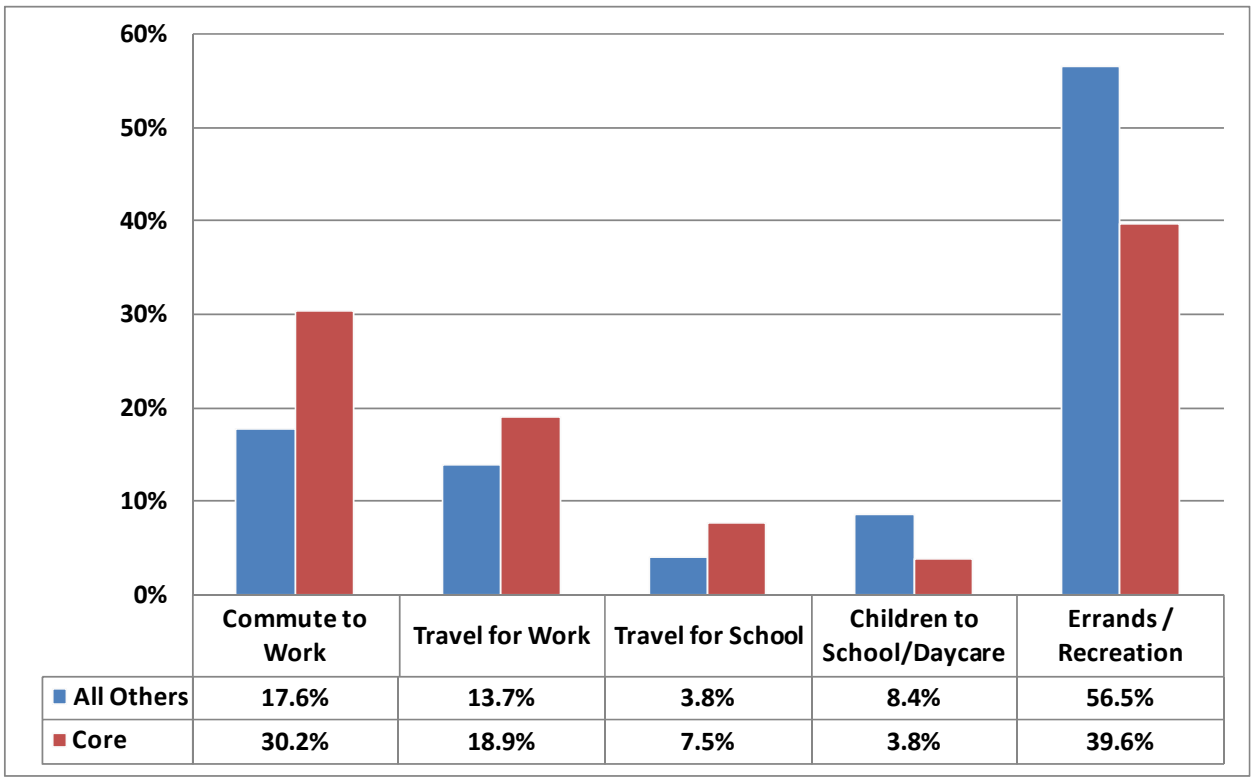
The frequency of toll road usage is fairly similar between Core and all other survey respondents, shown in Figure 15. Indeed, if there is any distinction, it is that Core respondents use toll roads only slightly less frequently than non-Core respondents, with the notable exception for heavy users.

Notable differences emerge in trip purpose, as Core respondents are more likely to use toll roads for non-discretionary trips (Figure 16). However, examining the situations that are conducive for using toll roads, both groups are similar, with the dominant (approximately half of all respondents) reasons for using the toll roads are congestion avoidance and convenience for trip-making (Figure 17). These imply using toll roads is based more on choice, as opposed to necessity.



