

APPENDICES

DULLES TOLL ROAD RATE ADJUSTMENT REVIEW



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Prepared for



Prepared by



Wilbur Smith Associates

February 8, 2005

Review of

Metropolitan Washington Council
of Governments

Socioeconomic Data Forecasts



Center for Regional Analysis
George Mason University

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Demographic and Economic Forecasts for the Dulles Corridor: 2000, 2010, and 2030

Introduction

The Washington region is among the fastest growing metropolitan areas in the nation. Because of its economic structure, it is less cyclically sensitive than any other major metropolitan area and it is positioned for above-average population and job growth in coming decades. The area's record of above-average growth is not new. As a result of the Washington area's economic performance during the eighties and nineties, its officially-adopted projections (through the Metropolitan Washington Council of Governments – "COG") of future growth have fallen below actual outcomes with this undercount being much greater in the Northern Virginia suburbs than in the Maryland suburbs. The opposite has been true for the District of Columbia. Its population and employment projections have generally overstated the actual outcomes. This shift to the Northern Virginia jurisdictions has resulted in their capturing two-times or more the job gains registered in the Suburban Maryland jurisdictions (on the order of 40,000-50,000 jobs per year in Northern Virginia compared to 20,000-25,000 jobs per year in Suburban Maryland) while the growth rates for population and households have not diverged by nearly as much. And, in Northern Virginia, the errors in forecasts have been much greater in its western quadrant than in its southern quadrant with Loudoun County experiencing the greatest increments of increase over and above the projections.

The primary objective of this analysis is to evaluate current demographic (population and household) and economic (jobs) forecasts for the geography attendant to the Dulles Toll Road. The actual study area extends from Tyson's Corner at the I-495 Beltway west to Leesburg (Route 15 By-pass) north generally to the Potomac River with the southern boundary paralleling US Route 50. The Metropolitan Washington Council of Government's (COG) Round 6.3 Forecast will provide the baseline forecasts that will be evaluated. These will be validated for 2000 and again for 2005. These forecasts will also provide the baseline projections for examination of 2010 and 2030 alternatives.

Alternative forecasts for each affected jurisdiction will be developed by the GMU Center for Regional Analysis (CRA) in aggregate and these projections will be apportioned by Transportation Analysis District and Zone to specified areas that may experience more or less growth than reflected currently in the Round 6.3 Forecast. In addition to differences in expected growth rates going forward that would alter the magnitude of the population, household and employment gains in the Study Area, opportunities to accommodate higher densities than currently present or planned will be considered as well as changes in the capacity of the transportation system and in other primary elements of the infrastructure.

The output of these analyses will be forecasts for population, households and employment by Transportation Analysis Zone for the Study Area attendant to the Dulles Toll Road for 2010 and 2030. These forecasts will build from and extend the Council of Governments' forecasts (Round 6.3) either confirming these or revising them to reflect potential changes in growth patterns and land use changes—regulatory and market—that can be expected to take place within the corridor in response to the Washington area's gains in relative comparative economic development advantage going forward.

As the COG forecasts are more related to political desires regarding growth rather than the economic pressures and realities that society faces, the COG forecasts cannot accurately reflect those pressures. Since The District of Columbia itself wants to see more residents and the suburbs want to see more jobs, the forecasts will reflect those desires as much as they will reflect economic reality. While policy changes will certainly bias future development toward these goals, they are not likely to be achieved on their own. The analysis presented here attempts to remove those biases. However, the alternative forecasts presented will represent a view that is as conservative as possible. While the alternative forecasts are in some cases higher than the COG forecasts, this is not due to excessive optimism but rather to the fact that the COG forecasts represent, in some cases, an unrealistic hope for a complete cessation of growth.

Methodology and Sources

The analytical methodology underlying the forecast testing and revisions undertaken herein reflects a combination of; (1) comparisons of historic trends and accuracy among alternative forecasts for the jurisdictions comprising the Washington metropolitan area (2) reconciliation of market-driven or demand-based forecasts to forecasts constrained by holding capacity limits established by local comprehensive plans and zoning ordinances, and (3) judgmental interpretation of growth trends, scheduled and proposed public investments having land use implications, and redevelopment potentials that may alter the development magnitudes and timing within specific Transportation Analysis Zones in the Study Area.

The principal sources of data for these analyses include: the U.S. Census and Bureau of Economic Analysis (US Department of Commerce), the Bureau of Labor Statistics (US Department of Labor), Metropolitan Washington Council of Governments (COG), the Fairfax County Planning Office, the Loudoun County Department of Economic Development, the George Mason University (GMU) Center for Regional Analysis (CRA), and NPA Data Services, Inc. As indicated above, the baseline forecast is COG's Round 6.3. Alternatives to this forecast include COG's earlier Rounds, preliminary updates to Round 6.3 that will be issued as Round 6.4 later in 2004, and forecasts prepared by NPA Data Services, Inc.

The COG forecasts are prepared by the respective jurisdictions and reflect institutional parameters (current land use policies as set in adopted Comprehensive Plans) and

therefore do not necessarily reflect the levels of growth that could be supported by the market. As such, the COG 6.3 Forecast may reflect “wishful thinking” on the part of a jurisdiction (e.g., the District of Columbia’s population forecast) or represent a constrained condition that could be relieved by subsequent policy shifts (e.g., Fairfax County approaches build out in 2020 under currently permitted densities adopted in the current Comprehensive Plan).

In general, the forecasts developed by COG over the last two decades have understated the actual amount of growth that has occurred, primarily as a result of reflecting predominant local government policy to constrain growth. For example, the set of forecasts adopted in 1984 projected a Year 2000 population of 3.52 million, the 1988 forecasts projected 3.91 million, and the actual 2000 population was 4.07 million – exceeding the 1984 forecast by 550,000 and exceeding the 1988 forecast by 160,000. A similar pattern is occurring for the forecasts for 2010 in that the population forecasts made in 1988 for 2010 have already been surpassed. (These comparisons are for the COG region as defined in 1973, which is somewhat smaller than the current regional definition.) Figures 1 and 2 show the comparisons of COG forecasts by the year they were made for population and employment, respectively. These charts demonstrate, in general, how the forecasts made from 1984 on have normally understated reality.

In contrast, NPA Data Services forecasts are modeled. Its population forecast reflects the US Census cohort-survival model with natural increases calculated from projections for births and deaths based on the current demographic profile of each jurisdiction and net migration projections based on historic trends. These forecasts hold other externalities constant and so can deviate from actuality over time as non-demographic factors drive an area’s growth. NPA Data Services’ employment forecasts are developed from a national econometric model that builds from national growth forecasts by sector and apply these sector-specific growth performance forecasts to the sectoral mix of the local economy. These projections are insensitive to differences in the internal performance of sectors that derive from differences in productivity and labor force quality.

They also incorporate workers employed in the less formal segments of the economy: self-employed and part-time workers, undocumented workers, employees of very small firms, as well as uniformed military personnel. With this broader definition of jobs, the NPA employment base (reflecting BEA data) includes approximately 20 percent more workers than the employment base used by the Council of Governments that is restricted to full-time, year round positions. However, even with this definitional difference, the rates of growth over time will be used to characterize changes in the structure of the local economy that may impact its long-term growth rates. The alternative forecasts by zone developed for this analysis uses the narrower definition of employment as the COG models have used this definition throughout their application. The conservatism incorporated in this approach is greater than it used to be because there are more of the non-wage and salary jobs in the economy today than there were ten or even five years ago.

Figure 1: COG Historical Forecast Comparisons - Population

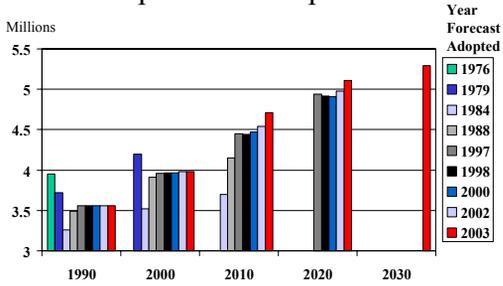


Figure 2: COG Historical Forecast Comparisons - Employment

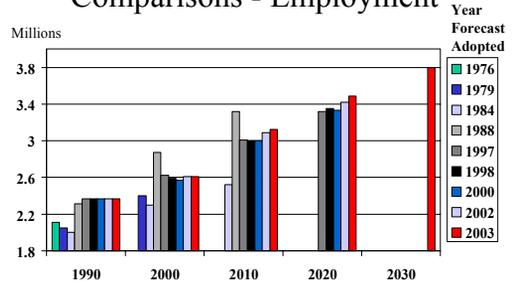


Figure 3: COG Region Employment COG 6.3 Forecasts

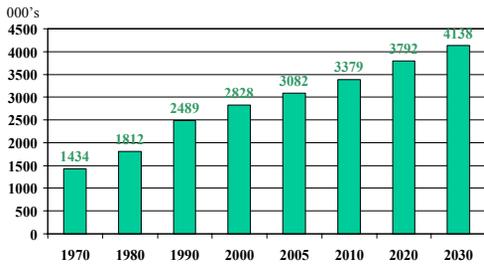


Figure 4: COG Region Population COG 6.3 Forecasts

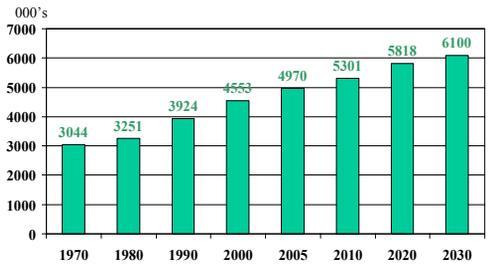


Figure 5: COG Region Households COG 6.3 Forecast

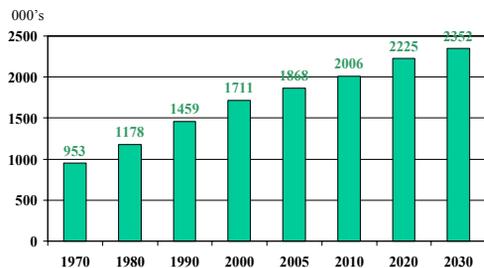
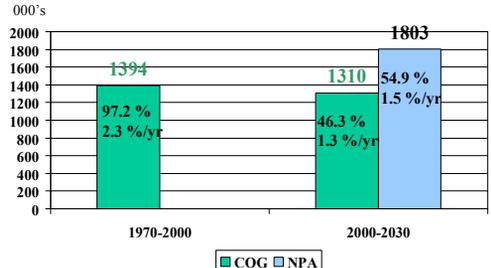


Figure 6: COG Region Employment 1970-2000 vs 2000-2030



The analyses presented in the following section reflect a multi-stage approach:

- First, alternative historic trends and projections will be compared at the county level for the major jurisdictions in the metropolitan area. Both the totals and changes between forecast years will be presented.
- Second, the baseline provided by the COG Round 6.3 Forecast for 2000 will be reviewed and adjusted, if necessary.
- Third, the COG Round 6.3 Forecast for 2005 will be reviewed and revised where other data point to faster or slower rates of change during this period in response to the sluggish performance of the economy since 2001, and growth trends that may have been accelerated by short-term factors not in evidence at the time Round 6.3 was prepared.
- Fourth, the revised Round 6.3 Forecast for 2005 will be extended to 2010 and stepped down from the County level to the Transportation Analysis District (TAD) and Transportation Analysis Zone (TAZ) levels within the Study Area. The population, household and employment forecasts for each District and its constituent zones will be calculated for 2010 and differences between the baseline forecast and the alternative forecast presented where these differences are determined.
- Fifth, the baseline (Round 6.3) and alternative forecasts to 2030 will be developed. County-level forecasts for 2030 will be calculated and then will be stepped down to TAD and TAZ levels. Comparisons of the baseline projections and the alternative projections at these geographic scales will be presented with differences (where these exist) detailed and explained. The results of these analyses will be county-level comparisons between the baseline and alternative forecasts, TAD and TAZ allocations of forecast differences, and the rationale underlying the alternative forecasts where these differ significantly from the baseline.

The principle difference between the baseline forecast and the alternative forecast developed herein will be changes in permitted densities. The Round 6.3 Forecast is constrained by public policy imposed limits to holding capacity. The alternative forecasts, where these differ from the baseline, will reflect the magnitudes of growth that would occur naturally within the Study Area in the absence of current regulatory constraints and could be captured if these constraints are modified. The alternative forecasts are based on the assumption that current land use controls will be modified over time to reflect changing economic, social, and political conditions. Also, land use controls will become more accommodating as urban values replace suburban values and infrastructure utilization efficiencies become more central determinants of a TAZ's ultimate holding capacity.

The alternative forecasts also assume that local infrastructural needs for new developments will be provided. The nature of the development approval process in the

Commonwealth of Virginia is that roads, schools, water and sewer lines and other facilities have to be provided with the new development.

The alternative forecasts do not assume major new intra-regional infrastructure being built, such as proposals for a Techway bridge connecting the Dulles Corridor with the I-270 corridor in Maryland. Construction of such facilities would not increase the region's growth in any case, but would result in some different distribution within the region. If such a facility or other were to be built affecting the Dulles Corridor, there would be additional development within the corridor – but this has not been assumed in the alternative forecasts.

It should be noted that the CRA alternative forecast (as well as the COG Round 6.3 forecast) for employment does not include all of the workers in the labor force. Rather, this forecast reflects only full-time, year-round jobs and excludes part-time, self-employed, and contract workers, uniform military personnel, and undocumented workers. It is estimated that this excluded or more informal workforce accounts for approximately 700,000 workers or 21 percent of all jobs in the Washington metropolitan area. It is expected that this less formal and more flexible work force will increase in the Washington metropolitan area over the forecast period due to the dominance of the services sector, the continued growth of federal contracting, and the hospitality industry, all of which rely heavily on this segment of the work force for their employees. As population and household growth are a function of job growth and the employment forecast is conservative, as discussed above, projected population and household growth should also be considered to be conservative.

Baseline and Alternative Forecasts

Each of the following sections will present tabular and graphic information that compares the underlining trends for the baseline forecast and suggested alternative forecasts. These will reflect the appropriate geographic scales and forecast periods. In each case the jurisdictional level forecasts will be apportioned to the Study Area based on regional factors and, within the Study Area, these forecasts will be further stepped down to the TAD and TAZ levels based on current build out status, redevelopment potentials, and supportable densities given proposed changes in transportation and other essential infrastructure. In the end, the alternative forecasts for some TAZ's will not be different from the current loadings based on the COG 6.3 Forecast. If these forecasts do change, it will be a timing issue more than a holding capacity (density change) or economic development issue. Other TAZ's will be shown to have significantly greater growth potential (with accommodating holding capacity expansion) than for which they are current planned. In these cases, it will be assumed that over the 25-year planning period (2005-2030) the political process will respond to changes in economic and demographic growth opportunities and velocities as has been the case in the past (e.g., Tyson's Corner and Reston Town Center in Fairfax, or even more dramatically in some transit station

areas such as Arlington's Rosslyn-Ballston Corridor). Transportation capacity will be a major determinant in the analysis of alternative development loadings. For example, the provision of rapid rail service in the Dulles Corridor will enable its station areas to accommodate and capture significantly greater magnitudes of growth than currently planned while unserved areas that may already be built out will not experience any change in their development capacity or subsequent loading.

Regional Growth Trends: 1970-2030

The charts in Figures 3-5 show the region's employment, population, and household change from 1970 to 2030, with the COG 6.3 forecasts for the 2005-2030 period. The region doubled in employment in the 30-year period from 1970-2000 to 2.8 million jobs in 2000. Population increased by 50%, growing to a level of 4.55 million in 2000, and experienced a population gain of 1.51 million during the 1970-2000 period. Population growth projected by COG's Round 6.3 Forecast shows this magnitude of growth to continue to 2030 with population projected to increase by another 1.55 million people.

Household growth during this forecast period is projected to exceed population growth rates. This reflects a decrease in the average household size, moving from 3.19 persons in 1970 to 2.59 in 2030. During this 60 year period, a total of 1.4 million households are expected to be added representing a gain of 150 percent. To accommodate this household growth, the region's housing stock will have to increase by a similar percentage. Where these new housing units will be located will drive transportation demand as well as shape the regional distribution of the economy that emerges over this period.

Employment growth over the 60-year period shows an almost tripling of the number of jobs in the region. The projected gain of 2.7 million jobs between 1970 and 2030 is only slightly fewer than the projected gain in residents (3.1 million). Adjusting for labor force participation rates (and age profile of the new residents), the projected job growth in the region will exceed the growth of workers within the projected population requiring that an increasing share of these new jobs will be filled by non-residents of the Washington region. This substantial job growth also provides an indication of the expected economic vitality the region is projected to maintain over this period.

NPA Data Services, Inc offers alternative projections for population and employment for the Washington region. NPA's population forecast for 2000-2030, starting with the same base in 2000, shows the expected rate of growth to be slightly faster than the COG Round 6.3 Forecast (1.2% vs. 1.0%). In comparison to the 1970-2000, with its 1.4% annual growth rate, the COG forecast rate would appear conservative. It should be remembered that the COG population forecast is driven by local government policy and not market forces and would be expected to be conservative (except in the District of Columbia where more people would be welcome in the face of continuing population decline).

Figures 6-8 show the amount of change for each data item for 1970-2000 compared to the amount of change projected for 2000-2030 for both COG 6.3 and NPA.

The difference between COG's and NPA's household forecasts is even greater than between their population forecasts. This greater difference is explained by average household size differences: COG uses 2.59 persons per household average for 2030 while NPA uses a 2.53. In combination with a higher population growth rate, this smaller household size value (which reflects the US Census projection) yields gains of 855,000 (vs. 641,000) households over 30 years. This household gain would translate into an annual requirement for 28,000 new housing units to accommodate this gain, an increase that excludes additions for replacement for units lost during this period, units to an average vacancy rate, or units to satisfy pent up demand). This level of household and housing unit growth (a 50% increase to the region's stock) will have a major impact on the overall distribution of the region's population by the end of the study period.

NPA's employment growth forecast is also more aggressive than the COG Round 6.3 Forecast. Besides including a larger number of jobs in the employment base in 2000, (reflecting self-employed, part-time and other less formal jobs), the rate of increase is greater (1.5% vs. 1.3%). This faster growth rate translates into 493,000 more jobs being added to the region between 2000 and 2030 than are included in the COG forecast. With job growth being largely concentrated in the suburban jurisdictions and Northern Virginia capturing between 2 to 3 new jobs for each new job located in Suburban Maryland, the transportation implications of this difference in forecasts is significant. COG's job growth rate (1.3%) is a full percentage-point lower than the region sustained during the 1970-2000 period and appears conservative, reflecting policy constraints and not market potential. NPA's job forecast also reflects a substantially slower rate than the region sustained during the last 30 years. However, as it includes about 20 percent more jobs in its base and these tend to be more entrepreneurial in character than the more-formal year-round, full-time positions reflected exclusively in the COG forecast, it would be expected that the NPA forecast would be more aggressive as it is these less formal types of work that will be expansive in the future economy. The question remains, however, whether the zoning and other land use policies that control commercial land use growth in the Washington area will change over time to be more accommodative of the growth that could be captured.

These differences are set forth here as representing boundaries within which the actual magnitudes of future growth will likely fall. The COG forecasts (6.3) are conservative and reflect today's concerns about too much growth. That they reflect growth rates substantially slower than the past and that the region's growth has generally exceeded COG's forecasts suggest that these forecasts understate the actual future population and employment trends in the Washington region. NPA's forecasts are not constrained by current local public policies and suggest levels of growth that could be achieved if more

Figure 7: COG Region Population
1970-2000 vs 2000-2030

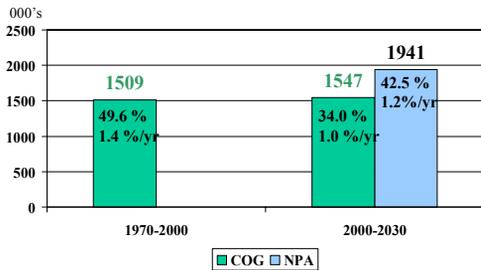


Figure 8: COG Region Households
1970-2000 vs 2000-2030

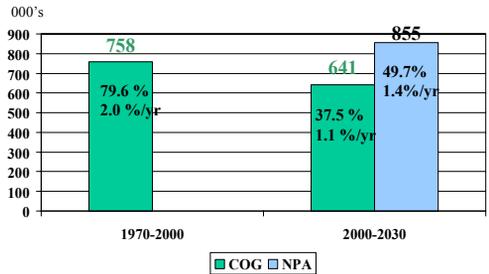


Figure 9: Ten-Mile Square
Employment
1970-2000 vs 2000-2030

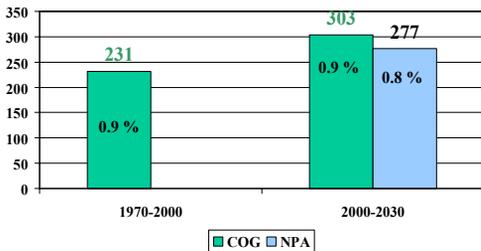


Figure 10: Ten-Mile Square
Population
1970-2000 vs 2000-2030

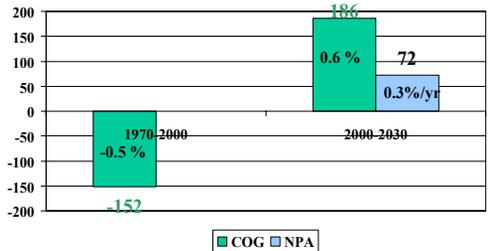


Figure 11: Ten-Mile Square
Households
1970-2000 vs 2000-2030

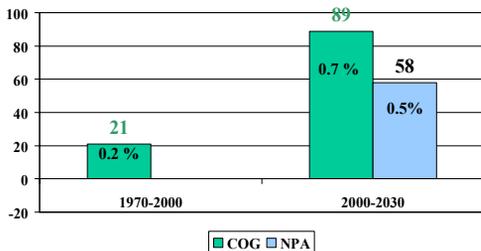
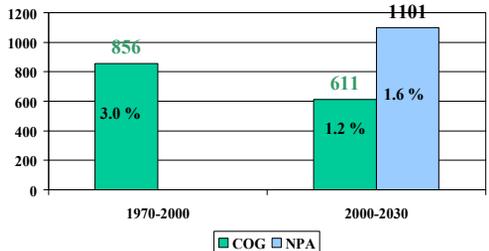


Figure 12: Beltway Counties
Employment
1970-2000 vs 2000-2030



growth is determined locally to be desirable. These projections assume the adequacy of basic infrastructure, transportation, and housing to accommodate future demand. As such, these more aggressive forecasts could be considered as the upward limits of growth for the purposes of testing the baseline forecast.

Comparative Forecasts for the Major Washington Area Jurisdictions

Growth patterns and rates have varied in different parts of the Washington region for the 1970-2000 period, and forecasts by COG and by NPA differ in the amounts and patterns for the 2000-2030 time frame. COG's central jurisdictions – the District of Columbia, Arlington and Alexandria – have grown substantially in employment in the past but have

lost households and population. This area is referred to as the “Ten-Mile Square”, and Figures 9-11 show the historical change and the forecast comparison for 2030. (It is essentially the original federal district established in the 1790's before Arlington and parts of Alexandria were ceded back to Virginia.) Looking to the 2000-2030 forecast period, the COG and NPA forecasts are very similar for employment, reflecting current trends of increasing densities in job centers and the transit corridors in the close-in areas of the region. The NPA forecasts expect a turnaround in the population and household growth pattern as compared to 1970-2000, with increases in population in the next 30 years. COG's forecasts, however, show expectations of much higher population growth in these jurisdictions, and this is primarily due to a more optimistic view by the District of Columbia about its potential population increase. There has been a consistent pattern in past COG forecasts of the District having higher expectations than have borne out in reality, and there is no reason to expect any change in this overly optimistic view. There will be some increases in households and population in the central jurisdictions as housing developments have been and are being constructed in the transit corridors and central locations, but it will not likely be as high as the COG forecasts.