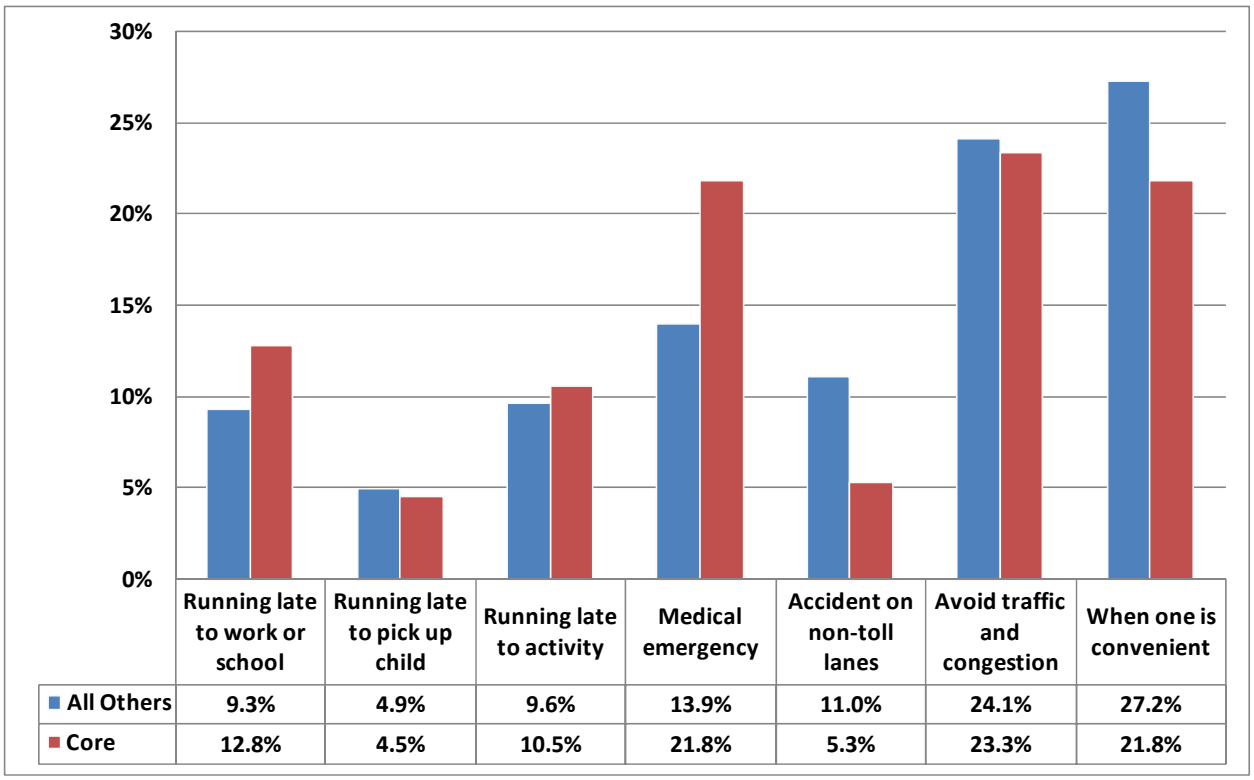
	Multiple times a day	Once a day	A few times a week	Once a week	Once or twice a month	A few times a year	None
All Others	3.9%	2.3%	6.6%	1.9%	14.3%	11.2%	60.2%
Core	8.6%	1.0%	3.8%	2.9%	8.6%	10.5%	64.8%

Figure 15: Toll Road Use Frequency



	Commute to Work	Travel for Work	Travel for School	Children to School/Daycare	Errands / Recreation
All Others	17.6%	13.7%	3.8%	8.4%	56.5%
Core	30.2%	18.9%	7.5%	3.8%	39.6%

Figure 16: Primary Trip Purpose When Using Toll Roads



	Running late to work or school	Running late to pick up child	Running late to activity	Medical emergency	Accident on non-toll lanes	Avoid traffic and congestion	When one is convenient
All Others	9.3%	4.9%	9.6%	13.9%	11.0%	24.1%	27.2%
Core	12.8%	4.5%	10.5%	21.8%	5.3%	23.3%	21.8%

Figure 17: Situations for Use of Toll Roads

IMPACTS AND BENEFITS OF TOLL ROADS

Core group and All Other respondents were similar in their reasons to not use toll roads, and, perceptions of the impacts of toll roads, as shown in Figure 18. No significant differences are found between the Core and the remaining regional population. Furthermore, the impacts of toll roads appear to be small in scale save for the perception that toll roads make it easier to access destinations (a positive impact), indicated in Figure 19.

In terms of perceived benefits, Core group respondents were slightly more inclined to recognize less traffic and travel time savings as a result of using the toll roads (Figure 20). Again, this implies that choice is a factor in determining use.

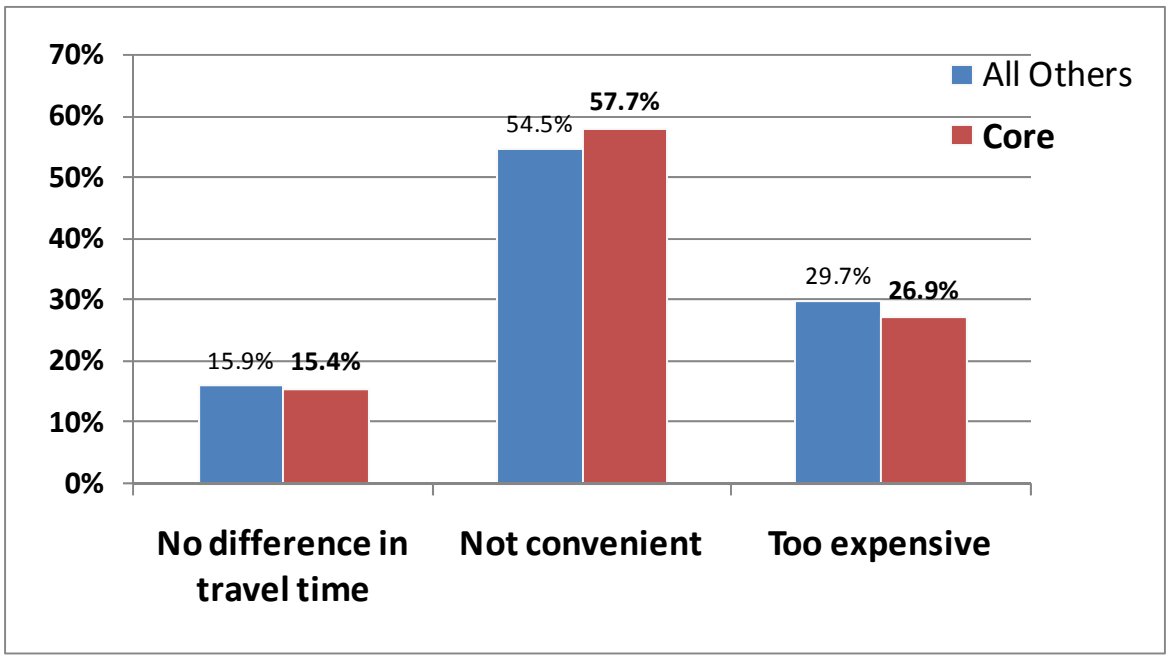


Figure 18: Reasons to Not Use Toll Roads

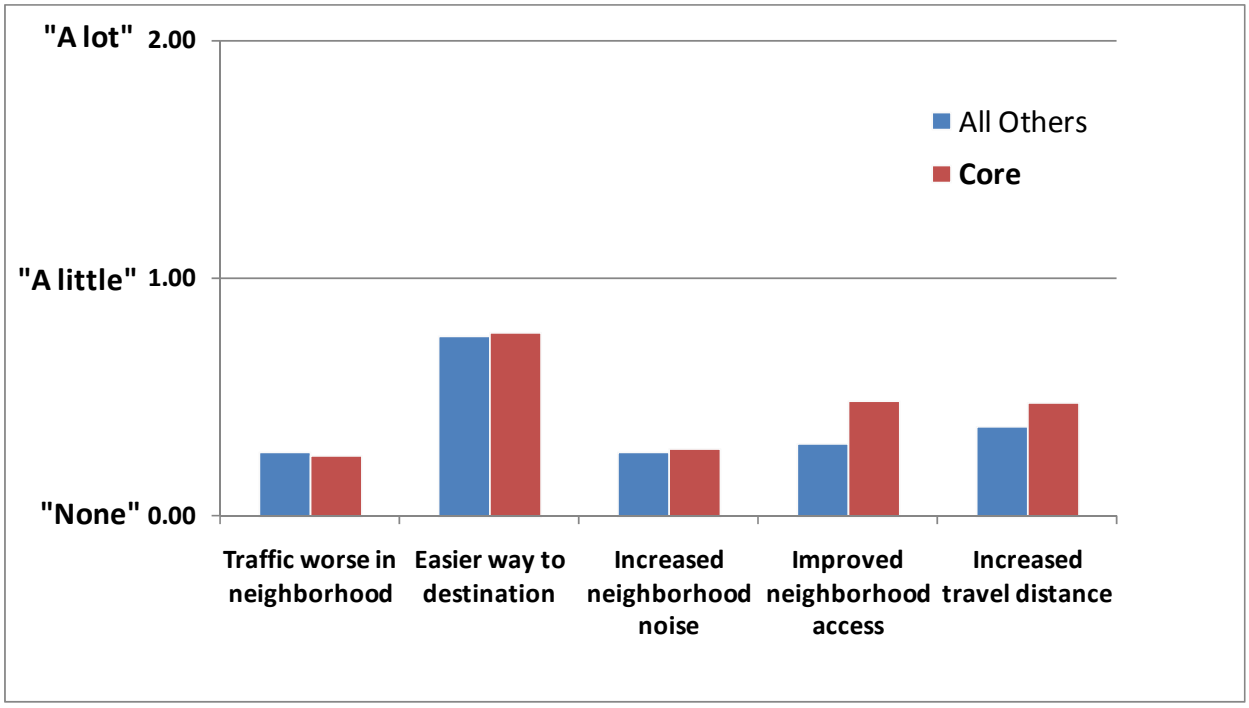


Figure 19: Impacts of Toll Roads (Mean Perception, 0.0 - 2.0 scale)