Most of the region's growth in the 1970-2000 period has occurred in the “Beltway Counties” of Fairfax, Montgomery, and Prince George's. Two-thirds of the region's population growth and 61 percent of the region's job growth have occurred in these three counties, and actually most of that in Fairfax and Montgomery. The amount of growth and the pace of growth in those two counties has been part of the reason that growth constraints have come into vogue there and that looking to the future those counties show expectations of much less growth than does the market-driven methodology of the NPA forecasts. Shown in Figures 12-14 are the forecast comparisons for the set of Beltway counties.

The outer suburbs of the COG region as defined for their forecasts consists of the counties of Calvert, Charles and Frederick in Maryland, and the counties of Loudoun, Prince William, and Stafford in Virginia. These outer counties taken as a group have had significant growth in the past, and are expected by both COG and NPA forecasts to have more growth in the 2000-2030 periods than in the 1970-2000 period. There are not large

Figure 13: Beltway Counties
Population
1970-2000 vs 2000-2030

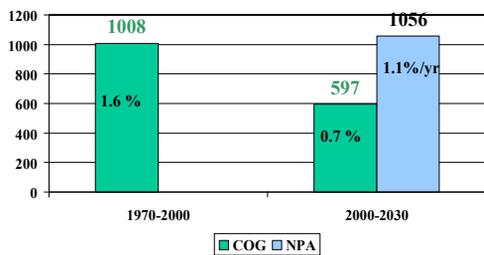


Figure 14: Beltway Counties
Households
1970-2000 vs 2000-2030

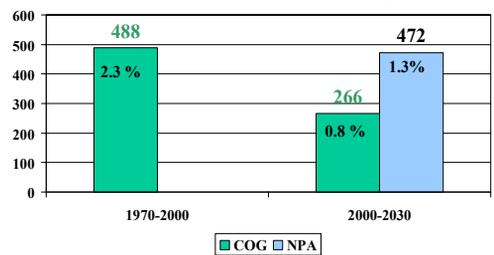


Figure 15: Outer Suburbs
Employment
1970-2000 vs 2000-2030

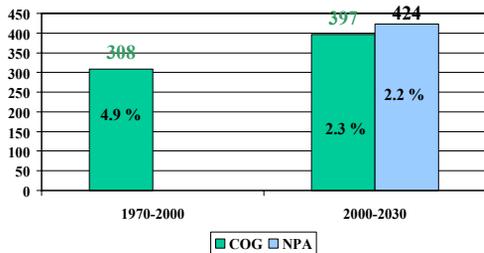


Figure 16: Outer Suburbs Population
1970-2000 vs 2000-2030

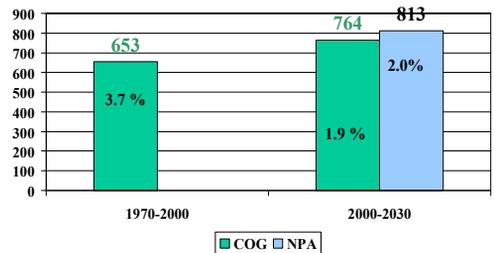


Figure 17: Outer Suburbs Households
1970-2000 vs 2000-2030

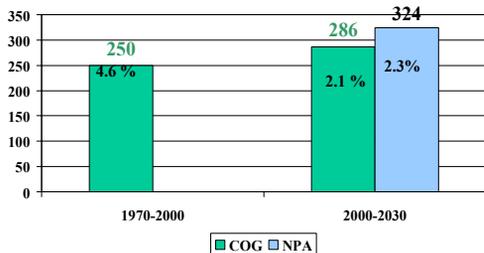
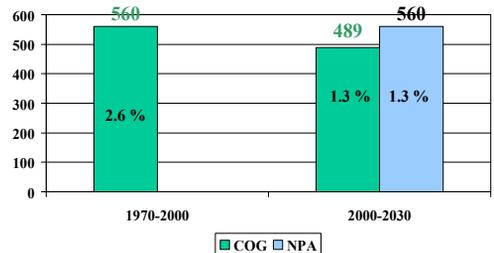


Figure 18: Suburban MD Employment
1970-2000 vs 2000-2030



differences in the expectations of the two different sets of forecasts. The forecast comparisons are shown in Figures 15-17.

(Note: forecast comparisons for the Suburban Maryland and Northern Virginia and for major jurisdictions outside the Dulles Corridor are shown in Figure 18-38.)

Trends and Forecasts for Fairfax and Loudoun Counties

The analysis now steps down in scale from the region and county groups to historical and forecast comparisons for the two counties of the Dulles Corridor -- Fairfax and Loudoun.

The charts for Fairfax are shown in Figures 39-41 and for Loudoun in Figures 42-44.

Fairfax has been the growth engine of the region for the past 30 years. By itself it has attracted 34 percent of the region's population growth and 30 percent of the job growth. It is currently adding jobs at rate of 25,000 per year which is more than most metropolitan areas in the country. More significantly for this analysis is that the Dulles Corridor in Fairfax – Tyson's Corner to Reston/Herndon – has attracted more than half of the growth. This has happened as Tyson's Corner exploded in office space and in the 1980s on with growth of Federal government contractors and technology companies and the professional service sectors that follow them. The political and governmental response to this rapid growth has been to want to set limits on growth, and this is clearly shown in the forecast comparisons for 2030. The COG forecast for jobs shows expectations for the next thirty of almost half as much growth as in the past thirty years. Yet NPA's market based forecasts indicate the county would by fifty percent more in the years from 2000-2030 than it did from 1970-2000. This understatement of future expectations is shown even more clearly in the household forecasts wherein the county (COG) shows expectations of growing by only 90,000 households from 2000-2030 after growing by almost three times that amount from 1970-2000. The higher amounts of growth in Fairfax will more likely occur because of redevelopment and building at higher densities than current plans and policies indicate. Transit, and the anticipation of transit, will be a major factor in the increased densities and development.

Loudoun County has not grown nearly as much as Fairfax. It has been more rural and suburban only in the very Eastern part of the county. This suburbanization has spread considerably in the past ten years in the area East of Leesburg, and especially in the corridor along the Greenway out from Dulles.

The explosion of growth in Loudoun – it is the fastest growing county in the U.S. – is difficult to capture by the methodology of NPA. It is an anomaly in urban econometric development. Therefore the analysis of the forecasts results in a conclusion that the COG forecasts more accurately reflect expectations in Loudoun, but are still somewhat conservative for population and household growth. The rural/suburban nature of the

Figure 19: Suburban MD Population
1970-2000 vs 2000-2030

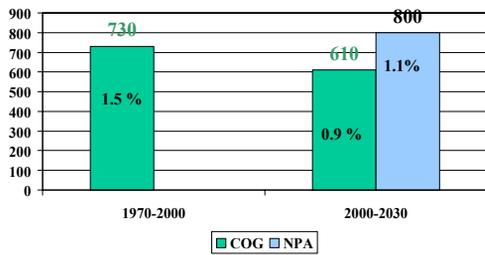


Figure 20: Suburban MD Households
1970-2000 vs 2000-2030

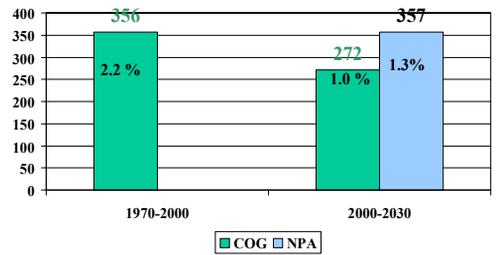


Figure 21: No. Virginia Employment
1970-2000 vs 2000-2030

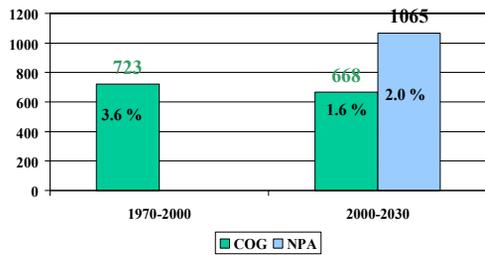


Figure 22: No. Virginia Population
1970-2000 vs 2000-2030

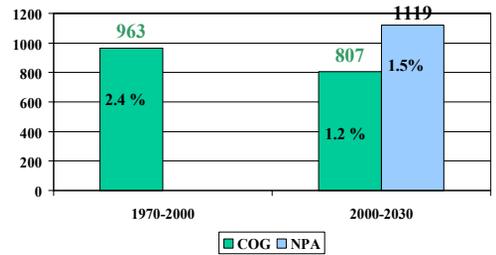


Figure 23: No. Virginia Households
1970-2000 vs 2000-2030

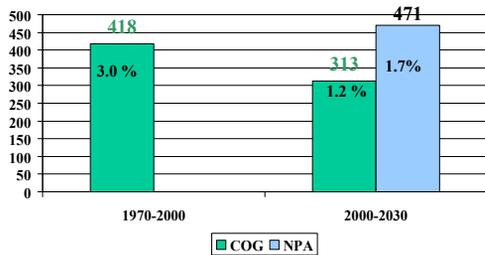


Figure 24: DC Employment
1970-2000 vs 2000-2030

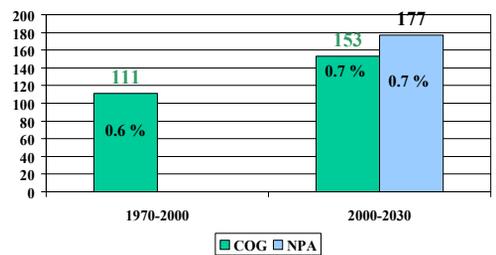


Figure 25: DC Population
1970-2000 vs 2000-2030

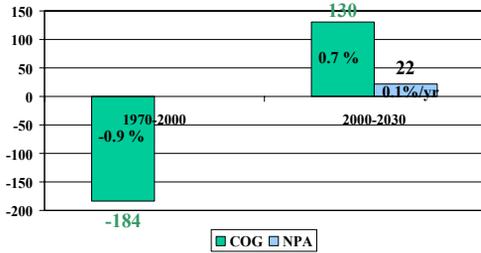


Figure 26: DC Households
1970-2000 vs 2000-2030

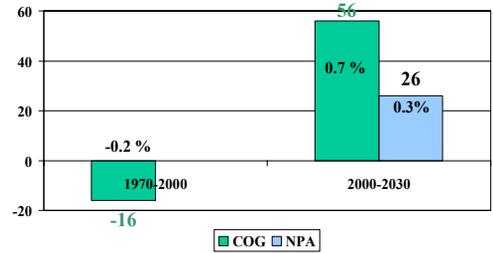


Figure 27: Arl/Alx Employment
1970-2000 vs 2000-2030

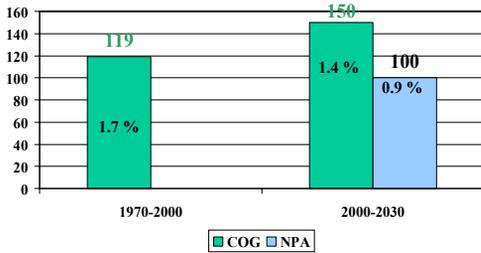


Figure 28: Arl/Alx Population
1970-2000 vs 2000-2030

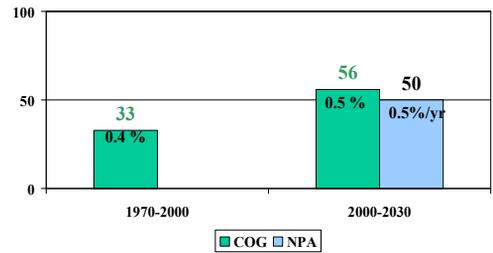


Figure 29: Arl/Alx Households
1970-2000 vs 2000-2030

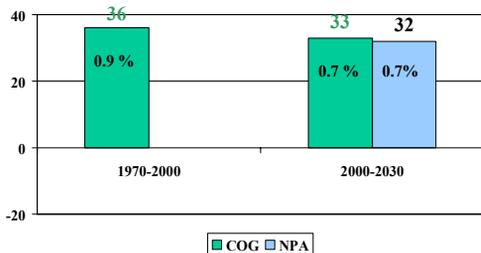


Figure 30: Montgomery Employment
1970-2000 vs 2000-2030

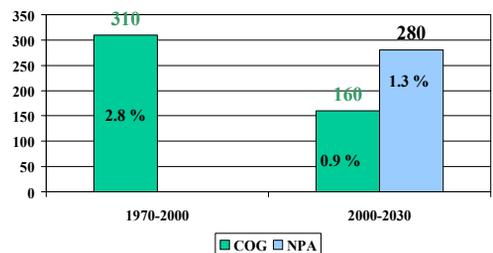


Figure 31: Montgomery Population
1970-2000 vs 2000-2030

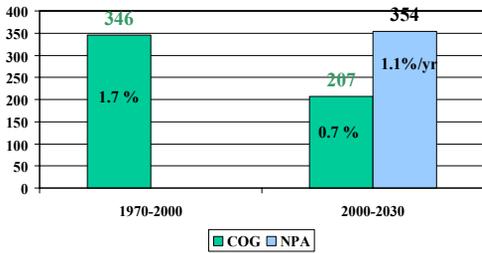


Figure 32: Montgomery Households
1970-2000 vs 2000-2030

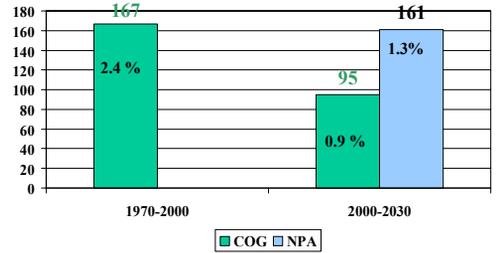


Figure 33: Pr George's Employment
1970-2000 vs 2000-2030

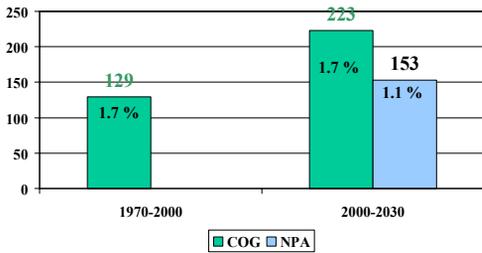


Figure 34: Pr George's Population
1970-2000 vs 2000-2030

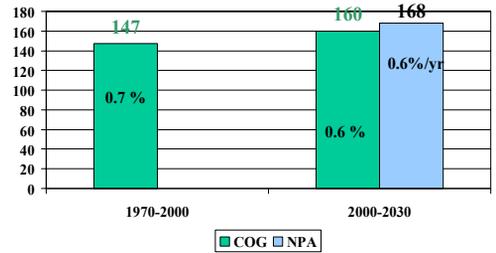


Figure 35: Pr George's Households
1970-2000 vs 2000-2030

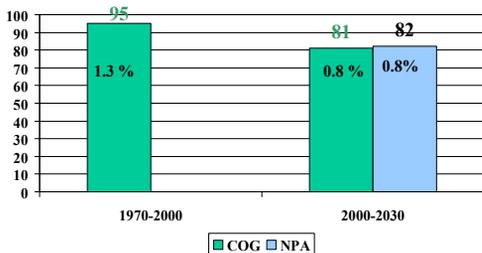


Figure 36: Pr William Employment
1970-2000 vs 2000-2030

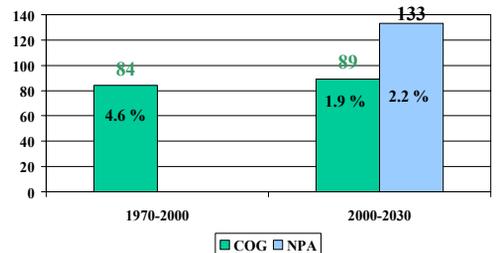


Figure 37: Pr William Population
1970-2000 vs 2000-2030

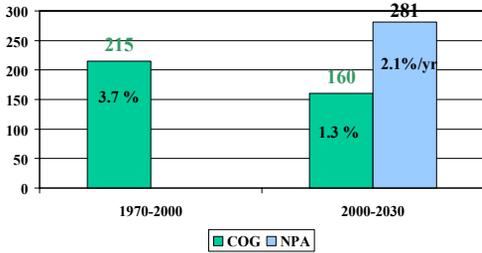


Figure 38: Pr William Households
1970-2000 vs 2000-2030

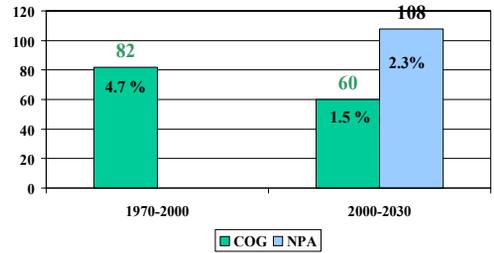


Figure 39: Fairfax Employment
1970-2000 vs 2000-2030

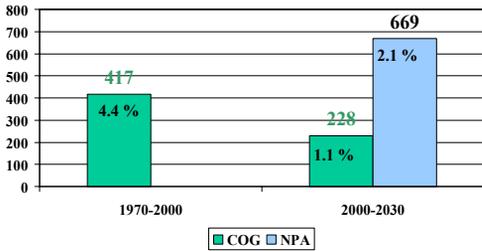


Figure 40: Fairfax Population
1970-2000 vs 2000-2030

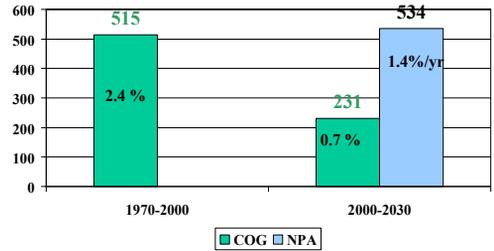


Figure 41: Fairfax Households
1970-2000 vs 2000-2030

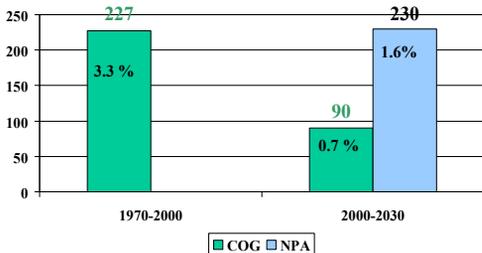


Figure 42: Loudoun Employment
1970-2000 vs 2000-2030

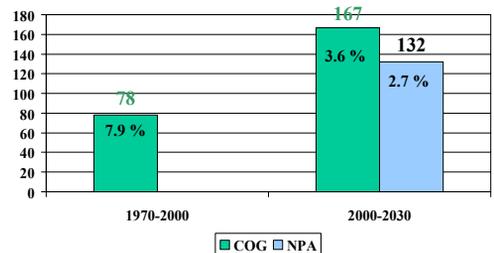


Figure 43: Loudoun Population
1970-2000 vs 2000-2030

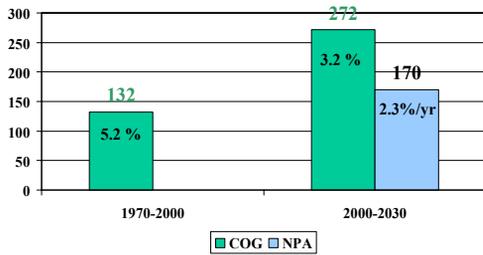


Figure 44: Loudoun Households
1970-2000 vs 2000-2030

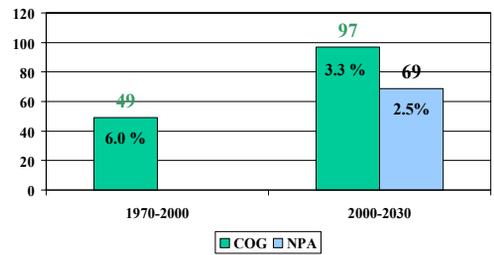


Figure 45: Fairfax Employment
2000 - 2030

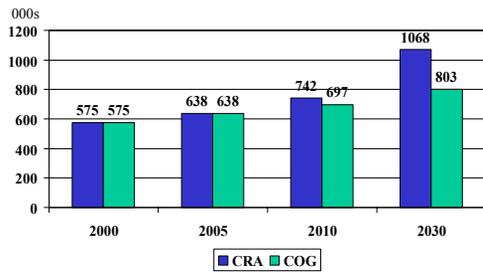


Figure 46: Fairfax Population
2000 - 2030

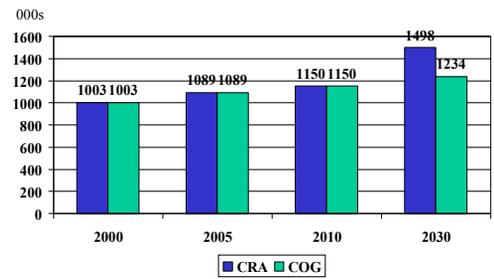


Figure 47: Fairfax Households
2000 - 2030

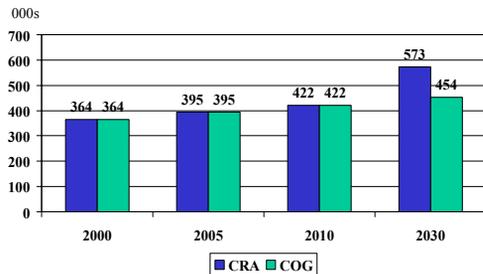
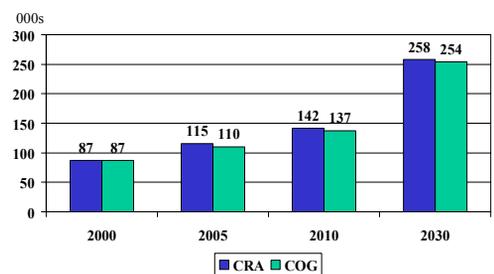


Figure 48: Loudoun Employment
2000 - 2030



county has not really prepared its policy and plan development for the increased pressures and higher densities (but not as high as more urban Fairfax) that are likely to develop over time. Attractive landscape, a major international airport, adjacency and a part of the technology and Federal contracting employment growth are factors causing these growth expectations.

Baseline 2000 and 2005 Forecasts

The baseline forecasts for Fairfax and Loudoun were examined to confirm or adjust them as appropriate. The data for 2000 for population and households are based on Census counts. Employment data for 2000 is based on BLS and BEA data series which have been rebenchmarked to 2000 Census and will not be changed. The 2005 forecasts were examined in light of known and measured trends from 2000 to 2003 at the county level.

Population and household forecasts for 2005 were compared to the Census July 1, 2003 estimates released this past spring. The estimates showed Fairfax County growing at a rate consistent with the 2003 estimates, and therefore the 2005 forecasts from COG 6.3 have not been adjusted. Overall county level employment trends through 2003 also are in line with the 2005 COG 6.3 forecast and are also not adjusted. However, job growth in the Tyson's-Dulles Corridor has picked up considerably in the last year (based on office absorption rates and Federal contracting data) and is projected to be strong in the next couple of years. This trend leads to the conclusion that the corridor is gaining a slightly greater share of county employment growth that is represented by the COG 6.3 zone-level forecasts. The COG 6.3 forecasts had the Tyson's-Dulles corridor zones getting 50% of the county's growth – this has been adjusted upward to 60% of the 2000-2005 growth.

In examining Loudoun County's trends relative to the 2005 forecasts, it is clear that Loudoun rate of population and household growth is exceeding expectations. This is based on both the Census July 1, 2003, population estimates and the building permit data for the county through April 2004. Therefore the population and household counts for the county were adjusted for 2005. The annual rate of growth for 2000-2003 was carried forward to 2005 and this was applied county-wide to zones based on COG 2000-2005 zonal increments. Also, the 2005 employment forecasts reflect revised pipeline development and data from BLS and BEA reflecting changes in trends since 2000.

2010 and 2030 Forecasts

The analysis and observations in the sections above about historical growth trends and comparisons of future expectations are the backdrop for development of alternative forecasts for the Dulles Corridor for 2010 and 2030. This section contains the rationale for development of alternative forecasts followed by a table summarizing the forecasts for the two counties.