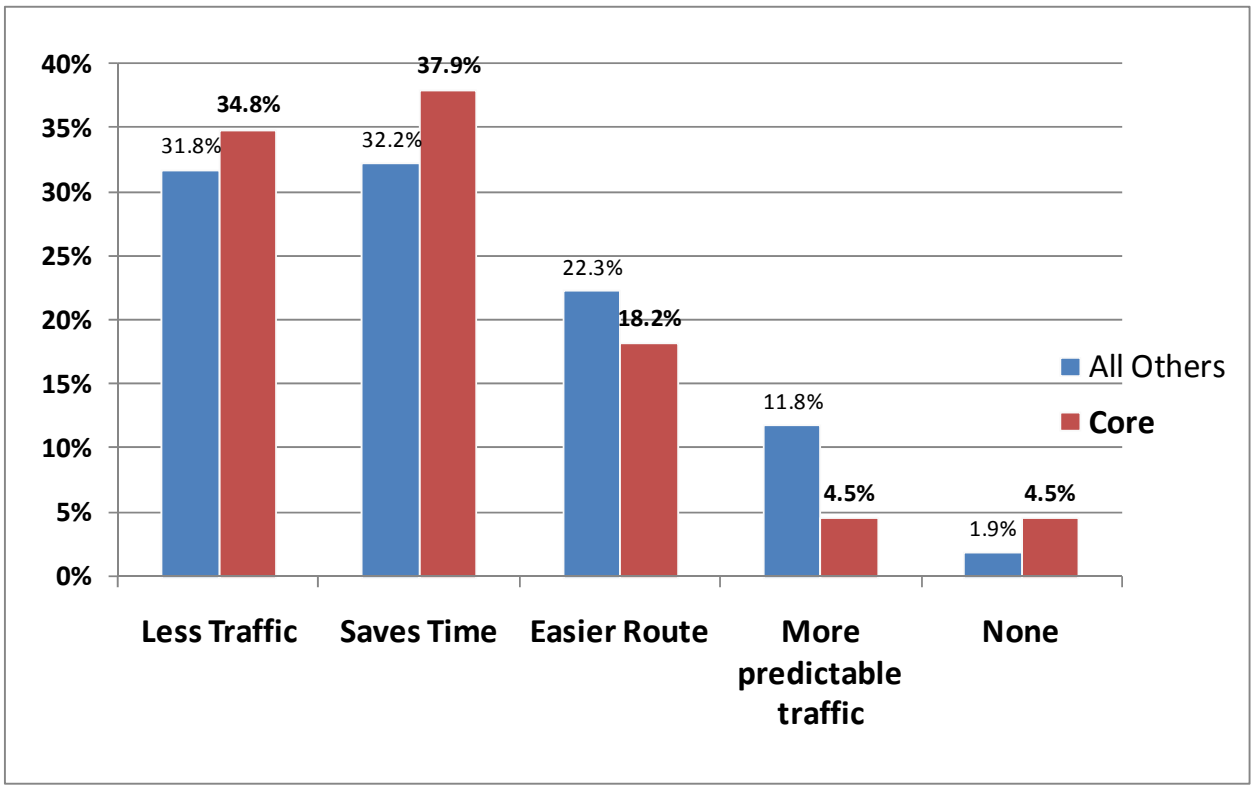


Figure 20: Reasons to Use Toll Roads in Austin

PROSPECTIVE TOLL ROAD USE

The survey asked respondents to indicate which route they would prefer to use, a toll road, the non-toll frontage roads adjacent to a toll road or neither. If the respondent selected a non-tolled frontage road, the survey next asked why he / she selected the frontage road.

As shown in Figure 21, Core group and all other respondents answered similarly in terms of choice of facility (frontage road or toll road). However, differences emerged as to why frontage roads were selected (Figure 22). Interestingly, the perceived cost of using toll roads was not only not as highly rated by Core group respondents as it was for all other respondents, but it also was not even the number one reason for using the non-tolled facility. Core group members more frequently answered "no perceived difference in travel time". This indicates that the decision to use or not use a toll road is not a function solely of cost for Core group respondents, but rather a decision that incorporates cost into the perceived value received from the toll road (e.g., travel time savings). Unfortunately, it was not clear whether those who chose inconvenience of entrance / exit were concerned about specific entrance / exit points for toll lanes or for the origin / destination pair.

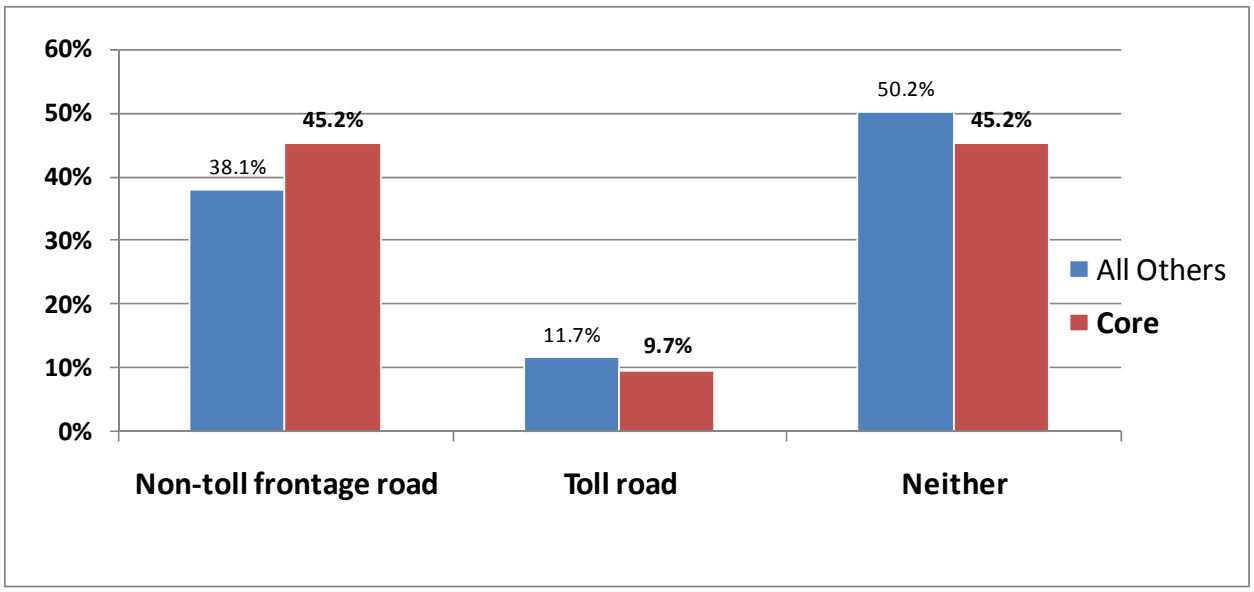


Figure 21: Road Choice for Commute to Work / School Trips

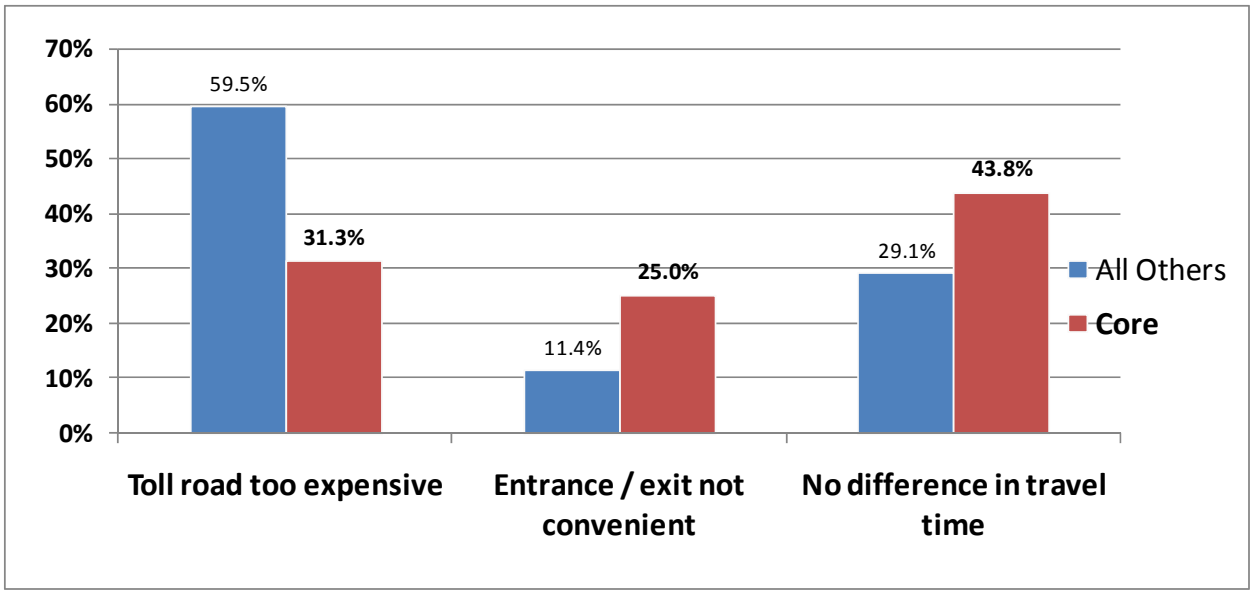


Figure 22: Reasons for Choosing Non-Toll Frontage Road

RAISING NEW REVENUE FOR TRANSPORTATION INFRASTRUCTURE

Finally, the survey asked respondents their opinions regarding four ways of raising new revenue for transportation projects (Figure 23): borrowing from future gas tax revenue, increasing the gas tax, using tolls for new construction, and using tolls on all lanes.

In general, survey respondents are opposed to three of the four means of raising revenue. Tolls for new construction is the only neutrally-rated option of the four, with all remaining respondents barely in favor and Core respondents slightly opposed. By comparison, the other four options are solidly rated "opposed"

by Core and all other respondents. That said, using tolls on all lanes is *less opposed* on average by Core respondents than all other respondents.