Fairfax

COG's forecast for employment for Fairfax for 2000-2010 is an increase of 122,000 jobs or an average of 12,200 per year. This is very modest given the regional share of growth being attracted to Northern Virginia and Fairfax specifically in the past 15 years. The county is currently growing at the rate of 25,000 per year, although it did grow much more slowly in 2001-2002. NPA's market-based forecast for Fairfax seems much more realistic given these past and current trends. Therefore, the rate of growth from the NPA series for 2005-2010 is applied to the COG 2005 base to yield the alternative forecast for the county of 742,300 jobs for 2010. Similarly, the NPA rate for 2010 to 2030 is applied to the 2010 alternative forecast to yield a 2030 forecast for the county of 1,068,100 jobs. This is an annual growth for the 20 years of 16,300 or 1.84 percent per year. This compares to the 1990-2000 growth of 13,500 jobs per year or 2.72 percent per year. And it is noted that the region and Northern Virginia, including Fairfax, had some poor years in the 1990s with the 91-92 recession and the federal spending related slowdown in 1995-1996. The technology boom did not really take off until 1998, and that is being followed by the large increases in federal contracting related to homeland security and other national issues. These factors are building a momentum that is attracting the well-educated and knowledge-based labor force that will continue to attract economic activity to the region and especially to Fairfax (and Loudoun). These factors also lead to the conclusion that the alternative forecast of 1,068,100 jobs in 2030 is not an upper limit. It is very possible that the county's growth could be higher.

For 2010, household forecasts for Fairfax are about the same for both COG and NPA and represent very closely the growth from 1990-2000 of 59,800. Therefore, no change is made to the 2010 *COG 6.3* forecasts of population and households in the alternative forecast. However, COG forecasts for households for 2010-2030 show an expectation of only 31,600 for the 20 years, which would mean the county's growth would drop from almost 6,000 per year to just over 1,500 per year. The county's plans show expectations of reaching plan capacity around 2020. However, there will be considerable pressure for re-planning and zoning to increased densities in the county given the market and the economic forecasts (jobs). This will be especially true in the Dulles Corridor given the toll road, transit plans and anticipation, and the economic growth.

This analysis applies NPA's growth rates for population and households for 2010-2030 to the 2010 base to develop the 2030 household and population forecasts of 572,600 and 1,498,000 respectively.

Loudoun

Loudoun County staff has already developed some forecast revisions that they plan to submit to COG for the next round (COG 6.4 – to be developed and approved in the fall of 2004) of forecasts. These have been developed because of new rezoning and filed site plans for development as well as actual trends for the 2000-2003 period which are exceeding the COG forecast.

For employment forecasts for 2010 and 2030 for the county, the new county forecasts have a 2000-2010 growth of 54,600 jobs as compared to 47,700 from 1990-2000. This projection seems reasonable and very likely given current trends. The 20-year growth from 2010-2030 is 116,500, and is also in line with likely expectations. There is therefore no need to develop an alternative set of employment forecasts as these rates of growth for jobs seem reasonable and very likely.

Population and household forecasts were adjusted upward for 2005 as explained above. Examining the new county forecasts, it is concluded that the rates of growth as applied to the 2005 base adjustment provide very likely alternative forecasts for the county. The rates do begin to lower over time, but that is expected given that the base will have gotten larger.

The alternative set of forecasts and comparisons with the COG 6.3 forecasts is summarized in the table below and is shown graphically in Figures 45-50:

Figure 49: Loudoun Population
2000 - 2030

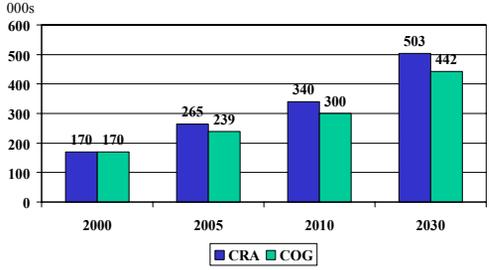
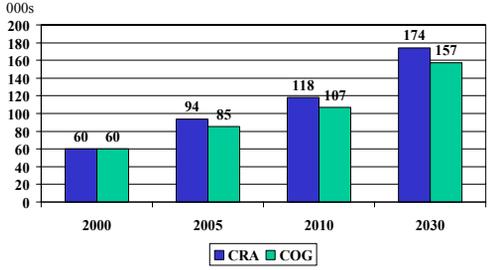


Figure 50: Loudoun Households
2000 - 2030



**Center for Regional Analysis
Alternative Forecasts for Fairfax and Loudoun Counties**

Fairfax County

	Employment			
	2000	2005	2010	2030
COG 6.3 Cooperative Forecast	575,100	637,600	697,100	803,400
Center for Regional Analysis Alternative Forecast	575,100	637,600	742,300	1,068,100
	Population			
	2000	2005	2010	2030
COG 6.3 Cooperative Forecast	1,003,100	1,079,100	1,149,500	1,233,900
Center for Regional Analysis Alternative Forecast	1,003,100	1,079,100	1,149,500	1,498,000
	Households			
	2000	2005	2010	2030
COG 6.3 Cooperative Forecast	363,700	394,800	422,900	453,500
Center for Regional Analysis Alternative Forecast	363,700	394,800	422,900	572,600

Loudoun County

	Employment			
	2000	2005	2010	2030
COG 6.3 Cooperative Forecast	87,000	109,900	137,100	253,600
CRA Alternative Forecast	87,000	114,500	150,600	276,100
	Population			
	2000	2005	2010	2030
COG 6.3 Cooperative Forecast	169,600	239,300	300,400	441,900
CRA Alternative Forecast	169,600	265,100	347,500	518,300
	Households			
	2000	2005	2010	2030
COG 6.3 Cooperative Forecast	59,900	84,900	106,600	156,700
CRA Alternative Forecast	59,900	94,100	121,400	180,100

**DULLES TOLL ROAD STATED PREFERENCE SURVEY
FINAL REPORT
OCTOBER 25, 2004**



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DULLES TOLL ROAD STATED PREFERENCE SURVEY

EXECUTIVE SUMMARY

In May of 2004, a stated preference survey was conducted by Resource Systems Group, Inc., in conjunction with Wilbur Smith Associates, for the Virginia Department of Transportation. This study was undertaken to support the evaluation of the traffic and toll revenue impact on the Dulles Toll Road (Virginia State Route 267) of various proposed toll structure and operational alternatives and the proposed Metrorail Orange Line extension from West Falls Church to the Dulles International Airport and eastern Loudoun County.

Resource Systems Group, Inc. administered the survey at a wide variety of locations within Fairfax County, VA during May 2004, and via the internet during May and June 2004.

Data were collected from 1446 people to reveal general travel habits and the details of a specific recent trip using the Dulles Toll Road. Respondents completed a series of stated preference experiments, where they were asked to make choices between several hypothetical alternatives for their trip. Travel time, toll cost, HOV lane use, time shift and trip characteristics relevant to a new rail service were varied according to a fractional factorial design to support the estimation of a nested logit travel choice model. Respondents who reported that they did not currently own a Smart Tag transponder for electronic toll collection also completed a series of stated preference experiments that sought to identify under what circumstances, such as introducing a toll discounts for Smart Tag users, would the respondent obtain a Smart Tag. These data were used to estimate a binomial logit Smart Tag acquisition model. Finally, demographic data were obtained to assist in categorizing responses and modeling the data.

Responses from 576 cash payers, or 4608 observations, were used to develop Smart Tag acquisition models for the whole sample and for journey to work, business related travel and other travel segments. The models showed that toll discounts for those paying with Smart Tag will provide the greatest incentive for current cash payers to acquire a Smart Tag. Also important is lowering the minimum replenishment amount and the deposit required to obtain a Smart Tag.

Of the 1446 completed responses, 1428, or 11424 observations, were used to estimate multinomial and nested logit travel choice models for choice between five alternatives: general purpose lanes at the same time as the current trip, general purpose lanes at a different time than the current trip, HOV lanes, non-tolled route and transit. Tests indicated the presence of income and vehicle occupancy effects, and these were modeled as transformations on the trip cost variable in the model. It was found that travel behavior varied by journey purpose and time of travel; therefore separate models were estimated for peak journey to work, off peak journey to work, business related travel and other travel. Finally, a nesting structure with the choice between transit and auto at the top level and a nest of auto alternatives at the second level was found to allow improved models to be estimated.

Values of time (at \$100K household income and vehicle occupancy = 1.38) of \$10.61 for peak journey to work, \$10.35 for off peak journey to work, \$13.94 for business related travel and \$12.22 for other travel were estimated.



DULLES TOLL ROAD STATED PREFERENCE SURVEY

INTRODUCTION

This report summarizes the results of a stated preference survey conducted in Fairfax County, VA in conjunction with Wilbur Smith Associates for the Virginia Department of Transportation (VDOT). This study was undertaken to support the evaluation of the traffic and toll revenue impact on the Dulles Toll Road (Virginia State Route 267) of various proposed toll structure and operational alternatives and the proposed Metrorail Orange Line extension from West Falls Church to the Dulles International Airport and eastern Loudoun County.

Resource Systems Group, Inc. conducted the survey fieldwork over a period of seven days, from May 19th through May 26th, 2004. The survey was administered at a wide variety of locations within Fairfax County, VA.

Data were collected from 1446 people to reveal general travel habits and the details of a specific recent trip using the Dulles Toll Road. Respondents completed a series of stated preference experiments, where they were asked to make choices between several hypothetical alternatives for their trip. Travel time, toll cost, HOV lane use, time shift and trip characteristics relevant to a new rail service were varied according to a fractional factorial design to support the estimation of a nested logit travel choice model. Respondents who reported that they did not currently own a Smart Tag transponder for electronic toll collection also completed a series of stated preference experiments that sought to identify under what circumstances, such as introducing a toll discounts for Smart Tag users, would the respondent obtain a Smart Tag. These data were used to estimate a binomial logit Smart Tag acquisition model. Finally, demographic data were obtained to assist in categorizing responses and modeling the data.

The body of this report describes the design, administration and analysis of the stated preference survey. Following the report are three appendices. Appendix A contains the script of the stated preference survey, along with tabulations for each question. Appendix B contains screen shots from the stated preference survey. Appendix C contains a direct transcript of the comments from respondents that were taken from the 'comments' section on the final page of the stated preference survey.



STATED PREFERENCE SURVEY ADMINISTRATION

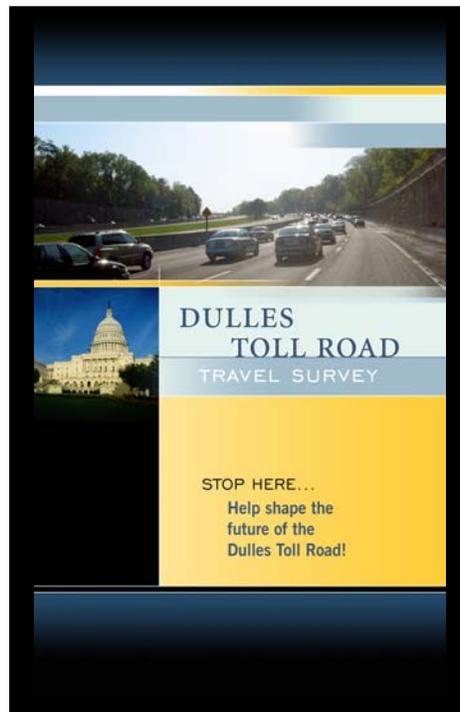
The stated preference survey was administered to 1446 people at various locations in Fairfax County, VA and over the internet at SurveyCafe.com.

The onsite administration of the survey comprised up to eight laptop computer interview stations set up daily at various locations within Fairfax County, VA close to the Dulles Toll Road. Each survey site was staffed by three to four survey attendants who were responsible for soliciting and screening potential respondents, escorting the participants to survey stations, and assisting them with the computer-based questionnaire. Potential respondents were questioned to insure that they met the screening criteria as explained in Table 1.

Table 1: Respondent Screening

Survey Criteria	Individuals who made a recent trip of 15 minutes or longer that used the Dulles Toll Road (trip must have been a tolled trip: trips using the free Airport Access Road did not qualify).
------------------------	--

Figure 1: Survey Poster



A framed poster mounted on an easel was positioned near the interview station to assist in attracting respondents (Figure 1).

When taking the stated preference survey, respondents sat in front of a laptop computer and used a mouse to record answers and navigate through the survey. Survey attendants operated the mouse for those respondents who were unfamiliar with computers. Most respondents completed the survey in less than 10 minutes. When respondents finished the survey, the data for that individual were automatically saved for later analysis. People were generally enthusiastic about taking the survey and appeared to enjoy the survey’s interactive technology.

The survey questionnaire was administered onsite over a seven day period from Thursday, May 20th through Wednesday, May 26th, to 616 qualifying respondents. Table 2 lists the survey administration schedule.



Table 2: Survey Schedule

Day	Date	Site	Town	Type	Hours
Thurs	20-May	Pretest: Ballston Common Mall	Arlington	Mall Facility	11am-6pm
		Friday Night Live	Herndon	Event	5pm-10pm
Sat	22-May	Tysons Corner Center	Tysons Corner	Mall	10am - 9:30pm
		Herndon Community Center	Herndon	Other	9:30am-5pm
Sun	23-May	Tysons Corner Center	Tysons Corner	Mall	11am - 6pm
		Ballston Common Mall	Arlington	Mall	12pm-6pm
Mon	24-May	DMV - Tysons Corner	Tysons Corner	DMV	8am-5pm
		DMV - Sterling	Falls Church	School	10am-5pm
Tues	25-May	DMV - Tysons Corner	Tysons Corner	DMV	8am-5pm
		DMV - Sterling	Sterling	DMV	8am-5pm
Wed	26-May	Ballston Common Mall	Arlington	Mall	10am-7pm
		DMV - Sterling	Sterling	DMV	8am-5pm

In order to capture a wide sample of respondents, emphasis was placed on selecting sites that provided demographic and geographic diversity. In order to give individuals of various income levels, ages and ethnicities the opportunity to participate, the study was conducted at locations that attract different types of people, such as the Ballston Common Mall, the Herndon Community Center, Friday Night Live (a live music event in Herndon) and Departments of Motor Vehicles in both Tysons Corner and Sterling.

In addition to the 616 surveys collected onsite in Fairfax County, surveys were collected over the internet at SurveyCafe.com, Resource Systems Group's online web survey site, between May 24th and June 21st. Of these, 694 were collected via the internet as a result of an email sent to people who responded to an origin-destination study conducted by Wilbur Smith Associates shortly before this stated preference survey. These individuals provided their email addresses and indicated willingness to participate in an additional travel survey. Flyers handed out at the Reston Regional and Herndon Fortnightly branches of the Fairfax County library system encouraged 121 individuals to log on and completed the survey. An email introducing the survey and providing a clickable hyperlink to it was sent to appropriate employees of Marymount University, of whom 15 completed the survey. Table 3 shows the distribution of completed surveys by method of recruitment.

Table 3: Completed Surveys by Method of Recruitment

Method of Recruitment	Number of Completes
On-Site Recruiting	616
Email sent to OD respondents	694
Flyers: distributed to individuals at libraries	121
Email Sent to Marymount University employees	15
Total	1446



STATED PREFERENCE SURVEY DESIGN

Respondent Screening

The survey began by asking respondents if they had made a trip recently that used the Dulles Toll Road and had these characteristics:

- At least 15 minutes long
- Used at least part of the Dulles Toll Road between the Capital Beltway (I-495) and Dulles International Airport
- Included payment of a toll, i.e. it was not a trip to or from the Dulles International Airport using the free Airport Access Road

If these conditions were satisfied, the respondent qualified for the survey and was invited to continue.

Trip Information

The respondents were asked for details about their recent trip on the Dulles Toll Road, including its origin and destination, travel time and purpose. For a full list of Trip Information questions and a tabulation of respondents' answers, see *Appendix A: Stated Preference Survey Script*.

Requesting this trip information allowed the interactive survey to base parts of the subsequent stated preference questions, such as toll cost and current travel time, on the data provided by the respondent, making the survey more realistic to the user and more relevant for planning purposes. In addition to providing the information upon which subsequent parts of the survey are based, responses to Trip Information questions provide a general account of travel within the study region.

Stated Preference Survey Experiments: Smart Tag Acquisition

Respondents who indicated that they did not possess a Smart Tag transponder for electronic toll collection completed a series of stated preference experiments that the survey was programmed to construct. The survey used a fixed fractional factorial orthogonal design, which ensures that the most possible information is received from the fewest possible experiments. This technique is commonly used in constructing experimental plans.

The respondents were presented with scenarios varying four attributes with three levels describing the Smart Tag program (method of replenishment, replenishment amount, deposit amount for the Smart Tag and discount for Smart Tag tolls over cash tolls) and one attribute with two levels (presence of express lanes at toll plazas for Smart Tag users), and asked whether they would choose to obtain a Smart Tag under that scenario. The orthogonal design contained 16 experiments, which were split into two blocks, so each respondent was presented with eight of the 16 possible scenarios.

The list below summarizes the levels of the attributes presented in each scenario:



- Smart Tag replenishment method: “automatically from credit card”, “by calling service center” or “by visiting Smart Tag website”
- Minimum replenishment amount: \$20, \$35 or \$50
- Smart Tag deposit: “\$30 refundable deposit”, “\$15 refundable deposit” or “No deposit”
- Toll discount: 10%, 20% or 30%
- Toll collection method: "Express Lanes for Smart Tag customers (cash customers stop to pay toll at plaza)" or "Same as currently; limited number of Smart Tag lanes at plaza"

Stated Preference Survey Experiments: Travel Choice

All respondents completed a series of choice experiments where they were presented with alternative travel options for the trip they had described earlier in the survey. The survey was programmed to construct stated preference experiments in a similar way to the Smart Tag Acquisition stated preference section.

For this particular design, 11 of the attributes had four levels (general purpose lane travel time, general purpose lane toll cost, time shifted trip travel time, time shifted trip toll cost, amount of time trip shifted, travel time in HOV lane, toll cost in HOV lane, toll free route travel time, transit access mode/time combination, transit in vehicle travel time, and transit fare) and four of the attributes had two levels (time shift direction, transit wait time, and transit egress time). The levels of the attributes varied between experiments, and not all of the attributes were used in each experiment. The orthogonal design contained 64 experiments, which were split into eight blocks, so each respondent was presented with eight of the 64 possible scenarios.

Each experiment offered respondents up to five alternatives for making the trip they had just described and asked them to choose which alternative they preferred. The alternatives were presented in different arrangements from survey to survey (presentation was consistent throughout the eight scenarios seen by each respondent to minimize confusion) to remove any likelihood of ordering effects.

The alternatives were varied depending on the time of day and the origin and destination of travels, as well as on the answers to other questions including vehicle occupancy and proximity of start and end locations to Metrorail stations.

- *Alternative 1:* Dulles Toll Road, Same Time As Current Trip – always shown (although, if the respondent was traveling during HOV Lane hours of operation and in their direction of operation, in a vehicle with more than one occupant, the times and tolls from the HOV alternative were substituted and the HOV alternative was not presented)
- *Alternative 2:* Dulles Toll Road, Different Trip Time – shown only for trips taking place during peak hours (any part of the trip occurring between 6:30 AM and 8:59AM or 4:30 PM and 6:59 on a weekday)

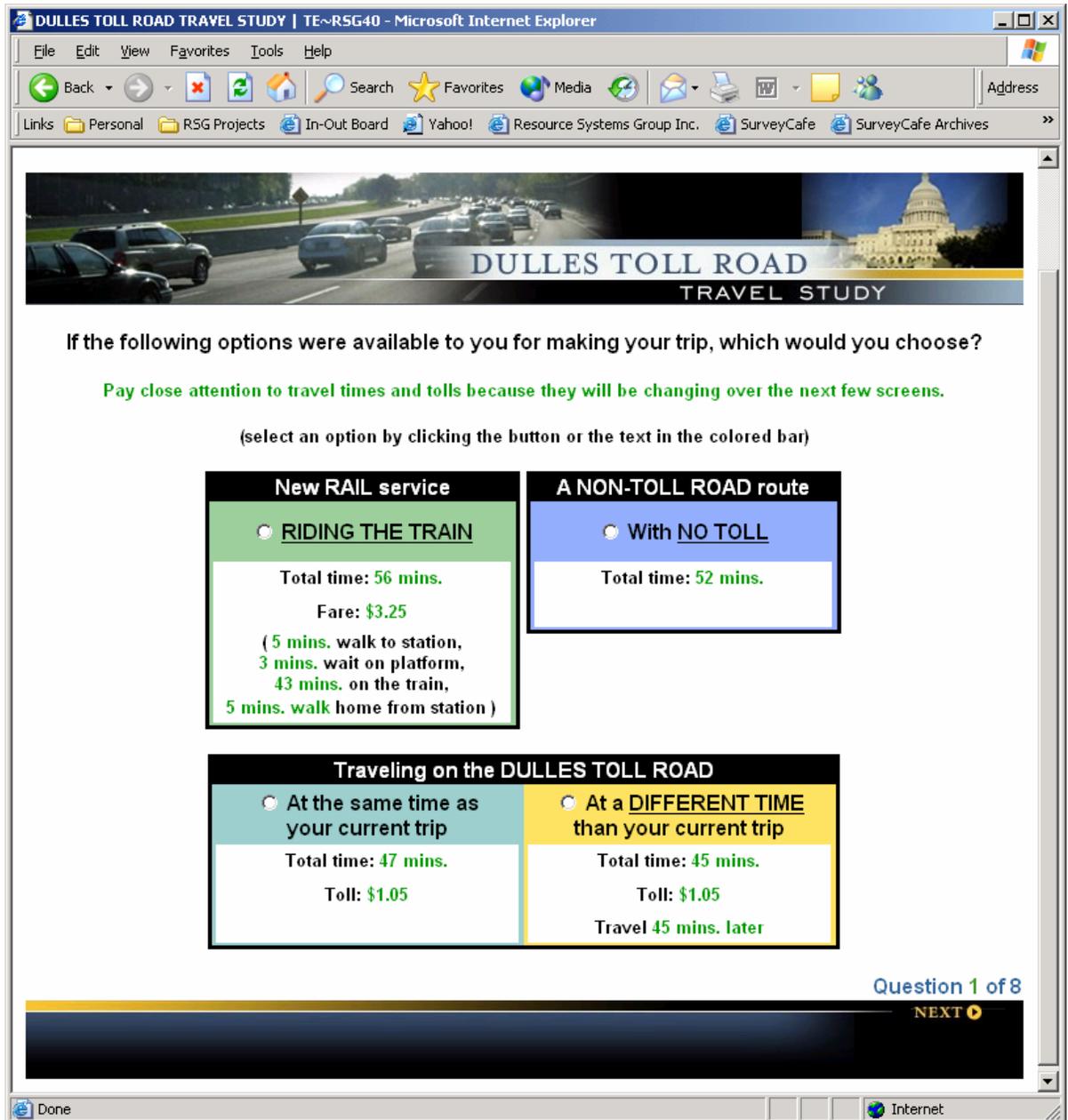


- *Alternative 3:* Dulles Toll Road, HOV Lane – shown only to travelers in single occupant vehicles who traveled during peak hours in the direction that HOV Lanes operate (Eastbound in the morning, Westbound in the afternoon)
- *Alternative 4:* Non-Tolled Route – always shown
- *Alternative 5:* New Rail Service – shown to respondents making trips that were transit accessible at origin and destination end and following a route where transit was deemed to be a reasonable option.

Figure 2 shows a sample stated preference experiment for a respondent who reported making a 30-minute trip with a carpool, during the peak hour and direction, paying \$0.75 in tolls. The start and end points of this trip are accessible by either exiting Metrorail service or the proposed extension of the Orange Line and therefore this respondent was given the option of making this trip on the new rail service.



Figure 2: Sample Stated Preference Experiment



The list below summarizes the levels of the attributes presented in each scenario.

Alternative 1: Dulles Toll Road, Same Time As Current Trip:

- Total Time (peak trips): Reported time to and from the Dulles Toll Road plus Dulles Toll Road distance divided by 25, 35, 45 or 55 mph.



- Total Time (off peak trips): Reported time to and from the Dulles Toll Road plus Dulles Toll Road distance divided by 40, 47, 53 or 60 mph.
- Toll Cost (peak trips): Toll cost on Dulles Toll Road calculated from reported entrance and exit ramps multiplied by 1.1, 1.4, 1.7 or 2, plus Dulles Greenway Tolls.
- Toll Cost (off peak trips): Toll cost on Dulles Toll Road calculated from reported entrance and exit ramps multiplied by 1.0, 1.3, 1.6 or 1.9, plus Dulles Greenway Tolls.