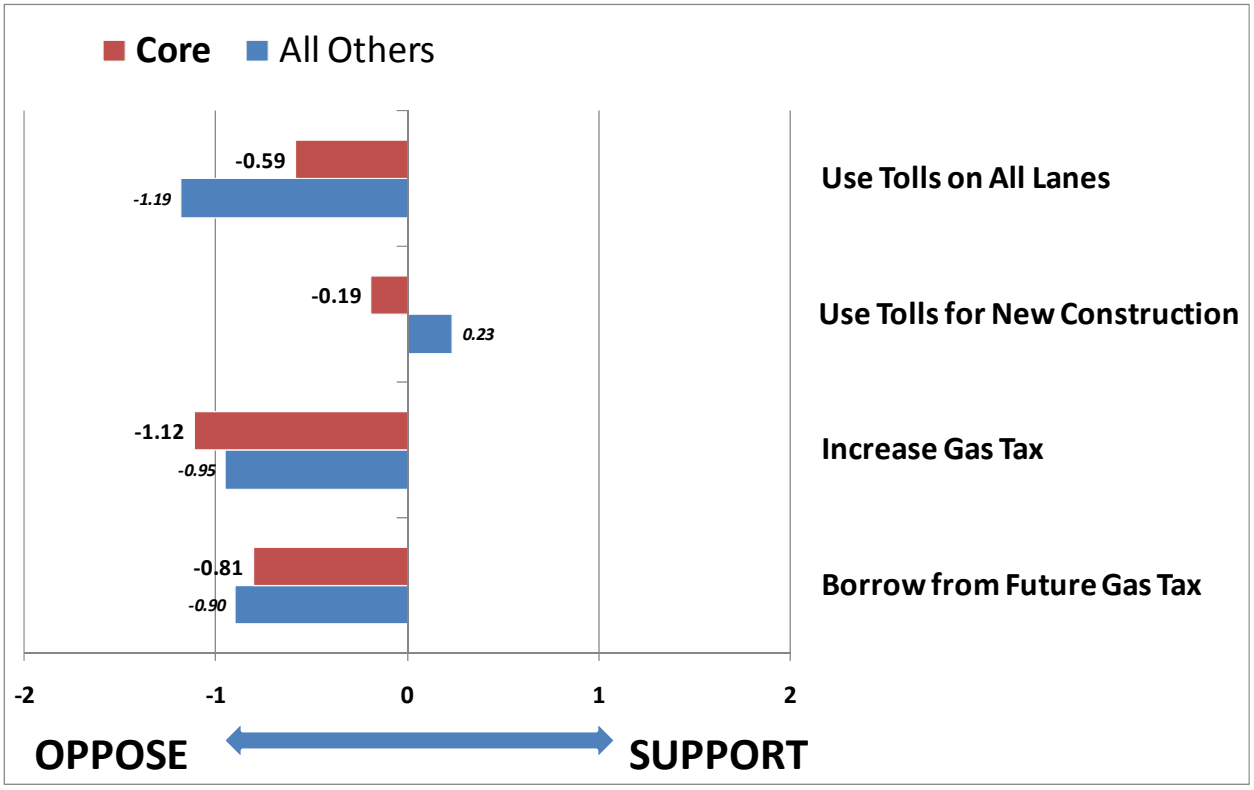


Figure 23: Oppose or Support Means of Raising New Revenue (Mean, -2.0 to 2.0 Scale)

CONCLUSIONS

The survey findings generally counter the premise that disadvantaged communities use the transportation system in a substantially different manner than the remainder of the regional population. The Core study group for this analysis was slightly more inclined to use transit for commute and work related trips than were the regional population, yet both groups had a drive alone rate above 65 percent of all trips. Furthermore, the patterns of use of regional toll roads indicate that Core group individuals use toll roads to the same extent as all other regional travelers.

The investigation as to *why* Core group members use toll roads indicate that use is predicated upon choice measures – congestion avoidance and convenience for trip making. Furthermore, Core group respondents were slightly more inclined to recognize less traffic and travel time savings as a positive result of using the toll roads, again reinforcing the concept of choice in use of facilities. Finally, when it comes to opinions regarding the expanded use of tolling, Core group respondents were similar in their response to the regional population on whole – tolling is generally unfavorable, but new or borrowed gas taxes are even more unfavorable.

In short, the survey results would indicate that disadvantaged communities in Austin do not have a disproportionate reaction to existing toll roads, nor have a significant difference of opinion regarding new toll roads.

APPENDIX A. AUSTIN AREA TRAVELER SURVEY

AUSTIN TRAVELER SURVEY

The Capital Area Metropolitan Planning Organization (CAMPO), the Central Texas Regional Mobility Authority (CTRMA), the Capital Area Rural Transportation System (CARTS), the Texas Department of Transportation (TxDOT) and the Capital Metropolitan Transit Authority (Capital Metro) are interested in your use of local roadways and transportation systems. Information collected on this anonymous survey will help plan for the future of transportation in the Central Texas area. Your participation is greatly appreciated. Please answer the following questions based on your average weekday travel.