Alternative 2: Dulles Toll Road, Different Trip Time:

- Total Time: Total Time for Alternative 1 multiplied by 1, 0.9, 0.8 or 0.7.
- Toll Cost: Dulles Toll Road toll for Alternative 1 multiplied by 1, 0.9, 0.8, or 0.7, plus Dulles Greenway Tolls.
- Time Shift: Change trip departure time by 15, 30, 45 or 60 minutes.
- Time Shift Direction: Depart for trip either earlier or later, in the amount of the previous attribute.

Alternative 3: Dulles Toll Road, HOV Lane:

- Total Time: Reported time to and from the Dulles Toll Road plus Dulles Toll Road distance divided by 60, 65, 70, 75 mph plus 5 minutes (to arrange carpool).
- Toll Cost: Dulles Toll Road toll for Alternative 1 multiplied by 1, 0.9, 0.8, or 0.7, plus Dulles Greenway Tolls.

Alternative 4: Non-Tolled Route:

- Total Time:
 - If Altdiff < 10 min: Time shown for Alternative 1 plus altdiff -2, -1, +1 or +2.
 - If Altdiff is 10-30 min: Time shown for Alternative 1 plus altdiff -5, -2, +2 or +5.
 - If Altdiff > 30 min: Time shown for Alternative 1 plus altdiff -10, -5, +5 or +10.

Where 'Altdiff' = [travel time on alternate route] – [travel time using Dulles Toll Road]

Alternative 5: New Rail Service:

- Transit Access Time: 5 or 10 minutes.
- Access Mode: Walk to the station or Drive & Park at the station.
- Transit Wait Time (peak): 3 or 5 minutes.
- Transit Wait Time (off peak): 5 or 8 minutes
- Transit Time: In-Vehicle Transit Time multiplied by 0.8, 0.95, 1.05 or 1.2.



- Egress Time: 5 or 10 minutes' walk to your destination.
- Fare: Transit Fare multiplied by 0.8, 0.95, 1.05 or 1.2.

Debrief Questions

Following the eight stated preference experiment questions, the respondents who were offered *Alternative 5* (New Rail Service) but never selected it were asked why they never chose that option. Similar debrief questions were asked if respondents were offered but never chose *Alternative 2* (Different Trip Time), or were offered but never chose *Alternative 3* (HOV Lane). Respondents who never selected *Alternatives 1, 2 or 3* (Current Trip, Different Trip Time, or HOV Lane) were asked why they never chose a tolled option.

Demographic Information

Finally, several general demographic questions were asked to allow demographic variables to be included during model estimation and to assist the application of the model to different population segments. The demographic questions included household size, number of vehicles, age, gender, employment status, and annual household income.



STATED PREFERENCE SURVEY RESULTS

For a complete tabulation of responses to each survey question, please refer to *Appendix A: Stated Preference Survey Script*. The following analysis is based on the responses of 1428 respondents to the survey. The responses of 18 respondents were excluded from the model estimation work following an outlier analysis; the dataset used in this analysis is therefore consistent with that used during estimation.

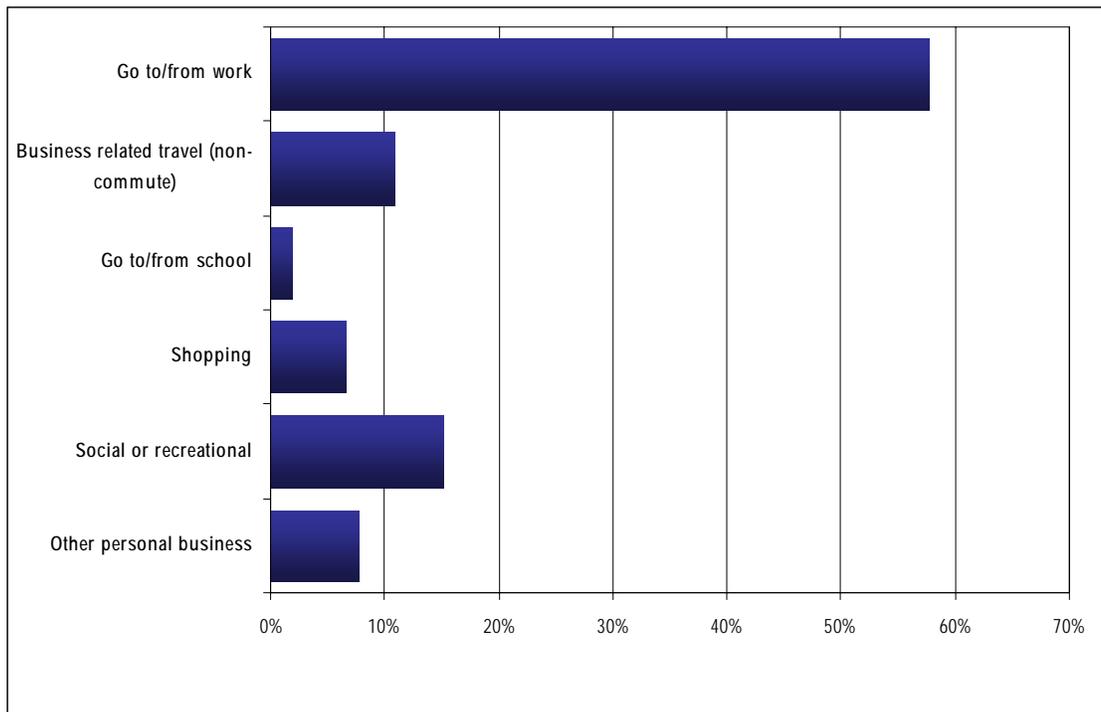
Trip Information

Respondents were asked to identify a recent trip they had made using the Dulles Toll Road that was at least 15 minutes long and included a toll payment. Several questions regarding the characteristics of this trip were then asked of the respondent.

Trip Purpose:

The majority of respondents (58%) reported the purpose of their trip was to go to or from work. Figure 3 below summarizes the sampled respondents regarding their stated trip purpose.

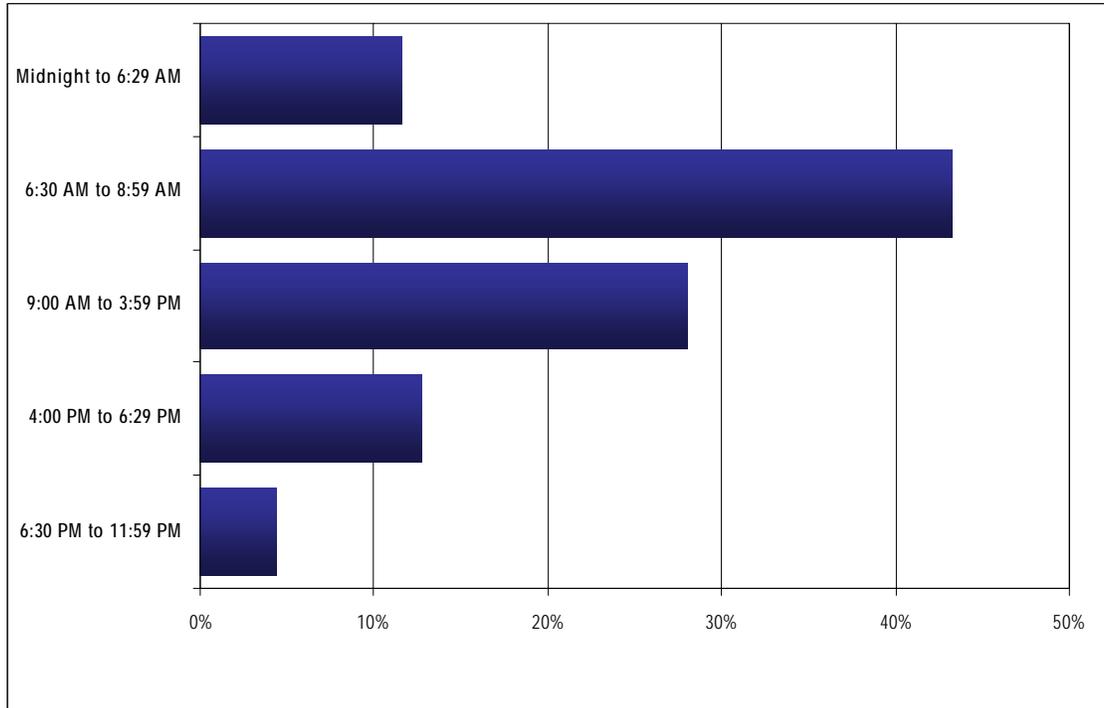
Figure 3: Trip Purpose



Day of Travel and Trip Start Time

Almost 85% of the respondents reported a trip that took place on a weekday. Figure 4 shows the distribution of start time through the day for weekday trips.

Figure 4: Trip Start Times

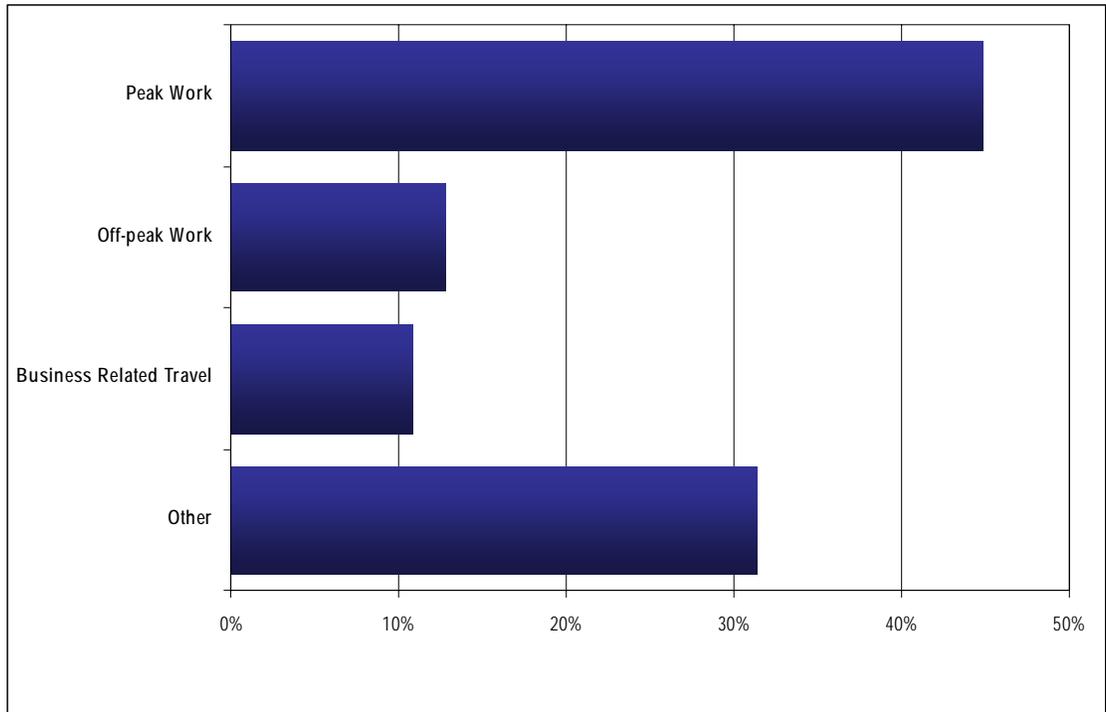


Type of Trip

Each trip was placed into one of four trip segments based on that trip’s purpose and time during the day when it took place. The four segments are peak trips to or from work, off-peak trips to or from work, business related trips, and all other trips. Peak work trips were reported by the greatest percentage of respondents (45%). Peak travel times were defined as 6:30 AM to 9:00 AM and 4:00 PM to 6:30 PM on weekdays, the same as the days and hours of operation of the HOV lanes on the Dulles Toll Road. All other times are considered off-peak. A trip was classified as being a peak trip if any part of it fell during a peak period.



Figure 5: Trip Type

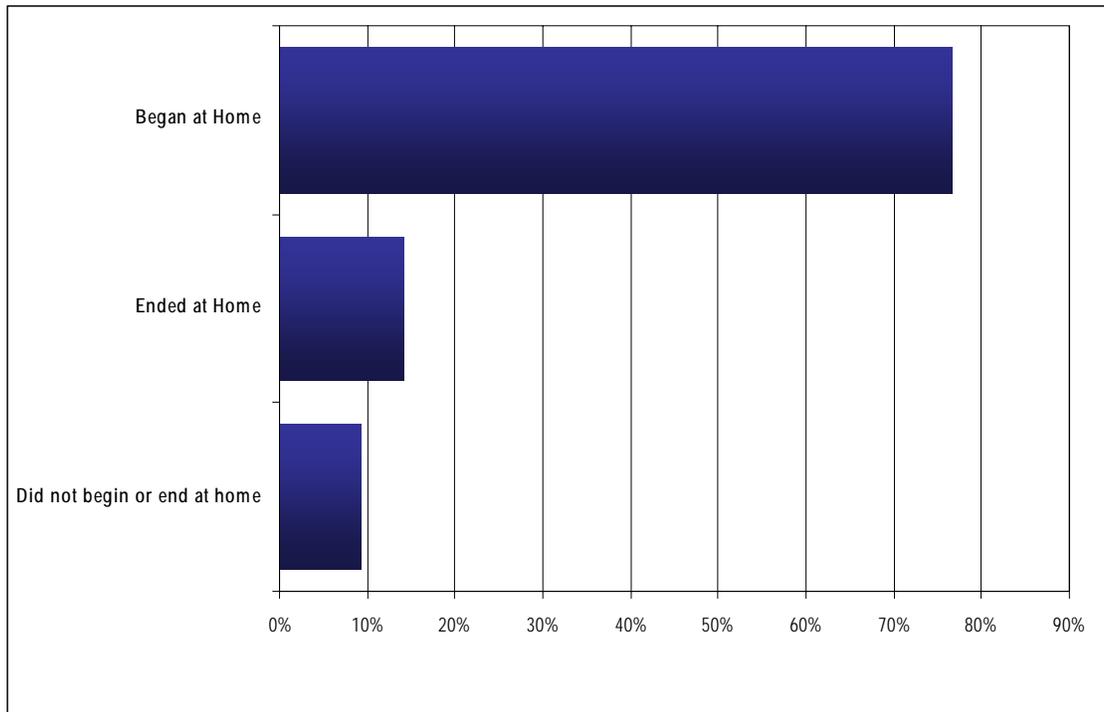


Trip Origin

The majority of respondents (77%) began their reported trip at home. Of the four Traveler Segments, those who were making business related trips had the lowest percentage (56%) of individuals starting out from home.



Figure 6: Trip Origin

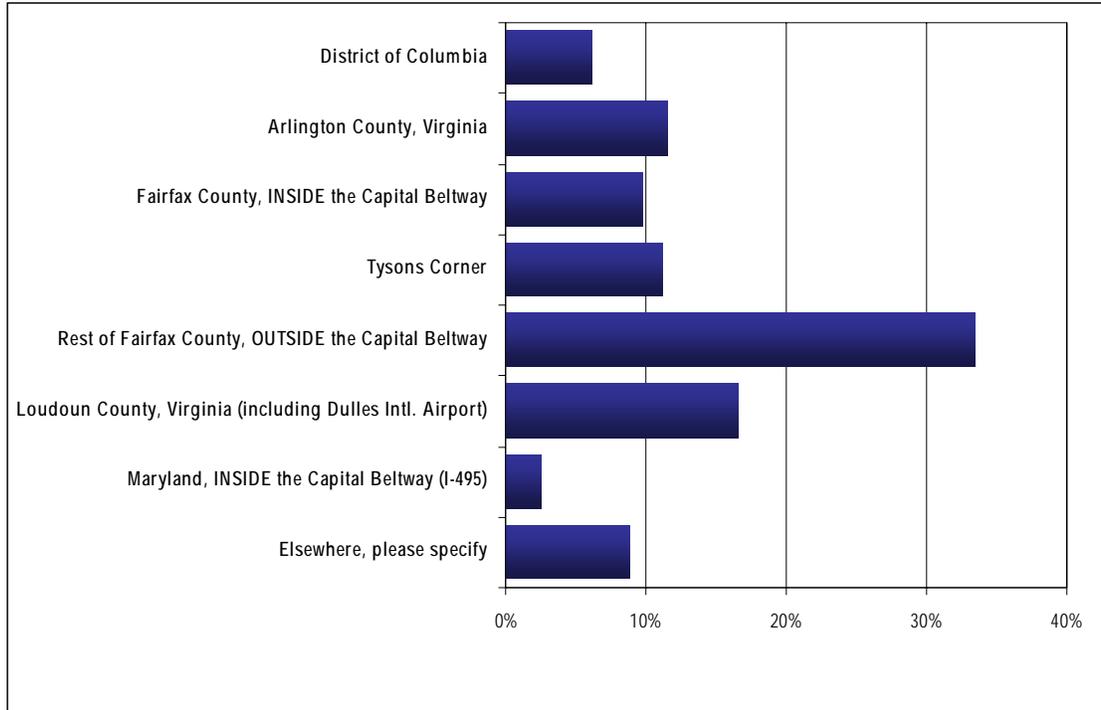


Trip Start Location

Overall, the greatest percentage of trips (34%) began in Fairfax County, Virginia, outside of the capital beltway. Seventeen percent began in Loudon County, while 6% began in the District of Columbia.



Figure 7: Trip Start Location

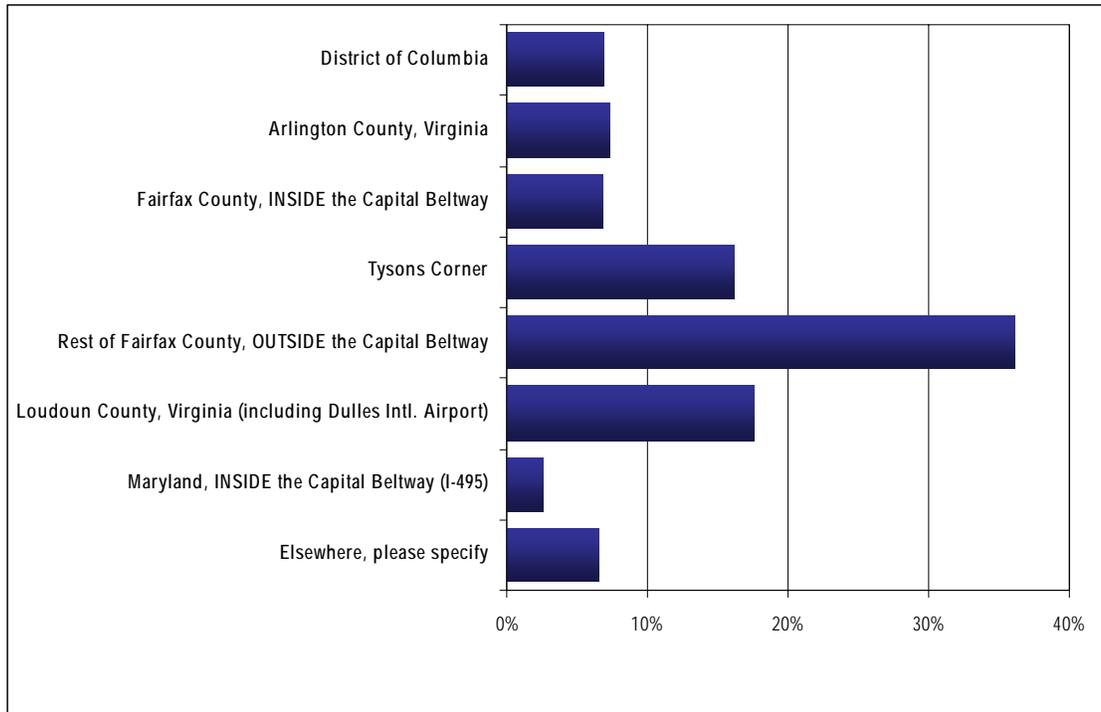


Trip End Location

The majority of trip end locations were also in Fairfax County, Virginia, outside of the I-495 Beltway.



Figure 8: Trip End Location



Trip Origin – Destination Matrix

Table 4 shows an origin – destination matrix (in units of percentage of total responses) of the trips that respondents reported. The matrix shows that trips were widely distributed across the allowed origin – destination pairs (the survey did not accept, for example, trips from the District of Columbia to Arlington County). The largest single o-d pair was from Fairfax County (outside I-495) to Tysons Corner.



Table 4: Trip Start Location by Trip End Location

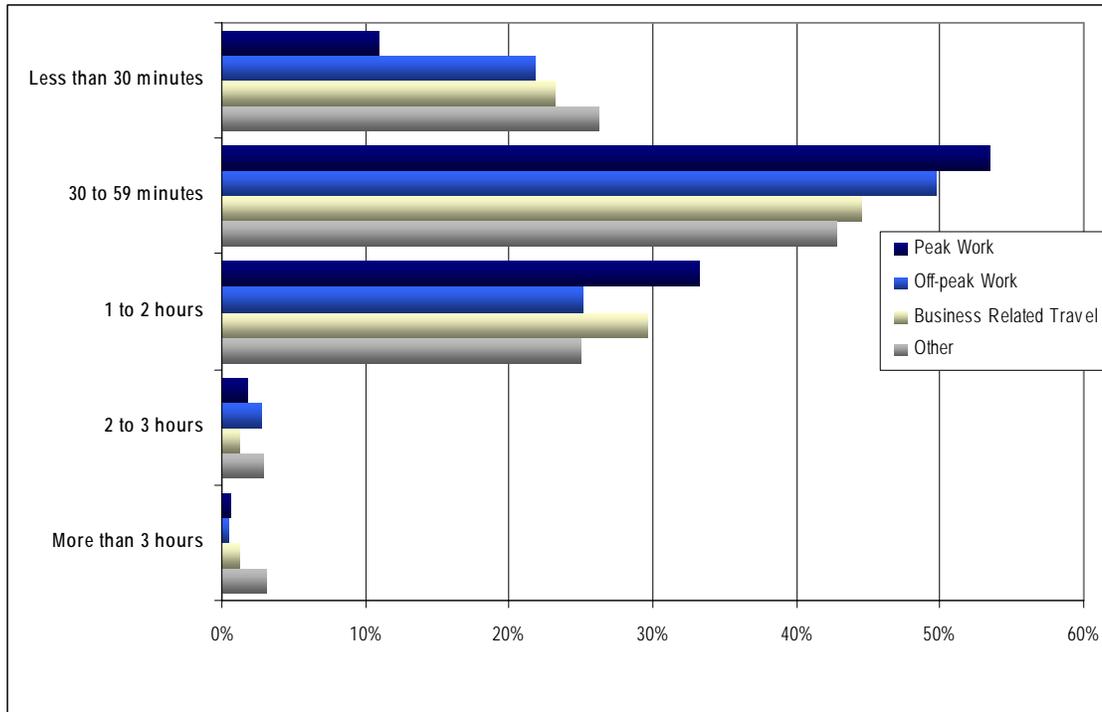
Start Location	End Location								Total
	DC	Arlington County	Fairfax Cty, INSIDE I-495	Tysons Corner	Fairfax Cty, OUTSIDE I-495	Loudoun County	Maryland, INSIDE I-495	Elsewhere	
DC	0.0	0.0	0.0	0.8	3.2	1.8	0.0	0.2	6.1
Arlington Cty	0.0	0.0	0.0	1.0	6.7	3.3	0.0	0.6	11.5
Fairfax Cty, INSIDE I-495	0.0	0.0	0.0	0.4	5.4	3.4	0.0	0.6	9.7
Tysons Corner	0.3	0.5	0.1	0.0	5.5	3.9	0.1	0.8	11.1
Fairfax Cty, OUTSIDE I-495	4.7	4.0	3.8	6.9	6.2	3.0	2.0	2.9	33.5
Loudoun Cty	1.8	2.5	2.5	6.0	3.0	0.0	0.4	0.5	16.6
Maryland, INSIDE I-495	0.0	0.0	0.0	0.1	1.6	0.9	0.0	0.0	2.6
Elsewhere	0.2	0.3	0.5	1.0	4.6	1.3	0.0	1.1	8.9
Total	6.9	7.3	6.8	16.1	36.2	17.5	2.6	6.6	100.0

Trip Length

Most trips (49%) using the Dulles Toll Road were between 30 minutes and 1 hour in length. Nineteen percent were less than 30 minutes, and 29% were between 1 and 2 hours. The remaining 5% of trips were longer than 2 hours. Figure 9 shows this distribution for the four different Traveler Segments.