1. What is your home ZIP CODE? _____

2. During a typical week, how do you travel to the following places? Check all that apply

	Drive Alone	Ride in a Car with Others	Bus	Walk	Bicycle	Does not apply
a. Commute to Work / Job	☐	☐	☐	☐	☐	☐
b. Travel for Work / Job	☐	☐	☐	☐	☐	☐
c. School (for yourself)	☐	☐	☐	☐	☐	☐
d. School / daycare (for children)	☐	☐	☐	☐	☐	☐
e. Shopping / errands / recreation	☐	☐	☐	☐	☐	☐

Ride in a car with others: which best describes the other passengers in the vehicle?

☐ Adult Family Members ☐ Children ☐ Co-Workers ☐ Neighbors / Friends

3. Which roads do you normally use to get to commute to work or school? Choose all that apply

☐ I-35 (south of downtown)	☐ 183A	☐ US 290 (west of I-35)	☐ Loop 360
☐ I-35 (north of downtown)	☐ US 183 (east of I-35)	☐ US 290 (east of I-35)	☐ Loop 1 (MoPac)
☐ SH 71 (east of I-35)	☐ US 183 (west of I-35)	☐ US 290 (west of I-35)	☐ SH 130
☐ SH 71 (west of I-35	☐ SH 45 North	☐ FM 1625	☐ Brodie

☐ Other_____

4. Which of the toll roads do you travel on? Choose all that apply

☐ SH-45 North	☐ 183A	☐ SH-130	☐ Loop 1 North	☐ I don't use the toll roads

Why don't you use the toll roads? Choose all that apply

☐ No difference in travel time ☐ Not convenient ☐ Too expensive ☐_____

ONLY ANSWER THESE QUESTIONS IF YOU USE THE TOLL ROADS

5. How often do you use the toll roads? Choose only one.

☐ Multiple times a day ☐ Once a day ☐ A few times a week ☐ Once a week

☐ Once or twice a month ☐ A few times a year

6. What benefits do the toll roads offer you? Choose all that apply

☐ Less traffic ☐ Saves time ☐ Easier route ☐ More predictable traffic ☐ _____ ☐ None

7. Why do you take the toll roads? Choose all that apply

☐ Commute to work ☐ Travel for school ☐ Taking children to school/daycare

☐ Shopping/errands/recreation

8. Which are you more likely to use to get to work or school? Choose only one.

☐ Non-toll frontage road ☐ Toll road ☐ Neither

9. If you chose frontage road in Question 8, why did you do so? Choose only one.

☐ Toll road too expensive ☐ Entrance/Exit on toll road not convenient ☐ Makes no difference in my travel time

10. To what extent do the toll roads impact you? Choose all that apply

	None	A Little	A Lot
a. Made traffic worse in my neighborhood	☐	☐	☐
b. Provided an easier way to get where I was going	☐	☐	☐
c. Increased noise in my neighborhood	☐	☐	☐
d. Improved access to / from my neighborhood	☐	☐	☐
e. Increased my travel distance to reach other roads	☐	☐	☐
f. _____	☐	☐	☐

11. When would you use a toll road? Choose all that apply.

- ☐ When I'm running late to work or school
- ☐ When I'm running late to pick up a child from school
- ☐ When I'm running late to an activity
- ☐ In case of a medical emergency
- ☐ If there is an accident on the non-toll lanes
- ☐ When I don't want to deal with traffic and congestion
- ☐ When there is one convenient to me
- ☐ _____

12. How often do you use Capital Metro transit / bus service? Choose only one.

- ☐ Multiple times a day
- ☐ Once a day
- ☐ A few times a week
- ☐ Once a week
- ☐ Once or twice a month
- ☐ A few times a year
- ☐ Never

13. What do you think of these different ways to raise money to build new roads for Austin?

	Oppose	No Opinion	Support
a. Borrowing from future gas taxes revenues	☐	☐	☐
b. Increasing gas taxes	☐	☐	☐
c. Using tolls only on newly constructed lanes	☐	☐	☐
d. Using tolls on all highway lanes	☐	☐	☐

14. How many people, including yourself, live in your home? Choose only one.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 or more

15. What is your ethnicity? Choose only one.

☐ Caucasian ☐ African-American ☐ Hispanic / Latino ☐ Asian ☐ Native American ☐ Other

16. What was your annual household income in 2007? Choose only one.

☐ Less than $9,999 ☐ $10,000 - $21,999 ☐ $22,000 - $49,999 ☐ $50,000 - $75,999 ☐ $76,000 +