Figure 9: Total Trip Time by Traveler Segment

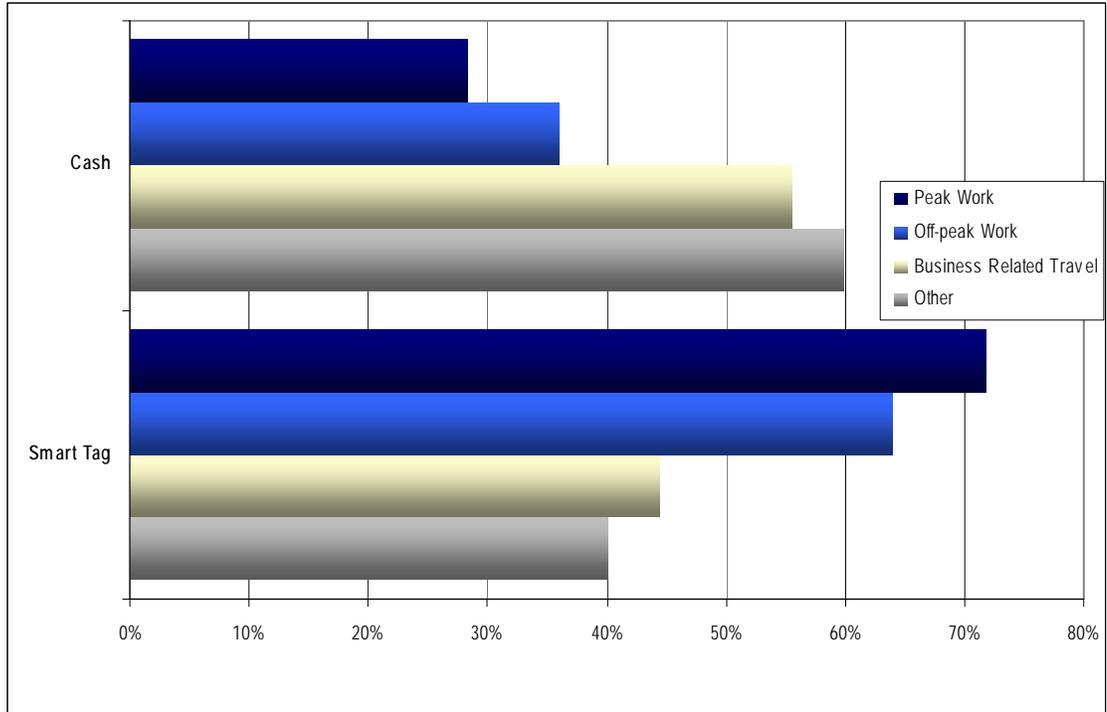


Toll Payment Method

More respondents paid the toll using Smart Tag than Cash (58% vs. 42%). Within the four Traveler Segments, the most frequent users of Smart Tag were the peak work travelers (72%). Off-peak work travelers also used Smart Tag more often than not, while fewer than half of business travelers (45%) and “other” travelers (40%) used Smart Tag.



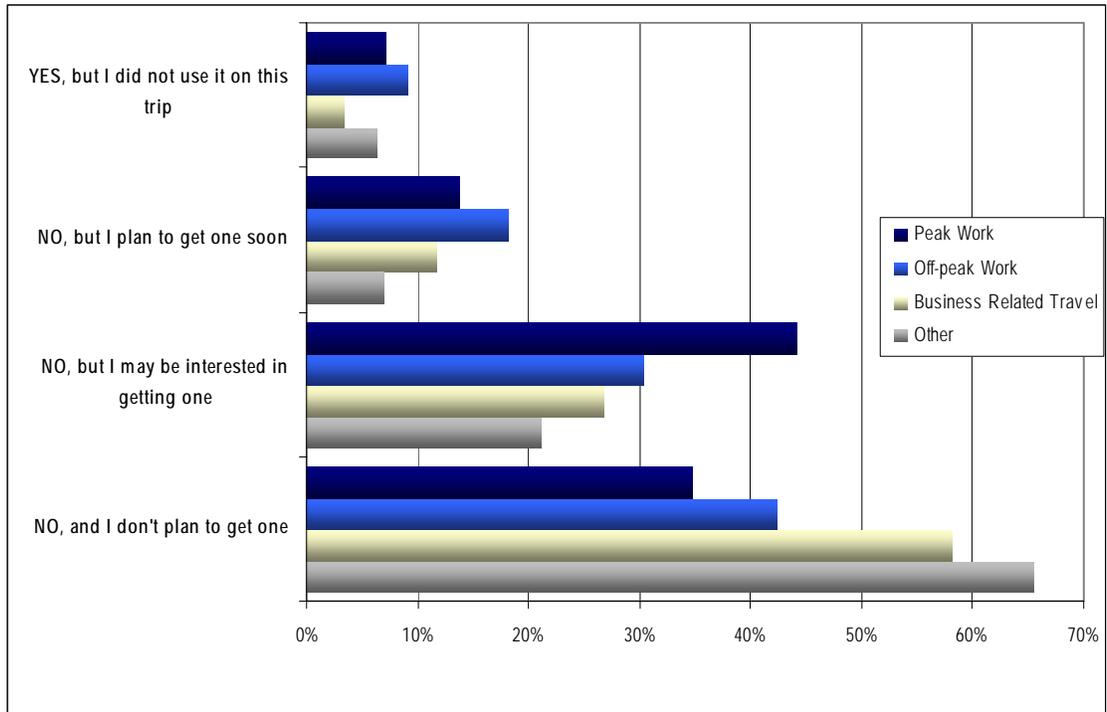
Figure 10: Payment Method by Traveler Segment



Respondents who did not pay for the toll using Smart Tag were asked if they currently owned, or planned to obtain, a transponder. The majority of business related and “other” travelers had no plans to get transponders, while peak work travelers showed the most interest in obtaining a transponder.



Figure 11: Do you currently own a Smart Tag Transponder by Traveler Segment



Those respondents who had no plans to get a Smart Tag transponder were asked why they didn't plan to obtain one. Among frequent travelers (peak and off peak work) most respondents (34%) did not like the idea of making automatic payments from a credit card. Among infrequent travelers (business and "other"), most respondents (71%) reported that they did not use toll roads often enough to make it worthwhile.



Table 5: Reasons for not planning to obtain a Smart Tag transponder

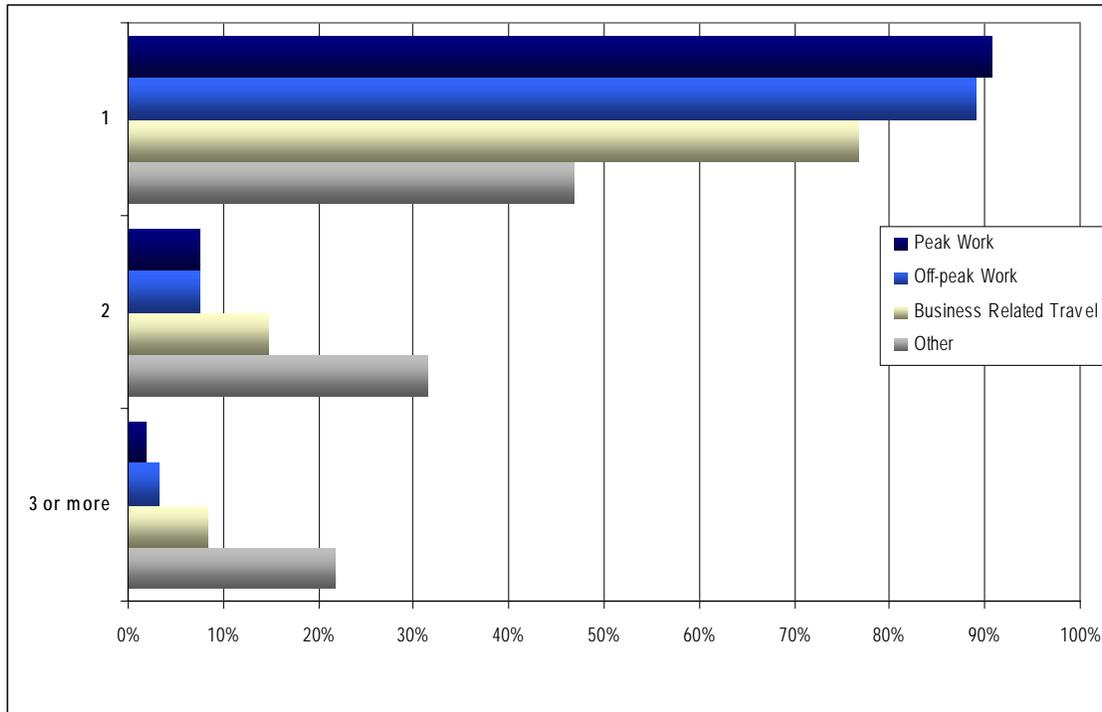
Reason	Infrequent		Frequent	
	Count	Percent	Count	Percent
Was not aware of Smart Tag	9	4	1	1
Do not use toll roads often enough	160	71	19	21
Do not like idea of electronic tolling	13	6	20	22
Do not want a transponder in my car	14	6	20	22
Do not want to set up an account	25	11	21	23
Do not want to make automatic payments from my credit card	29	13	31	34
Do not want to pay the security deposit	21	9	26	29
Do not want to prepay tolls	26	12	22	24
Too expensive	13	6	9	10
Concerned about privacy	18	8	19	21
Too difficult to maintain account	9	4	8	9
Other, Please specify:	26	12	27	30

Vehicle Occupancy

The majority (75%) of respondents drove alone to their destination. Sixteen percent drove with one other person, while the remaining 9% drove with two or more passengers. In the four trip categories, the vast majority of work trips, both peak (91%) and off peak (89%), were made by single drivers. Three quarters of all business travelers drove alone, while less than half (47%) of "other" trips were made alone.



Figure 12: Vehicle Occupancy by Traveler Segment



Debrief

Some respondents received follow-up questions based on their responses to the stated preference experiments. Respondents who never chose a toll option in the stated preference experiments were asked to describe their primary reason for not selecting a toll option. Table 6 below shows reasons for not selecting a toll option. Because multiple responses were allowed, the total exceeds 100%.

Table 6: Reasons for never selecting an option that included tolls

Reason	Count	Percent
Time savings not worth the toll cost	115	45%
Toll increases are too great	58	23%
Oppose any toll increases	70	28%
Tolls and fuel taxes together are unfair	49	19%
Prefer toll free route	54	21%
Prefer new rail service	97	38%
Other, please specify	24	9%

Peak work travelers who never selected an option that included a shift in their travel time were asked their reasons for not selecting any of those options.



Table 7: Reasons for never selecting an option that included a shift in travel time

Reason	Count	Percent
Flex-Time is not available at my place of employment	75	33%
Have to coordinate with family members	50	22%
Travel times are dictated by the hours of operation at my place of employment	104	46%
I have a variable work schedule	34	15%
Need car while at work	39	17%
Other, please specify:	37	16%

Respondents who saw car pool options but never selected one were asked their reasons for not selecting those options.

Table 8: Reasons for never selecting an option that included a car pool

Reason	Count	Percent
I prefer to drive alone	42	27%
The time savings using the HOV lanes are not great enough	35	23%
The toll is no cheaper than driving alone	20	13%
I am worried about personal safety	15	10%
Takes too long to form the car pool at the park and ride lot	27	17%
Being in a car pool means I have less flexibility about when I travel	113	73%
Other, please specify:	45	29%

Finally, respondents who saw a transit option but never chose one were asked their reasons for not selecting transit.

Table 9: Reasons for never selecting an option that included transit

Reason	Count	Percent
Travel time too long	142	40%
Train does not come often enough	44	12%
Route is not convenient	79	22%
Cost is too high	107	30%
Trains are too unreliable	16	5%
Too difficult to get from WHERE MY TRIP BEGINS to RAIL STATION	90	25%
Too difficult to get to from RAIL STATION to MY DESTINATION	108	30%
Do not like transit	26	7%
Need car for other reasons	130	36%
Other, please specify:	40	11%



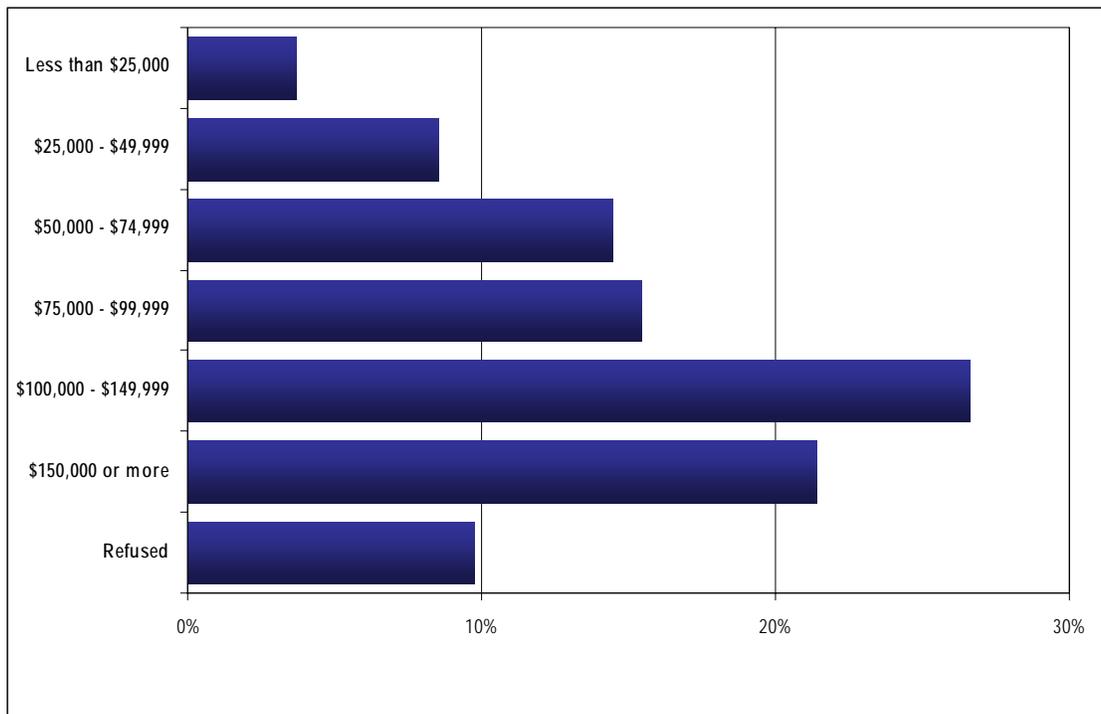
Demographics

The survey administration targeted a wide variety of residents and visitors of the Fairfax County, Virginia area in an effort to collect a sample that is representative of Dulles Toll Road users. The following are several metrics on the demographics of the survey sample.

Household Income

The median household income for all respondents falls in the \$75,000 to \$99,000 per year range. Twenty-seven percent of all respondents reported a household income between \$100,000 and \$150,000. Ten percent of respondents declined to answer this question but were allowed to complete the survey.

Figure 13: Household Income

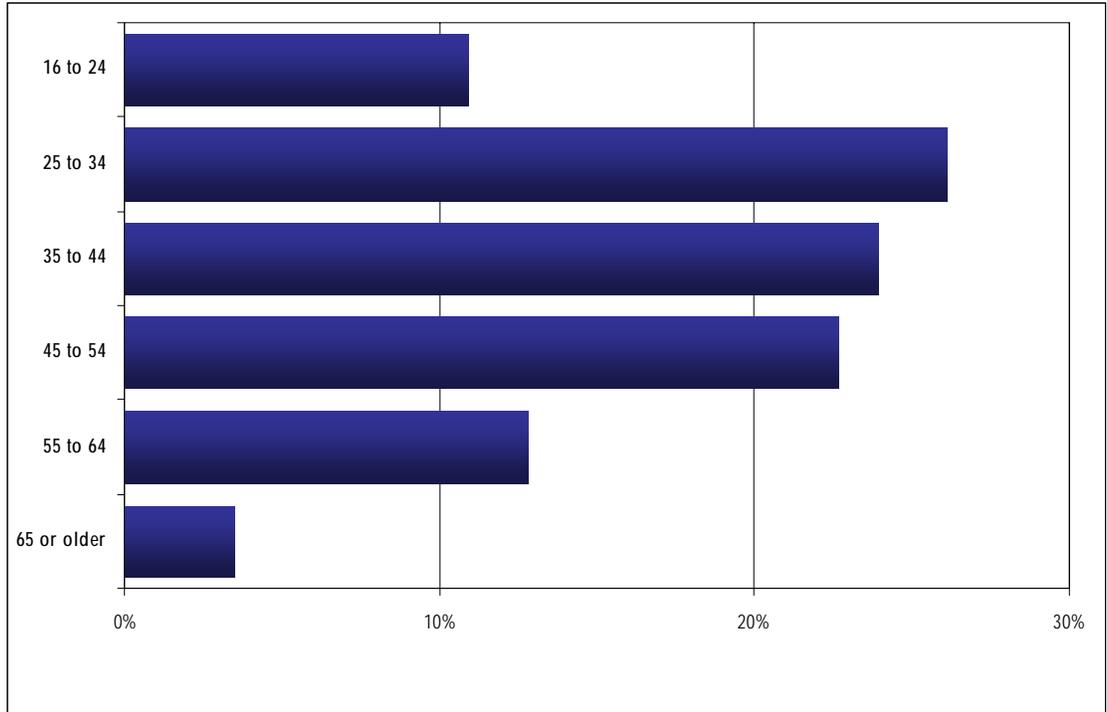


Age

The median age of the survey population is between 35 and 44 years, with around 26% of respondents falling into this category.



Figure 14: Age

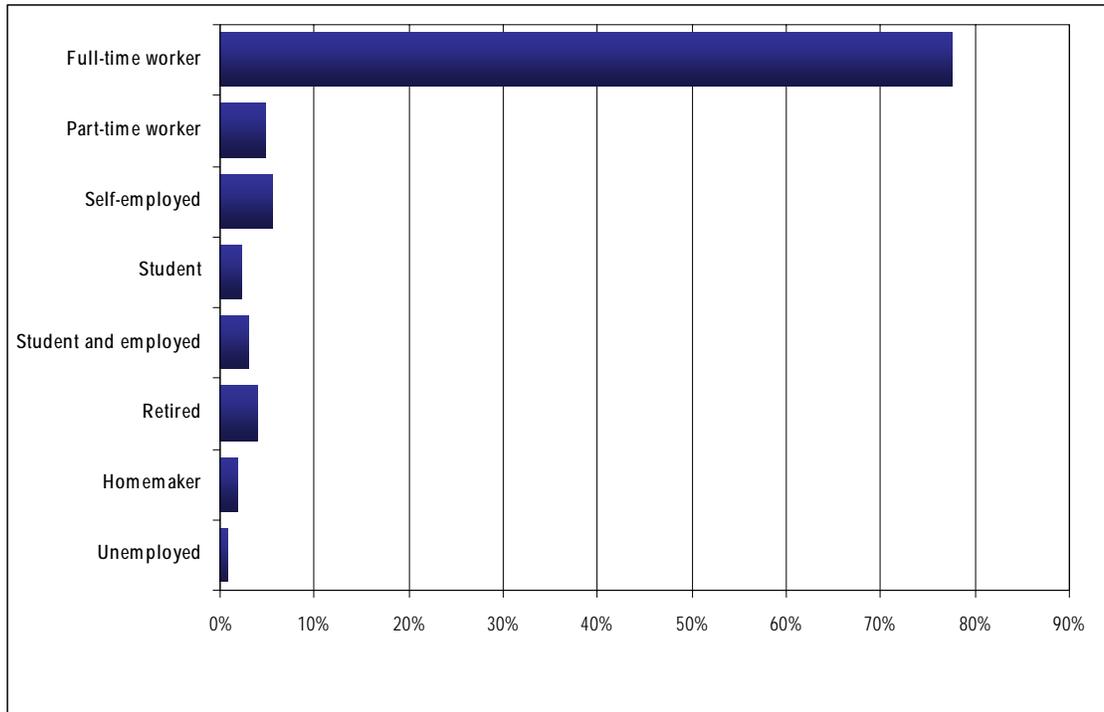


Employment Status

Most (78%) respondents were employed full time. Five percent were employed part time, and 1% were unemployed.



Figure 15: Employment

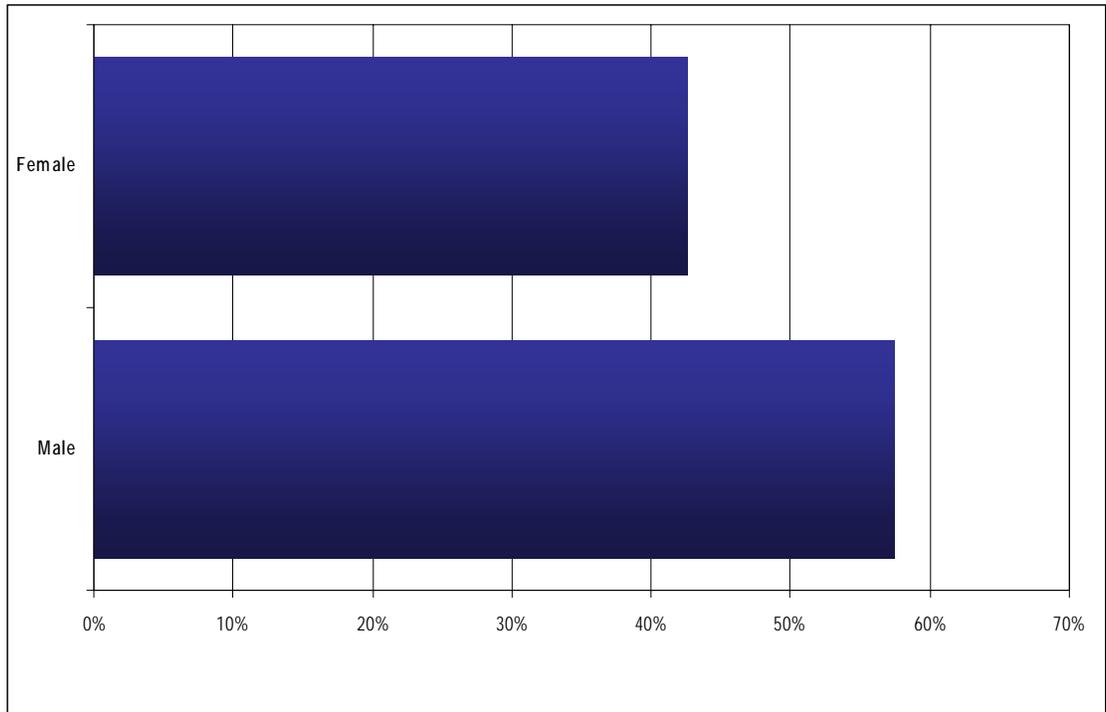


Gender

More men were surveyed than women. Overall, 57% of respondents were male and 43% were female.



Figure 16: Gender

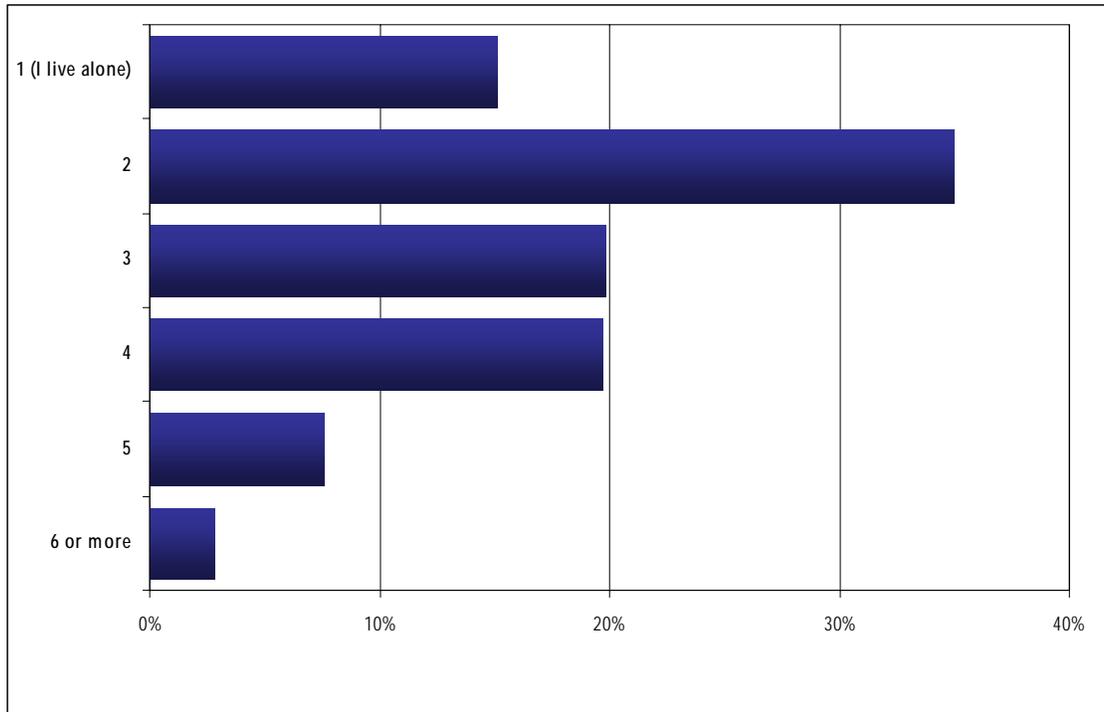


Household Size

The median household has three members. About one-third (35%) of all households have 2 members and 3% of households have 6 or more members.



Figure 17: Household Size

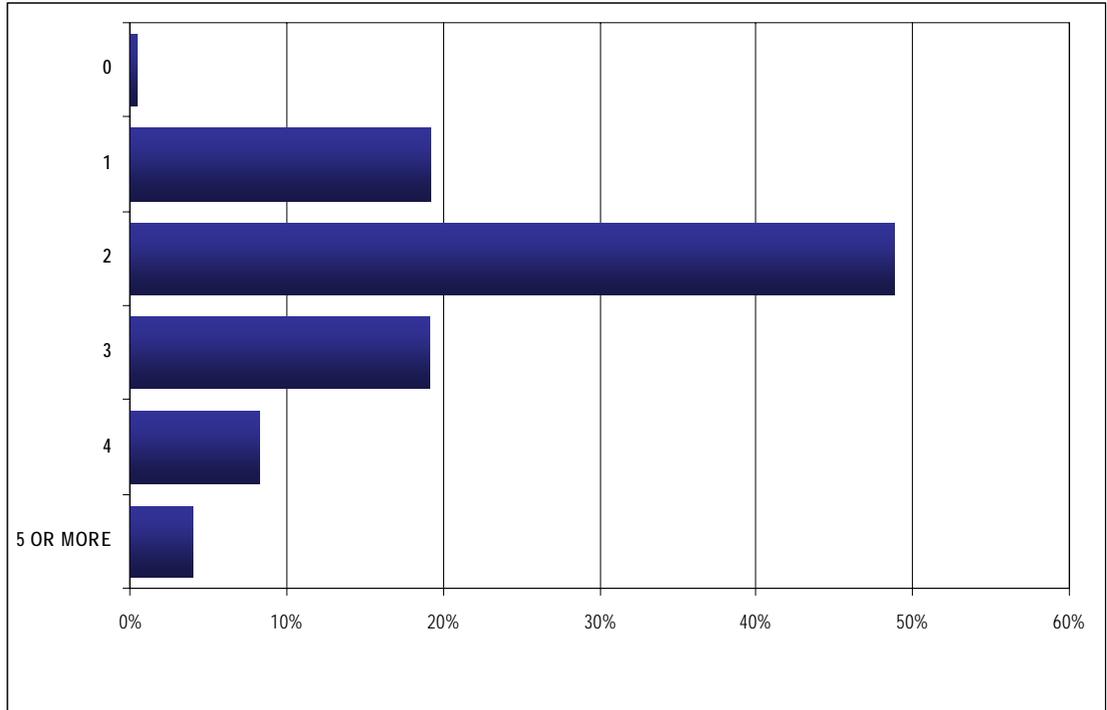


Number of Vehicles

Slightly fewer than half (49%) of all households have 2 vehicles. Less than 1% (0.4%) had no vehicles, while 4% had 5 or more vehicles.



Figure 18: Number of Vehicles



STATED PREFERENCE MODEL ESTIMATION

Data from the two stated preference sections in the survey were used to estimate the coefficients of logit models¹. The results are based on datasets of 4608 observations from the Smart Tag acquisition experiments and 11,424 observations from the travel choice experiments. The datasets are each made up of 8 independent observations for each of the respondents who completed the respective sections of the survey.

The model estimation work was carried out using ALOGIT software, a commercially available package specifically written for estimating and applying multinomial and nested logit models.

Smart Tag Acquisition Model

Data from the Smart Tag acquisition section of the survey were used to estimate a binary logit model that models whether current cash paying users of the Dulles Toll Road would acquire a Smart Tag under different variations of the Smart Tag program, including different replenishment methods and amounts, toll discount levels for Smart Tags users and the presence or not of segregated high speed lanes for Smart Tag users at plazas.

Utilities were estimated for each level of each of the attributes. A constant for the continue to pay tolls with cash alternative was also estimated, which represents the preference the respondents exhibit for continuing to pay cash that cannot be explained by any of the variables specified in the model.

Table 10 shows the coefficients of the Smart Tag acquisition model for the whole sample. The strongest attributes are toll discount at 30% and minimum replenishment amount of \$20.

¹ The multinomial logit model has the general form, $p(i) = \frac{e^{U_i}}{\sum_{AllModes} e^{U_j}}$, where $p(i)$ is the probability that mode i will be chosen

and U_i is the "utility" of mode i , a function of service and other variables. See, for example, M. E. Ben-Akiva and S. R. Lerman, *Discrete Choice Analysis*, MIT Press, 1985 for details on the model structure and statistical estimations procedures.



Table 10: Smart Tag Acquisition Model Coefficients, for all sample

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Automatic replenishment from credit card	autoCC	0.116	1.50
Replenishment by calling service center	callSC	0.000	0.00
Replenishment by visiting Smart Tag website	website	0.141	1.90
Minimum replenishment amount: \$50	replen50	0.000	0.00
Minimum replenishment amount: \$35	replen35	0.551	6.80
Minimum replenishment amount: \$20	replen20	0.746	8.20
\$30 refundable deposit	depos30	0.000	0.00
\$15 refundable deposit	depos15	0.048	0.60
No deposit	depos0	0.310	3.50
Toll discount: 10%	disc10	0.000	0.00
Toll discount: 20%	disc20	0.395	5.00
Toll discount: 30%,	disc30	0.759	8.50
Express Lanes for Smart Tag customers	ExpLanes	0.180	2.90
Same as currently; ltd no. of Smart Tag lanes at plaza	SMTglane	0.000	0.00
Cash constant	Cashcon	1.645	15.80
Smart Tag constant	SmartTag	0.000	0.00

Observations = 4608

Log Likelihood = -2930.12

Separate models were estimated for respondents in three journey purpose segments, journey to work (Table 11), business related travel (Table 12)



Table 12), and other travel (Table 14



Table 13). In the journey to work and business related travel segments, a toll discount of 30% was the attribute level with the largest magnitude, i.e. implementing that policy would have the biggest single impact of the measures tested on increasing Smart Tag acquisition. A \$20 minimum replenishment amount was the second most important attribute for those traveling to work. In the business related travel segment, reducing the Smart Tag deposit to zero was only marginally smaller in magnitude than the toll discount. In the other travel segment, the minimum replenishment amount of \$20 was the most attribute with the largest value, followed by the toll discount of 30%.



Table 11: Smart Tag Acquisition Model Coefficients, for journey to work segment

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Automatic replenishment from credit card	autoCC	0.022	0.20
Replenishment by calling service center	callSC	0.000	0.00
Replenishment by visiting Smart Tag website	Website	0.190	1.60
Minimum replenishment amount: \$50	replen50	0.000	0.00
Minimum replenishment amount: \$35	replen35	0.656	5.30
Minimum replenishment amount: \$20	replen20	0.744	5.30
\$30 refundable deposit	depos30	0.000	0.00
\$15 refundable deposit	depos15	0.023	0.20
No deposit	depos0	0.392	2.90
Toll discount: 10%	disc10	0.000	0.00
Toll discount: 20%	disc20	0.531	4.40
Toll discount: 30%,	disc30	0.857	6.30
Express Lanes for Smart Tag customers	ExpLanes	0.371	3.80
Same as currently; ltd no. of Smart Tag lanes at plaza	SMTglane	0.000	0.00
Cash constant	Cashcon	1.642	9.30
Smart Tag constant	SmartTag	0.000	0.00

Observations = 1864

Log Likelihood = -1220.04



Table 12: Smart Tag Acquisition Model Coefficients, for business related travel segment

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Automatic replenishment from credit card	autoCC	0.173	0.80
Replenishment by calling service center	callSC	0.000	0.00
Replenishment by visiting Smart Tag website	Website	0.341	1.70
Minimum replenishment amount: \$50	replen50	0.000	0.00
Minimum replenishment amount: \$35	replen35	0.260	1.20
Minimum replenishment amount: \$20	replen20	0.449	1.90
\$30 refundable deposit	depos30	0.000	0.00
\$15 refundable deposit	depos15	0.425	2.00
No deposit	depos0	0.592	2.40
Toll discount: 10%	disc10	0.000	0.00
Toll discount: 20%	disc20	0.183	0.80
Toll discount: 30%,	disc30	0.645	2.60
Express Lanes for Smart Tag customers	ExpLanes	0.000	0.00
Same as currently; ltd no. of Smart Tag lanes at plaza	SMTglane	0.116	0.70
Cash constant	Cashcon	1.831	5.40
Smart Tag constant	SmartTag	0.000	0.00

Observations = 680

Log Likelihood = -414.74



Table 13: Smart Tag Acquisition Model Coefficients, for other travel segment

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Automatic replenishment from credit card	autoCC	0.194	1.70
Replenishment by calling service center	callSC	0.000	0.00
Replenishment by visiting Smart Tag website	Website	0.028	0.20
Minimum replenishment amount: \$50	replen50	0.000	0.00
Minimum replenishment amount: \$35	replen35	0.544	4.30
Minimum replenishment amount: \$20	replen20	0.865	6.20
\$30 refundable deposit	depos30	0.054	0.50
\$15 refundable deposit	depos15	0.000	0.00
No deposit	depos0	0.190	1.60
Toll discount: 10%	disc10	0.000	0.00
Toll discount: 20%	disc20	0.367	3.00
Toll discount: 30%,	disc30	0.733	5.30
Express Lanes for Smart Tag customers	ExpLanes	0.107	1.10
Same as currently; ltd no. of Smart Tag lanes at plaza	SMTglane	0.000	0.00
Cash constant	Cashcon	1.825	11.20
Smart Tag constant	SmartTag	0.000	0.00

Observations = 2064

Log Likelihood = -1251.02

A Chi Squared statistical test was used to demonstrate that the segmentation of the Smart Tag acquisition model into three segments resulted in a significant improvement to the model, at a 95% confidence level. The inputs to the Chi Squared test and the resulting level of significance and difference in the Chi Squared statistics between the segmented model and the aggregate model are shown in Table 14. A positive difference means segmentation is significant at a 95% confidence level.

Table 14: Chi Squared Test results for significance of segmentation of Smart Tag acquisition model

Segment	Log Likelihood	Degrees of Freedom	Observations
Aggregate model	-2930.12	10	4608
Journey to work	-1220.04	10	1864
Business related travel	-414.74	10	680
Other travel	-1251.02	10	2064
Segment total	-2885.80	30	5064
Segmentation significant at a >99% confidence level			
Chi Squared (Segmented) – Chi Squared (Aggregate) = 57.2			



Travel Choice Model

Data from the travel choice stated preference experiments were used to estimate the coefficients of both multinomial and nested logit models. A number of steps were followed to arrive at the final models, including data checking, outlier analysis, testing of income, vehicle occupancy, and other demographic of trip specific variables in addition to time and cost, and testing of alternative journey purpose and time of travel segmentation schemes. The results of this work and the coefficients of the final multinomial and nested models are presented in the section.

Data Checking

The majority of inputs by respondents were screened during the survey, with error messages or confirmation pages shown to respondents to ask them to revise or confirm answers. This results in very “clean” data. Parking costs, used in the stated preference experiments when transit was presented to allow the comparison of parking costs between those at train stations and those paid by the respondent, were not screened. A cap of \$50 per trip for parking was selected for the data used in model estimation.

Outlier Analysis

The estimation of logit models is sensitive to the presence of observations with a very low probability of occurring. Therefore, an outlier analysis was conducted, and respondents with observations with a probability of lower than 0.025 of occurrence were excluded. Eighteen respondents were excluded from the dataset, leaving observations from 1428 respondents, or 11424 observations, for use in estimating the models.

Alternatives Specification

A multinomial logit model with five alternatives was estimated. The five alternatives specified were as follows:

- Toll trip, general purpose lanes, same trip as current trip
- Toll trip, general purpose lanes, different time from current trip
- Toll trip, HOV lanes, same time as current trip
- Toll free route
- Transit

A multinomial logit model specified with generic time and cost variables, and alternative specific constants was developed. The coefficients of this model are shown in Table 15.



Table 15: Initial travel choice model

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.059	-38.90
Cost (Tolls, Parking, Fares; \$)	cost	-0.264	-14.60
Time Shift (minutes)	timeshft	-0.031	-15.20
Change to Different Time (constant)	CDIFCcon	0.035	0.50
HOV Lane (constant)	HOVcon	-1.250	-22.60
Non Tolled Route (constant)	NTcon	0.054	1.50
Transit (constant)	TRcon	0.513	13.10

Observations = 11424

Log Likelihood = -11392.33

Model Segmentation

Segmentation by time period (peak, off peak) and by journey purpose (journey to work, business related travel, other) was tested. Four combined journey purpose and time period groups were identified as producing the most robust results, as follows:

- Peak Journey to Work
- Off Peak Journey to Work
- Business Related Travel
- Other Travel

The results of several Chi Squared test demonstrate how this segmentation scheme was developed. Comparing Table 16 and Table 17



Table 17 shows that segmenting by journey purpose leads to a larger improvement in the model than segmenting by time of travel and direction of travel.

Table 18 shows that a further improvement is obtained by segmenting journey to work trips into peak and off peak trips.

Table 16: Chi Squared Test results for significance of segmentation by journey purpose

Segment	Log Likelihood	Degrees of Freedom	Observations
Aggregate model	-11392.33	7	11424
Journey to work	-7320.19	7	6592
Business related travel	-939.46	7	1240
Other travel	-3045.59	7	3592
Segment total	-11305.24	21	11424
Segmentation significant at a >99% confidence level			
Chi Squared (Segmented) – Chi Squared (Aggregate) = 150.5			



Table 17: Chi Squared Test results for significance of segmentation by travel time and direction

Segment	Log Likelihood	Degrees of Freedom	Observations
Aggregate model	-11392.3	7	11424
Peak time, direction	-4641.34	7	3584
Peak time, off peak dir	-2820.87	6	2664
Off peak time	-3893.4	4	5176
Segment total	-11355.6	17	11424
Segmentation significant at a >99% confidence level			
Chi Squared (Segmented) – Chi Squared (Aggregate) = 55.1			

Table 18: Chi Squared Test results for significance of segmentation by travel time and direction

Segment	Log Likelihood	Degrees of Freedom	Observations
Aggregate model	-7320.19	7	6592
Peak journey to work	-6178.56	7	5128
Off peak journey to work	-1134.83	4	1464
Segment total	-7313.39	11	6592
Segmentation significant at a >99% confidence level			
Chi Squared (Segmented) – Chi Squared (Aggregate) = 4.1			

Income and vehicle occupancy effects

Both income and vehicle occupancy transformations of travel cost were found to improve the models. The transformations that provided the largest improvements across the four journey purpose segments were as follows:

- Income transformation: Shared Costs (i.e. toll and parking costs, but not transit fares) divided by the natural log of household income in thousands of dollars
- Vehicle occupancy: Shared Costs (i.e. toll and parking costs, but not transit fares) divided by the natural log of (vehicle occupancy + 1)

Table 19 compares the log likelihoods of the models without income and vehicle occupancy transformations with those from the models with transformations. Table 20 to Table 23



Table 23 show the coefficients of the four multinomial models developed with the income and vehicle occupancy transformations.

Table 19: Improvements in Model Log Likelihoods when Income and Occupancy Transformations Included

Segment	No Income/ occupancy transformations	With Income/ occupancy transformations
Peak journey to work	-6178.56	-6157.35
Off peak journey to work	-1134.83	-1127.49
Business related travel	-939.46	-932.40
Other travel	-3045.59	-3043.40

Table 20: Multinomial Logit Model coefficients, peak journey to work

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.060	-25.90
Cost (Tolls, Parking, Fares; \$)	cost	-1.001	-10.30
Time Shift (minutes)	timeshft	-0.033	-14.90
Change to Different Time (constant)	CDIFCcon	0.168	2.00
HOV Lane (constant)	HOVcon	-1.412	-21.00
Non Tolled Route (constant)	NTcon	-0.026	-0.40
Transit (constant)	TRcon	0.414	8.20

Observations = 5128

Log Likelihood = -6157.35

Table 21: Multinomial Logit Model coefficients, off peak journey to work

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.063	-13.50
Cost (Tolls, Parking, Fares; \$)	cost	-1.349	-8.90
Non Tolled Route (constant)	NTcon	-0.095	-1.00
Transit (constant)	TRcon	0.234	2.00

Observations = 1464

Log Likelihood = -1127.49

Table 22: Multinomial Logit Model coefficients, business related travel

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.095	-15.50
Cost (Tolls, Parking, Fares; \$)	cost	-1.661	-7.40
Time Shift (minutes)	timeshft	-0.022	-2.50
Change to Different Time (constant)	CDIFCcon	-1.150	-3.50
HOV Lane (constant)	HOVcon	-1.261	-5.60



Non Tolled Route (constant)	NTcon	0.169	1.40
Transit (constant)	TRcon	1.314	8.70

Observations = 1240

Log Likelihood = -932.40



Table 23: Multinomial Logit Model coefficients, other travel

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.049	-20.00
Cost (Tolls, Parking, Fares; \$)	cost	-1.006	-7.80
Time Shift (minutes)	timeshft	-0.017	-2.70
Change to Different Time (constant)	CDIFCcon	-0.621	-2.60
HOV Lane (constant)	HOVcon	-0.660	-5.30
Non Tolled Route (constant)	NTcon	0.006	0.10
Transit (constant)	TRcon	0.110	1.50

Observations = 3592

Log Likelihood = -3043.40

Nested Logit Model Estimation

Nested logit models allow the specification of different choice structures that may more accurately represent respondents' decision making processes. For example, respondents may be thought likely to choose between transit and auto modes before deciding whether they will travel on the Dulles Toll Road or a parallel non-tolled route.

Nested logit models with the nesting structure shown in Figure 19 were estimated.



Table 24 shows the improvements in the models' log likelihoods. The addition of the extra variable, the auto nest theta, was a significant improvement to all of the models at a 95% confidence level.

Table 25 to Table 28 show the coefficients of the four nested models.

Figure 19: Nesting structure of the travel choice nested logit model

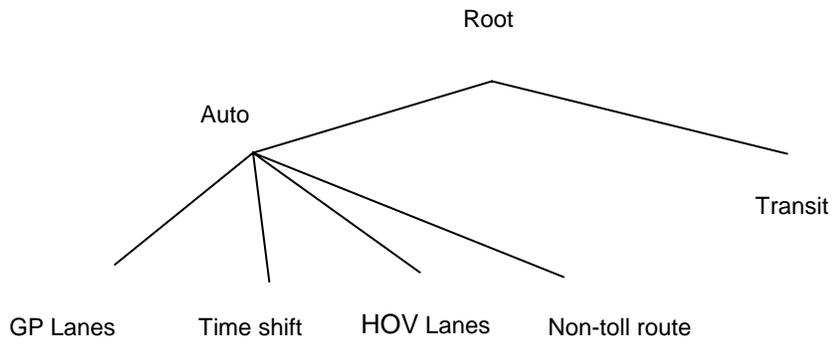


Table 24 : Improvements in Model Log Likelihoods when nested models are estimated

Segment	Multinomial Logit Model	Nested Logit Model
Peak journey to work	-6157.35	-6102.56
Off peak journey to work	-1127.49	-1087.75
Business related travel	-932.40	-889.773
Other travel	-3043.40	-2974.57

Table 25 : Nested Logit Model coefficients, peak journey to work

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.082	-25.10
Cost (Tolls, Parking, Fares; \$)	cost	-1.841	-12.00
Time Shift (minutes)	timeshft	-0.036	-15.30
Change to Different Time (constant)	CDIFCcon	0.028	0.30
HOV Lane (constant)	HOVcon	-1.573	-22.30
Non Tolled Route (constant)	NTcon	-0.089	-1.20
Transit (constant)	TRcon	-0.319	-2.00
Auto Nest Theta (constant)	CarNest	0.439	11.70

Observations = 5128

Log Likelihood = -6102.56

Table 26 : Nested Logit Model coefficients, off peak journey to work

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.107	-13.80
Cost (Tolls, Parking, Fares; \$)	cost	-2.469	-8.90
Non Tolled Route (constant)	NTcon	0.049	0.40
Transit (constant)	TRcon	-1.378	-2.60
Auto Nest Theta (constant)	CarNest	0.312	6.60

Observations = 1464

Log Likelihood = -1087.75



Table 27: Nested Logit Model coefficients, business related travel

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	time	-0.145	-15.90
Cost (Tolls, Parking, Fares; \$)	cost	-2.485	-7.90
Time Shift (minutes)	timeshft	-0.027	-2.90
Change to Different Time (constant)	CDIFCcon	-1.527	-4.10
HOV Lane (constant)	HOVcon	-1.555	-6.20
Non Tolled Route (constant)	NTcon	0.468	3.30
Transit (constant)	TRcon	0.911	1.50
Auto Nest Theta (constant)	CarNest	0.231	4.40

Observations = 1240

Log Likelihood = -889.773

Table 28 : Nested Logit Model coefficients, other travel

Coefficient Description	Coefficient Label	Estimate	T-Ratio
Travel Time (minutes)	Time	-0.081	-20.40
Cost (Tolls, Parking, Fares; \$)	Cost	-1.594	-9.10
Time Shift (minutes)	Timeshft	-0.020	-3.10
Change to Different Time (constant)	CDIFCcon	-0.786	-3.10
HOV Lane (constant)	HOVcon	-0.672	-5.00
Non Tolled Route (constant)	NTcon	0.284	3.60
Transit (constant)	TRcon	-1.571	-4.10
Auto Nest Theta (constant)	CarNest	0.328	9.00

Observations = 3592

Log Likelihood = -2974.57

Values of Time

The average value of time for each of the model segments can be derived for a given household income and vehicle occupancy. Table 29 shows the values of time at \$100,000 per year household income and a vehicle occupancy of 1.38 people (the mean for the sample). At this income and vehicle occupancy, respondents making business related trips exhibited the highest value of time. Other travel fell between journey to work and business travel.



Table 29 : Estimated values of time for model segments

Segment	Value of time, \$/hr*
Peak journey to work	\$10.61
Off peak journey to work	\$10.35
Business related travel	\$13.94
Other travel	\$12.22

* At \$100K household income, vehicle occupancy of 1.38



APPENDIX A: STATED PREFERENCE SURVEY SCRIPT AND TABULATIONS



APPENDIX A

DULLES TOLL ROAD STATED PREFERENCE SURVEY SCRIPT AND TABULATIONS

SURVEY QUESTIONS

ASP name	Question Text
password	<p><i>Internet only:</i> Welcome to the Dulles Toll Road Travel Survey!</p> <p>Please enter your password.</p> <p>If you would like additional information, you may call 888-774-5983 or email Dulles@rsginc.com.</p> <p>Click “next” to continue.</p>
passwordc	<p><i>Intercept in Field only:</i> Thank you for agreeing to participate in the Dulles Toll Road Travel Survey!</p> <p>Click “next” to begin.</p>
instruction	<p>THANK YOU FOR PARTICIPATING IN THIS SURVEY</p> <p>The Commonwealth of Virginia is evaluating plans for improving travel times, minimizing delays, and providing rail transit in the Dulles Toll Road corridor. As part of this effort, the Virginia Department of Transportation (VDOT) is conducting a survey of Dulles Toll Road users to learn more about your usage of the roadway and obtain input about potential changes to travel options that might affect you. We appreciate your time and participation in this survey. Questions are customized based on your responses. Your answers will be kept confidential and will be used only for this study.</p> <p>INSTRUCTIONS</p> <p>Please use the next button in the lower right corner of the screen to go forward. To back up, use the browser's Back button, which is the left-pointing arrow in the upper left corner of the screen. If you do back up and change an answer, please be sure to use the Next button and not your browser's Forward button or your new answers will not be recorded. Answering all of the questions will take about 10 - 20 minutes.</p> <p>Click next to continue.</p>

intro

For this survey, please think about the most recent one-way trip you made where you used at least part of the Dulles Toll Road (Route 267) between the Capital Beltway (I-495) and Dulles International Airport.

A one-way trip is defined as a trip from an origin to a destination, including any stops in between. For example, a trip from home to work is a one-way trip. A stop is a temporary stop on the way to your main destination, such as picking up dry cleaning or getting a coffee. We do not want you to describe a round-trip (e.g. home to work and then back to home).

All the questions in this survey will ask you about this trip.

TRIP REQUIREMENTS:

Your trip must have these qualities:

Be at least 15 minutes long

Use at least part of the Dulles Toll Road (Route 267) between the Capital Beltway (I-495) and Dulles International Airport

Must include paying a toll, i.e. it was NOT a trip to Dulles International Airport on the Dulles Airport Access Road.

Click next to continue.



	BACKGROUND QUESTIONS		
origin	Where did this trip BEGIN? (If you're unsure, please see the map provided below)		
		Frequency	Percent
	District of Columbia	87	6.1%
	Arlington County, Virginia	164	11.5%
	Fairfax County, INSIDE the Capital Beltway	139	9.7%
	Tysons Corner	159	11.1%
	Rest of Fairfax County, OUTSIDE the Capital Beltway	478	33.5%
	Loudoun County, Virginia (including Dulles Intl. Airport)	237	16.6%
	Maryland, INSIDE the Capital Beltway (I-495)	37	2.6%
	Elsewhere, please specify	127	8.9%
	Total	1428	100.0%
dest	Where did this trip END? (If you're unsure, please see the map provided below)		
		Frequency	Percent
	District of Columbia	99	6.9%
	Arlington County, Virginia	104	7.3%
	Fairfax County, INSIDE the Capital Beltway	97	6.8%
	Tysons Corner	230	16.1%
	Rest of Fairfax County, OUTSIDE the Capital Beltway	517	36.2%
	Loudoun County, Virginia (including Dulles Intl. Airport)	250	17.5%
	Maryland, INSIDE the Capital Beltway (I-495)	37	2.6%
	Elsewhere, please specify	94	6.6%
	Total	1428	100.0%



onDTR	<p>For this trip using the Dulles Toll Road (Route 267), where did you ENTER the Toll Road?</p> <table border="1" data-bbox="427 415 1385 940"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Dulles Greenway</td> <td>138</td> <td>9.7%</td> </tr> <tr> <td>Sully Rd. (Route 28) (Exit 9, Dulles Intl. Airport)</td> <td>106</td> <td>7.4%</td> </tr> <tr> <td>Centreville Rd. (Exit 10)</td> <td>82</td> <td>5.7%</td> </tr> <tr> <td>Fairfax Cty. Pkwy. (Exit 11)</td> <td>142</td> <td>9.9%</td> </tr> <tr> <td>Reston Parkway (Exit 12)</td> <td>122</td> <td>8.5%</td> </tr> <tr> <td>Wiehle Ave. (Exit 13)</td> <td>75</td> <td>5.3%</td> </tr> <tr> <td>Hunter Mill Rd. (Exit 14)</td> <td>67</td> <td>4.7%</td> </tr> <tr> <td>Trap Rd. (Exit 15, enter EB only)</td> <td>5</td> <td>.4%</td> </tr> <tr> <td>Leesburg Pike (Route 7) (Exit 16)</td> <td>124</td> <td>8.7%</td> </tr> <tr> <td>Spring Hill Rd. (Exit 17)</td> <td>54</td> <td>3.8%</td> </tr> <tr> <td>Capital Beltway (I-495) (Exit 18)</td> <td>268</td> <td>18.8%</td> </tr> <tr> <td>State Route 123 (Exit 19)</td> <td>49</td> <td>3.4%</td> </tr> <tr> <td>Interstate 66</td> <td>196</td> <td>13.7%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Dulles Greenway	138	9.7%	Sully Rd. (Route 28) (Exit 9, Dulles Intl. Airport)	106	7.4%	Centreville Rd. (Exit 10)	82	5.7%	Fairfax Cty. Pkwy. (Exit 11)	142	9.9%	Reston Parkway (Exit 12)	122	8.5%	Wiehle Ave. (Exit 13)	75	5.3%	Hunter Mill Rd. (Exit 14)	67	4.7%	Trap Rd. (Exit 15, enter EB only)	5	.4%	Leesburg Pike (Route 7) (Exit 16)	124	8.7%	Spring Hill Rd. (Exit 17)	54	3.8%	Capital Beltway (I-495) (Exit 18)	268	18.8%	State Route 123 (Exit 19)	49	3.4%	Interstate 66	196	13.7%	Total	1428	100.0%
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Shopping	95	6.7%																										
Social or recreational	216	15.1%																										
Other personal business (such as a medical appointment)	111	7.8%																										
Total	1428	100.0%																										
begin	<p>Did your trip begin or end at home?</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Began at Home</td> <td>1095</td> <td>76.7%</td> </tr> <tr> <td>Ended at Home</td> <td>201</td> <td>14.1%</td> </tr> <tr> <td>Did not begin or end at home</td> <td>132</td> <td>9.2%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Began at Home	1095	76.7%	Ended at Home	201	14.1%	Did not begin or end at home	132	9.2%	Total	1428	100.0%												
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day	<p>What day of the week did you make your trip?</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Monday</td> <td>393</td> <td>27.5%</td> </tr> <tr> <td>Tuesday</td> <td>204</td> <td>14.3%</td> </tr> <tr> <td>Wednesday</td> <td>208</td> <td>14.6%</td> </tr> <tr> <td>Thursday</td> <td>219</td> <td>15.3%</td> </tr> <tr> <td>Friday</td> <td>186</td> <td>13.0%</td> </tr> <tr> <td>Saturday</td> <td>156</td> <td>10.9%</td> </tr> <tr> <td>Sunday</td> <td>62</td> <td>4.3%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Monday	393	27.5%	Tuesday	204	14.3%	Wednesday	208	14.6%	Thursday	219	15.3%	Friday	186	13.0%	Saturday	156	10.9%	Sunday	62	4.3%	Total	1428	100.0%
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time	<p>Please keep in mind your trip from your trip from <i>(insert origin)</i> to <i>(insert dest)</i>(if <i>origin area = destination area</i>) <u>Please keep in mind your trip within <i>(insert origin)</i>.</u></p> <p>What time did you begin your trip? Please select hours and minutes and click on a.m. or p.m.</p> <table border="1" data-bbox="427 533 1383 781"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Midnight to 6:29 AM</td> <td>150</td> <td>10.5%</td> </tr> <tr> <td>6:30 AM to 8:59 AM</td> <td>539</td> <td>37.7%</td> </tr> <tr> <td>9:00 AM to 3:59 PM</td> <td>476</td> <td>33.3%</td> </tr> <tr> <td>4:00 PM to 6:29 PM</td> <td>189</td> <td>13.2%</td> </tr> <tr> <td>6:30 PM to 11:59 PM</td> <td>74</td> <td>5.2%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Midnight to 6:29 AM	150	10.5%	6:30 AM to 8:59 AM	539	37.7%	9:00 AM to 3:59 PM	476	33.3%	4:00 PM to 6:29 PM	189	13.2%	6:30 PM to 11:59 PM	74	5.2%	Total	1428	100.0%
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timetot	<p>How much time did you spend traveling, door-to-door? Please select hours and minutes. [(error if less than 15 minutes entered) Your total travel time must be at least 15 minutes.]</p> <table border="1" data-bbox="422 903 1378 1150"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Less than 30 minutes</td> <td>264</td> <td>18.5%</td> </tr> <tr> <td>30 to 59 minutes</td> <td>695</td> <td>48.7%</td> </tr> <tr> <td>1 to 2 hours</td> <td>417</td> <td>29.2%</td> </tr> <tr> <td>2 to 3 hours</td> <td>31</td> <td>2.2%</td> </tr> <tr> <td>More than 3 hours</td> <td>21</td> <td>1.5%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Less than 30 minutes	264	18.5%	30 to 59 minutes	695	48.7%	1 to 2 hours	417	29.2%	2 to 3 hours	31	2.2%	More than 3 hours	21	1.5%	Total	1428	100.0%
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timeDTR	<p>You said that your trip took <i>(insert hours)</i> hour(s) and <i>(insert minutes)</i> minutes. How much of this time was spent on the Dulles Toll Road? Please select hours and minutes.</p> <table border="1" data-bbox="422 1276 1378 1491"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Less than 30 minutes</td> <td>1072</td> <td>75.1%</td> </tr> <tr> <td>30 to 59 minutes</td> <td>305</td> <td>21.4%</td> </tr> <tr> <td>1 to 2 hours</td> <td>46</td> <td>3.2%</td> </tr> <tr> <td>2 to 3 hours</td> <td>5</td> <td>.4%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Less than 30 minutes	1072	75.1%	30 to 59 minutes	305	21.4%	1 to 2 hours	46	3.2%	2 to 3 hours	5	.4%	Total	1428	100.0%			
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prefpeak	<p><i>If traveled wholly during off-peak period (9:01 AM to 3:59 PM and 6:31 PM to 6:29 AM on a weekday):</i> Did you choose to make this trip during an off-peak time to avoid peak period traffic congestion?</p> <table border="1" data-bbox="422 1659 1378 1801"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>258</td> <td>60.1%</td> </tr> <tr> <td>No</td> <td>171</td> <td>39.9%</td> </tr> <tr> <td>Total</td> <td>429</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Yes	258	60.1%	No	171	39.9%	Total	429	100.0%									
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alltime	<p>You said that you spent (<i>insert hours</i>) hour(s) and (<i>insert minutes</i>) minutes traveling door-to-door. If you were to use a DIFFERENT ROUTE, where you did not drive on the Dulles Toll Road, how long do you think your trip would take (door-to-door)? Please select hours and minutes.</p> <table border="1" data-bbox="423 533 1382 781"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Less than 30 minutes</td> <td>75</td> <td>5.3%</td> </tr> <tr> <td>30 to 59 minutes</td> <td>523</td> <td>36.6%</td> </tr> <tr> <td>1 to 2 hours</td> <td>692</td> <td>48.5%</td> </tr> <tr> <td>2 to 3 hours</td> <td>108</td> <td>7.6%</td> </tr> <tr> <td>More than 3 hours</td> <td>30</td> <td>2.1%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Less than 30 minutes	75	5.3%	30 to 59 minutes	523	36.6%	1 to 2 hours	692	48.5%	2 to 3 hours	108	7.6%	More than 3 hours	30	2.1%	Total	1428	100.0%
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mode	<p>For the majority of this trip did you:</p> <table border="1" data-bbox="423 877 1382 1054"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Drive alone</td> <td>1073</td> <td>75.1%</td> </tr> <tr> <td>Drive with others</td> <td>311</td> <td>21.8%</td> </tr> <tr> <td>Ride with others</td> <td>44</td> <td>3.1%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Drive alone	1073	75.1%	Drive with others	311	21.8%	Ride with others	44	3.1%	Total	1428	100.0%						
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occ	<p><i>Skip if mode=1 and insert "1" into "occ" variable:</i> Including you, how many people were in the car on this trip?</p> <table border="1" data-bbox="423 1186 1382 1398"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>226</td> <td>63.7%</td> </tr> <tr> <td>3</td> <td>88</td> <td>24.8%</td> </tr> <tr> <td>4</td> <td>25</td> <td>7.0%</td> </tr> <tr> <td>5 or more</td> <td>16</td> <td>4.5%</td> </tr> <tr> <td>Total</td> <td>355</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	2	226	63.7%	3	88	24.8%	4	25	7.0%	5 or more	16	4.5%	Total	355	100.0%			
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carpool	<p><i>Skip if mode=1.</i> Which of the following best describes who was in the car for this trip?</p> <table border="1" data-bbox="423 1499 1382 1747"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Members of your household</td> <td>224</td> <td>63.1%</td> </tr> <tr> <td>Friends or relatives who live elsewhere</td> <td>82</td> <td>23.1%</td> </tr> <tr> <td>Coworkers</td> <td>37</td> <td>10.4%</td> </tr> <tr> <td>Other prearranged carpoolers</td> <td>7</td> <td>2.0%</td> </tr> <tr> <td>Casual carpoolers, Slugs</td> <td>5</td> <td>1.4%</td> </tr> <tr> <td>Total</td> <td>355</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Members of your household	224	63.1%	Friends or relatives who live elsewhere	82	23.1%	Coworkers	37	10.4%	Other prearranged carpoolers	7	2.0%	Casual carpoolers, Slugs	5	1.4%	Total	355	100.0%
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wherecp	<p><i>(Ask if carpool >= 3, i.e. coworkers or other carpoolers).</i> Where was the carpool formed?</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>At your home</td> <td>10</td> <td>20.4%</td> </tr> <tr> <td>At someone else's home</td> <td>5</td> <td>10.2%</td> </tr> <tr> <td>At your place of employment At a park and ride site:</td> <td>16</td> <td>32.7%</td> </tr> <tr> <td>Reston South Park & Ride</td> <td>1</td> <td>2.0%</td> </tr> <tr> <td>Reston North Park & Ride</td> <td>1</td> <td>2.0%</td> </tr> <tr> <td>Reston East Park & Ride</td> <td>2</td> <td>4.1%</td> </tr> <tr> <td>Tysons West Park Transit Station</td> <td>1</td> <td>2.0%</td> </tr> <tr> <td>Herndon-Monroe Park and Ride</td> <td>2</td> <td>4.1%</td> </tr> <tr> <td>Elsewhere, please specify:</td> <td>11</td> <td>22.4%</td> </tr> <tr> <td>Total</td> <td>49</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	At your home	10	20.4%	At someone else's home	5	10.2%	At your place of employment At a park and ride site:	16	32.7%	Reston South Park & Ride	1	2.0%	Reston North Park & Ride	1	2.0%	Reston East Park & Ride	2	4.1%	Tysons West Park Transit Station	1	2.0%	Herndon-Monroe Park and Ride	2	4.1%	Elsewhere, please specify:	11	22.4%	Total	49	100.0%			
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usehov	<p><i>Skip if mode=1 or travel occurred in offpeak or offpeak direction (outside of 6:30am – 9:00am EB and 4:00pm – 6:30pm WB).</i> Did you use the High Occupancy Vehicle (HOV) Lane while you were on the Dulles Toll Road?</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>70</td> <td>76.1%</td> </tr> <tr> <td>No</td> <td>22</td> <td>23.9%</td> </tr> <tr> <td>Total</td> <td>92</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Yes	70	76.1%	No	22	23.9%	Total	92	100.0%																								
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carcost	<p>How much did it cost you to make your trip for each of the items below?</p> <p>Gas:</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Less than \$2.00</td> <td>266</td> <td>18.6%</td> </tr> <tr> <td>\$2.00 to \$4.99</td> <td>722</td> <td>50.6%</td> </tr> <tr> <td>\$5.00 to \$9.99</td> <td>290</td> <td>20.3%</td> </tr> <tr> <td>\$10.00 or more</td> <td>150</td> <td>10.5%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table> <p>Parking:</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Free parking</td> <td>1279</td> <td>89.6%</td> </tr> <tr> <td>Less than \$5.00</td> <td>62</td> <td>4.3%</td> </tr> <tr> <td>\$5.00 to \$9.99</td> <td>48</td> <td>3.4%</td> </tr> <tr> <td>\$10.00 or more</td> <td>39</td> <td>2.7%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Less than \$2.00	266	18.6%	\$2.00 to \$4.99	722	50.6%	\$5.00 to \$9.99	290	20.3%	\$10.00 or more	150	10.5%	Total	1428	100.0%		Frequency	Percent	Free parking	1279	89.6%	Less than \$5.00	62	4.3%	\$5.00 to \$9.99	48	3.4%	\$10.00 or more	39	2.7%	Total	1428	100.0%
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tollDTR	Based on the information you provided, we estimate that the tolls on the Dulles Toll Road would have been: \$X. Is that how much you paid?															
tollDGW	(if used Dulles Greenway, i.e. onDTR or offDTR is Sulley Rd. South Dulles Greenway Mainline Plaza) Based on the information you provided, we estimate that the tolls on the Dulles Greenway would have been: \$X. Is that how much you paid?															
tollOTH	(If origin or destination = elsewhere) Did you pay any tolls on roads other than the Dulles Toll Road [(if Dulles Greenway user) and the Dulles Greenway] during this trip? <table border="1" data-bbox="427 869 1385 1014"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>YES, Please enter toll paid on other roads:</td> <td>5</td> <td>2.4%</td> </tr> <tr> <td>No</td> <td>201</td> <td>97.6%</td> </tr> <tr> <td>Total</td> <td>206</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	YES, Please enter toll paid on other roads:	5	2.4%	No	201	97.6%	Total	206	100.0%			
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<p>smart</p>	<p><i>(if TollPay = 1, cash)</i></p> <p>Smart Tag requires opening an account with the Virginia Department of Transportation and placing a Smart Tag transponder in your vehicle. Toll costs are deducted from a prepaid account each time you drive through a toll plaza in Virginia. Some plazas have dedicated Smart Tag lanes allowing faster travel through toll plazas.</p> <p>The minimum opening account balance is \$35. You can either choose to automatically replenish the account from a credit card or pay a \$15 security deposit and replenish via mail or telephone.</p> <p>Do you currently own a Smart Tag transponder for electronic toll collection?</p> <table border="1" data-bbox="427 737 1385 951"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>YES, but I did not use it on this trip</td> <td>39</td> <td>6.5%</td> </tr> <tr> <td>NO, but I plan to get one soon</td> <td>66</td> <td>11.0%</td> </tr> <tr> <td>NO, but I may be interested in getting one</td> <td>180</td> <td>29.9%</td> </tr> <tr> <td>NO, and I don't plan to get one</td> <td>317</td> <td>52.7%</td> </tr> <tr> <td>Total</td> <td>602</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	YES, but I did not use it on this trip	39	6.5%	NO, but I plan to get one soon	66	11.0%	NO, but I may be interested in getting one	180	29.9%	NO, and I don't plan to get one	317	52.7%	Total	602	100.0%			
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ynoplan	<p><i>(If smart = 3, do not plan to purchase Smart Tag):</i> Which of the following best describes the reason why you don't plan to obtain a Smart Tag transponder? Select all that apply.</p> <table border="1" data-bbox="427 449 1386 936"> <thead> <tr> <th></th> <th>Count</th> <th>Column %</th> </tr> </thead> <tbody> <tr> <td>Was not aware of Smart Tag</td> <td>1</td> <td>1.1</td> </tr> <tr> <td>Do not use toll roads often enough</td> <td>19</td> <td>20.9</td> </tr> <tr> <td>Do not like idea of electronic tolling</td> <td>20</td> <td>22.0</td> </tr> <tr> <td>Do not want a transponder in my car</td> <td>20</td> <td>22.0</td> </tr> <tr> <td>Do not want to set up an account</td> <td>21</td> <td>23.1</td> </tr> <tr> <td>Do not want to make automatic payments from my credit card</td> <td>31</td> <td>34.1</td> </tr> <tr> <td>Do not want to pay the security deposit</td> <td>26</td> <td>28.6</td> </tr> <tr> <td>Do not want to prepay tolls</td> <td>22</td> <td>24.2</td> </tr> <tr> <td>Too expensive</td> <td>9</td> <td>9.9</td> </tr> <tr> <td>Concerned about privacy</td> <td>19</td> <td>20.9</td> </tr> <tr> <td>Too difficult to maintain account</td> <td>8</td> <td>8.8</td> </tr> <tr> <td>Other, Please specify:</td> <td>27</td> <td>29.7</td> </tr> </tbody> </table>		Count	Column %	Was not aware of Smart Tag	1	1.1	Do not use toll roads often enough	19	20.9	Do not like idea of electronic tolling	20	22.0	Do not want a transponder in my car	20	22.0	Do not want to set up an account	21	23.1	Do not want to make automatic payments from my credit card	31	34.1	Do not want to pay the security deposit	26	28.6	Do not want to prepay tolls	22	24.2	Too expensive	9	9.9	Concerned about privacy	19	20.9	Too difficult to maintain account	8	8.8	Other, Please specify:	27	29.7
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tranorig	<p><i>(Potential transit user: traveling from (home-end) outside Beltway to inside Beltway, or from (home-end) inside Beltway, Tysons Corner, Fairfax County outside the Beltway or Loudoun County to Fairfax County outside the Beltway, or from (home-end) inside Beltway, Fairfax County outside the Beltway or Loudoun County to Tysons corner; if non-home based trip not potential transit user)</i> About how far is it from your home to where you joined the Dulles Toll Road at <i>(Insert onDTR)?</i></p> <p><i>(If home-end of trip within Beltway AND non-home end in Fairfax County outside the Beltway or Tysons Corner)</i> About how far do you live from your closest MetroRail station?</p> <table border="1" data-bbox="427 1457 1386 1633"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Less than one mile</td> <td>202</td> <td>23.7%</td> </tr> <tr> <td>More than one mile, please specify:</td> <td>613</td> <td>71.8%</td> </tr> <tr> <td>Don't know</td> <td>39</td> <td>4.6%</td> </tr> <tr> <td>Total</td> <td>854</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Less than one mile	202	23.7%	More than one mile, please specify:	613	71.8%	Don't know	39	4.6%	Total	854	100.0%																								
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trandest	<p><i>(if non home end of trip within Beltway AND home end in Loudoun County or in Fairfax County outside the Beltway or Tysons Corner)</i> About how far [<i>(insert text based on trip purpose, e.g.)</i>] from your place of work is] the closest MetroRail station?</p> <p><i>(if non home end of trip within Fairfax county outside the Beltway AND home end IS inside Beltway, Tysons Corner, Fairfax County outside the Beltway or Loudoun County)</i> About how far did you drive from the [<i>(insert exit name)</i>] [<i>(insert text based on trip purpose, e.g.)</i>] to your place of work]?</p> <table border="1" data-bbox="427 604 1385 779"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Less than one mile</td> <td>271</td> <td>38.3%</td> </tr> <tr> <td>More than one mile, please specify:</td> <td>340</td> <td>48.1%</td> </tr> <tr> <td>Don't know</td> <td>96</td> <td>13.6%</td> </tr> <tr> <td>Total</td> <td>707</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Less than one mile	271	38.3%	More than one mile, please specify:	340	48.1%	Don't know	96	13.6%	Total	707	100.0%
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Slide1	<p>INFORMATION</p> <p>Please read and click “next” to continue.</p> <p>The Virginia Department of Transportation is evaluating various pricing options on the Dulles Toll Road (Route 267) between the Capital Beltway (I-495) and Dulles International Airport, a distance of about 14 miles.</p> <p>To encourage free flow operating conditions, value pricing could include:</p> <ul style="list-style-type: none"> • higher tolls during peak times (i.e. “rush hour”) or congested periods, and • discounted tolls for Smart Tag electronic toll collection users 															
Slide2	<p><i>(only if to be shown transit option in CBC)</i></p> <p>Please read and click “next” to continue.</p> <p>The Virginia Department of Rail and Public Transportation and the Washington Metropolitan Area Transit Authority are advancing implementation of new Metrorail service in the Dulles Toll Road corridor.</p> <p>The new Metrorail service would extend from the existing Orange Line (near the West Falls Church station) in Fairfax County, travel through Tysons Corner, continue to Dulles International Airprt along the Dulles Toll Road, and end at Route 772 along the Dulles Greenway.</p> <p>New rail stations would serve major population and employment centers in Tysons Corner, Reston, Herndon, and eastern Loudoun County.</p>															



Cbcint.htm	<p>STATED PREFERENCE SECTION</p> <p>In the next several questions, you will compare the trip you described earlier with several alternative ways of making the same trip:</p> <ul style="list-style-type: none"> • Dulles Toll Road at the same time as your current trip • Dulles Toll Road at a different time of day than your current trip (<i>current peak travelers only</i>) • Dulles Toll Road High Occupancy Vehicle (HOV) Lanes driving in a carpool with a driver and at least one other passenger at the same time of day as your current trip (<i>SOV only, traveling in the correct direction during HOV lane operation</i>) • A toll free route at the same time of day as your current trip • Riding the new rail transit service at the same time of day as your current trip (<i>only if to be shown transit option</i>) <p>In these future scenarios, park & ride lots would provide travelers with safe and convenient locations for meeting a carpool (<i>show if HOV lane to be presented</i>).</p> <p>Assume that all the alternatives shown are available to you and choose the one you prefer most.</p> <p>Click "next" to continue.</p>																								
ynotoll	<p>(<i>If respondent never chose a toll option</i>) Which of the following describe your reasons for not choosing a trip on the Dulles Toll Road? Select all that apply.</p> <table border="1" data-bbox="427 1255 1386 1539"> <thead> <tr> <th></th> <th>Count</th> <th>Column %</th> </tr> </thead> <tbody> <tr> <td>Time savings not worth the toll cost</td> <td>115</td> <td>45.1</td> </tr> <tr> <td>Toll increases are too great</td> <td>58</td> <td>22.7</td> </tr> <tr> <td>Oppose any toll increases</td> <td>70</td> <td>27.5</td> </tr> <tr> <td>Tolls and fuel taxes together are unfair</td> <td>49</td> <td>19.2</td> </tr> <tr> <td>Prefer toll free route</td> <td>54</td> <td>21.2</td> </tr> <tr> <td>Prefer new rail service</td> <td>97</td> <td>38.0</td> </tr> <tr> <td>Other, please specify</td> <td>24</td> <td>9.4</td> </tr> </tbody> </table>		Count	Column %	Time savings not worth the toll cost	115	45.1	Toll increases are too great	58	22.7	Oppose any toll increases	70	27.5	Tolls and fuel taxes together are unfair	49	19.2	Prefer toll free route	54	21.2	Prefer new rail service	97	38.0	Other, please specify	24	9.4
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ynoshft	<p><i>(If peak traveler who never chose an off-peak option)</i> Which of the following describe the reasons you would not change the time of day you made the trip? Select all that apply.</p> <table border="1" data-bbox="427 464 1386 743"> <thead> <tr> <th></th> <th>Count</th> <th>Column %</th> </tr> </thead> <tbody> <tr> <td>Flex-Time is not available at my place of employment</td> <td>75</td> <td>32.9</td> </tr> <tr> <td>Have to coordinate with family members</td> <td>50</td> <td>21.9</td> </tr> <tr> <td>Travel times are dictated by the hours of operation at my place of employment</td> <td>104</td> <td>45.6</td> </tr> <tr> <td>I have a variable work schedule</td> <td>34</td> <td>14.9</td> </tr> <tr> <td>Need car while at work</td> <td>39</td> <td>17.1</td> </tr> <tr> <td>Other, please specify:</td> <td>37</td> <td>16.2</td> </tr> </tbody> </table>		Count	Column %	Flex-Time is not available at my place of employment	75	32.9	Have to coordinate with family members	50	21.9	Travel times are dictated by the hours of operation at my place of employment	104	45.6	I have a variable work schedule	34	14.9	Need car while at work	39	17.1	Other, please specify:	37	16.2												
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employ	<p>What is your employment status?</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Full-time worker</td> <td>1109</td> <td>77.7%</td> </tr> <tr> <td>Part-time worker</td> <td>69</td> <td>4.8%</td> </tr> <tr> <td>Self-employed</td> <td>79</td> <td>5.5%</td> </tr> <tr> <td>Student</td> <td>32</td> <td>2.2%</td> </tr> <tr> <td>Student and employed</td> <td>43</td> <td>3.0%</td> </tr> <tr> <td>Retired</td> <td>56</td> <td>3.9%</td> </tr> <tr> <td>Homemaker</td> <td>28</td> <td>2.0%</td> </tr> <tr> <td>Unemployed</td> <td>12</td> <td>.8%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Full-time worker	1109	77.7%	Part-time worker	69	4.8%	Self-employed	79	5.5%	Student	32	2.2%	Student and employed	43	3.0%	Retired	56	3.9%	Homemaker	28	2.0%	Unemployed	12	.8%	Total	1428	100.0%
	Frequency	Percent																													
Full-time worker	1109	77.7%																													
Part-time worker	69	4.8%																													
Self-employed	79	5.5%																													
Student	32	2.2%																													
Student and employed	43	3.0%																													
Retired	56	3.9%																													
Homemaker	28	2.0%																													
Unemployed	12	.8%																													
Total	1428	100.0%																													
income	<p>Which category best represents your household's annual income before taxes? *Note: this information is used only to make sure we have acquired a representative sample of this area's population.</p> <table border="1"> <thead> <tr> <th></th> <th>Frequency</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Less than \$25,000</td> <td>53</td> <td>3.7%</td> </tr> <tr> <td>\$25,000 - \$49,999</td> <td>122</td> <td>8.5%</td> </tr> <tr> <td>\$50,000 - \$74,999</td> <td>207</td> <td>14.5%</td> </tr> <tr> <td>\$75,000 - \$99,999</td> <td>221</td> <td>15.5%</td> </tr> <tr> <td>\$100,000 - \$149,999</td> <td>380</td> <td>26.6%</td> </tr> <tr> <td>\$150,000 or more</td> <td>306</td> <td>21.4%</td> </tr> <tr> <td>Refused</td> <td>139</td> <td>9.7%</td> </tr> <tr> <td>Total</td> <td>1428</td> <td>100.0%</td> </tr> </tbody> </table>		Frequency	Percent	Less than \$25,000	53	3.7%	\$25,000 - \$49,999	122	8.5%	\$50,000 - \$74,999	207	14.5%	\$75,000 - \$99,999	221	15.5%	\$100,000 - \$149,999	380	26.6%	\$150,000 or more	306	21.4%	Refused	139	9.7%	Total	1428	100.0%			
	Frequency	Percent																													
Less than \$25,000	53	3.7%																													
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\$75,000 - \$99,999	221	15.5%																													
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\$150,000 or more	306	21.4%																													
Refused	139	9.7%																													
Total	1428	100.0%																													



end	<p>Thank you for participating! You have finished the survey. You can click COMMENTS below if you would like to provide additional input on the survey. Otherwise, click NEXT to complete the survey.</p> <p>COMMENTS</p> <p>CONDUCTED BY RESOURCE SYSTEMS GROUP, INC. (HTTP://WWW.RSGINC.COM) WITH WILBUR SMITH ASSOCIATES (HTTP://WWW.WILBURSMITH.COM) FOR THE VIRGINIA DEPARTMENT OF TRANSPORTATION (HTTP://WWW.VIRGINIADOT.ORG)</p>
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APPENDIX B: STATED PREFERENCE SCREEN SHOTS



APPENDIX B

DULLES TOLL ROAD STATED PREFERENCE SURVEY SCREEN SHOTS

Figure 1: Introduction (Central Site respondents)

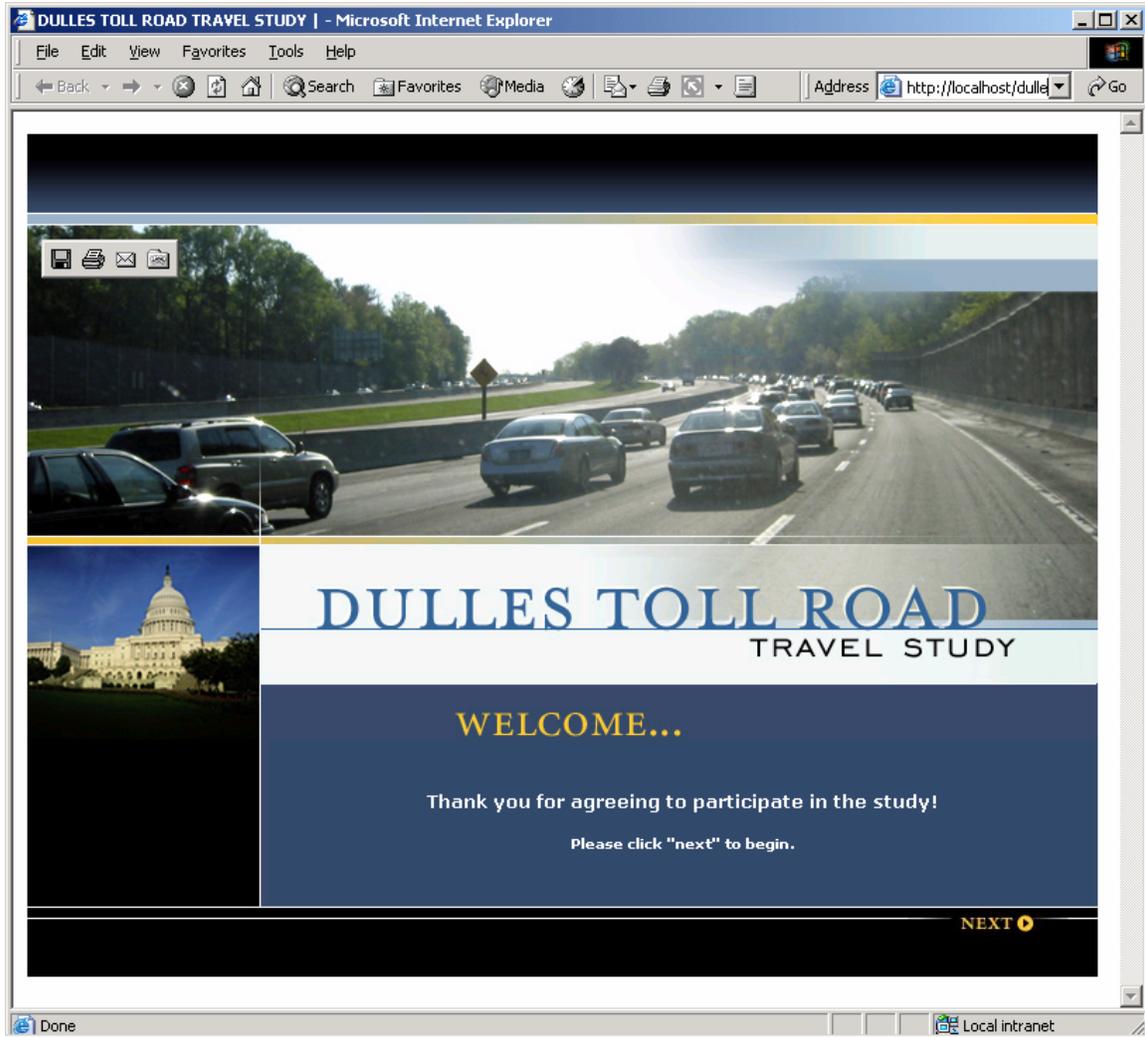


Figure 2: Introduction (Internet respondents)

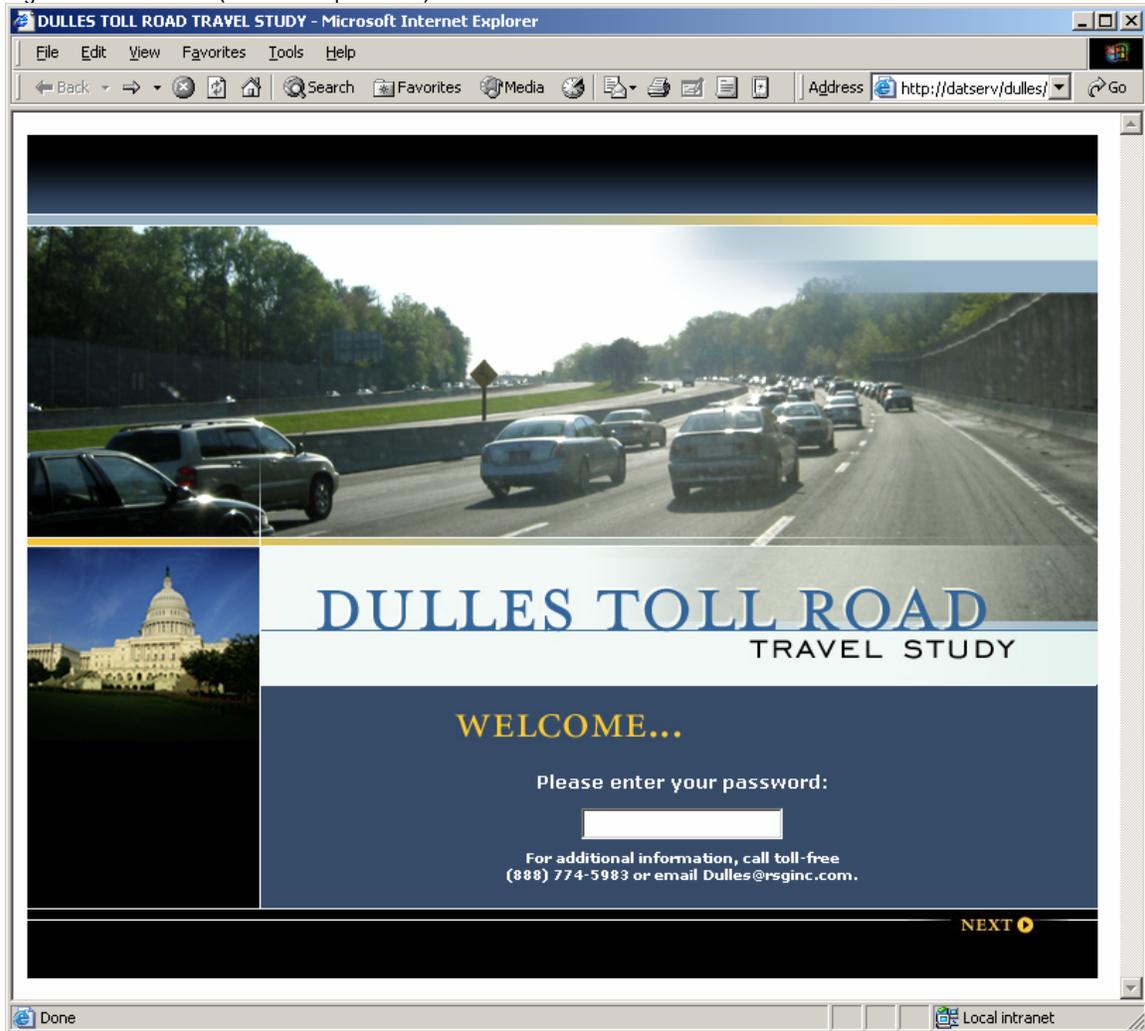


Figure 3: Instructions

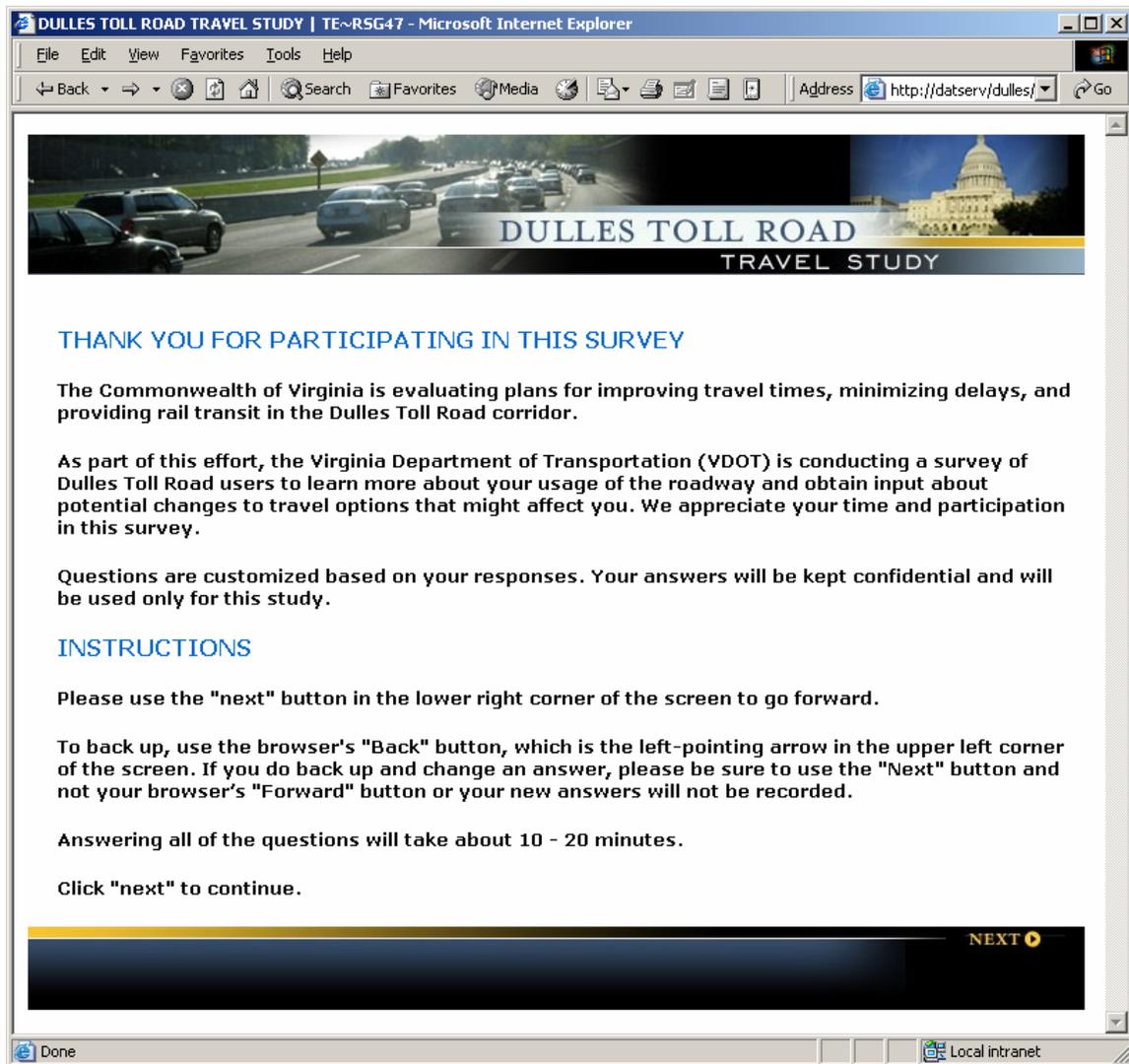
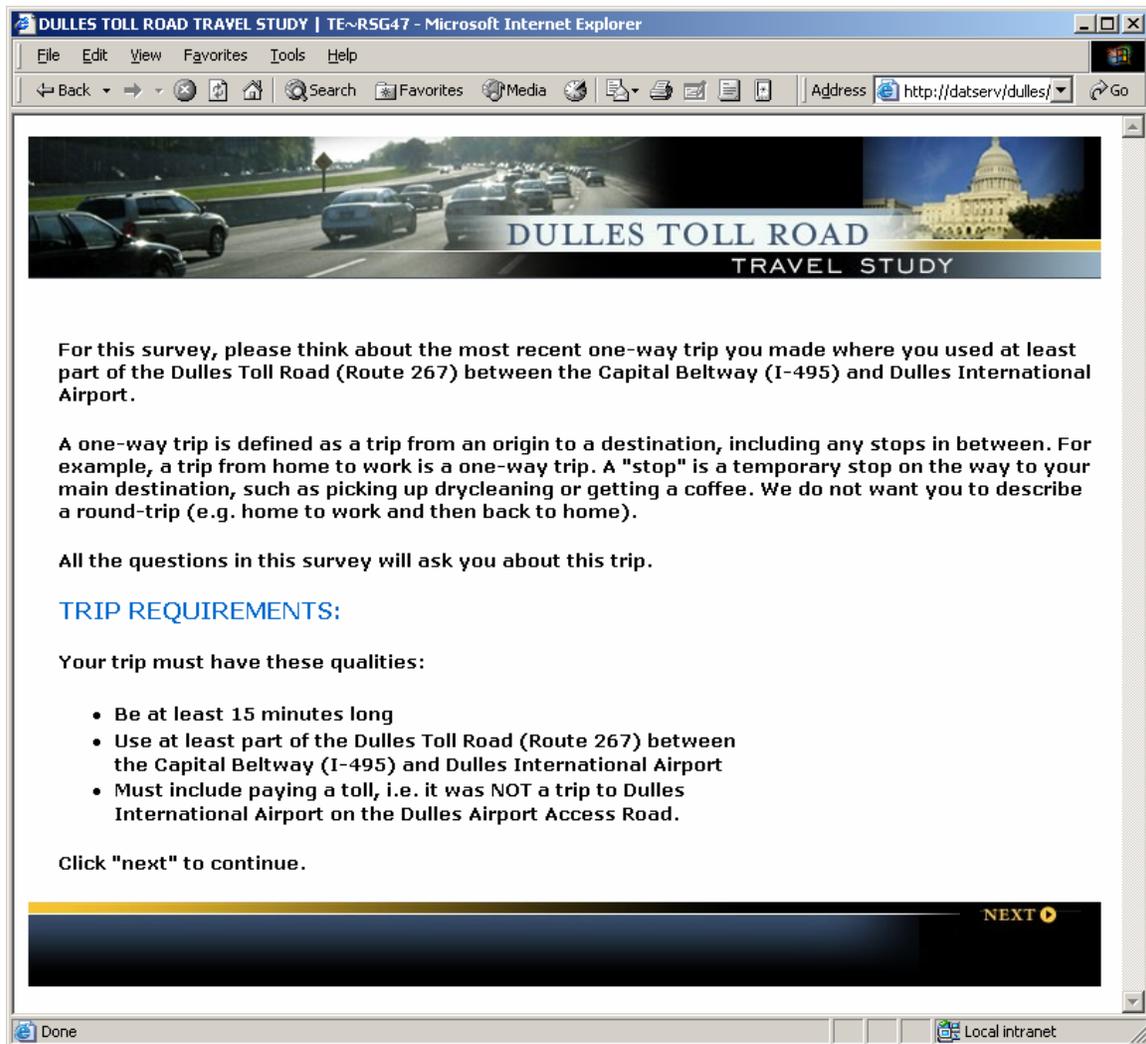


Figure 4: Trip Requirements



DULLES TOLL ROAD TRAVEL STUDY

For this survey, please think about the most recent one-way trip you made where you used at least part of the Dulles Toll Road (Route 267) between the Capital Beltway (I-495) and Dulles International Airport.

A one-way trip is defined as a trip from an origin to a destination, including any stops in between. For example, a trip from home to work is a one-way trip. A "stop" is a temporary stop on the way to your main destination, such as picking up drycleaning or getting a coffee. We do not want you to describe a round-trip (e.g. home to work and then back to home).

All the questions in this survey will ask you about this trip.

TRIP REQUIREMENTS:

Your trip must have these qualities:

- Be at least 15 minutes long
- Use at least part of the Dulles Toll Road (Route 267) between the Capital Beltway (I-495) and Dulles International Airport
- Must include paying a toll, i.e. it was NOT a trip to Dulles International Airport on the Dulles Airport Access Road.

Click "next" to continue.

NEXT ➔



Figure 5: Starting Location

DULLES TOLL ROAD TRAVEL STUDY | TE~RSG46 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Media Print Address http://datserv/dulles/

DULLES TOLL ROAD TRAVEL STUDY

Where did this trip **BEGIN**? (If you're unsure, please see the map provided below)

- 1. District of Columbia
- 2. Arlington County, Virginia
- 3. Fairfax County, Virginia, **INSIDE** the Capital Beltway (I-495)
- 4. Tysons Corner
- 5. Rest of Fairfax County, Virginia, **OUTSIDE** the Capital Beltway (I-495)
- 6. Loudoun County, Virginia (including Dulles Intl. Airport)
- 7. Maryland, **INSIDE** the Capital Beltway (I-495)
- Elsewhere, please specify:

Please scroll to the bottom of the page and click "next" once you have made your selection.

NEXT

Done Internet



Figure 6: Ending Location

DULLES TOLL ROAD TRAVEL STUDY | TE~R5G46 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://datsew/dulles/t/ Go

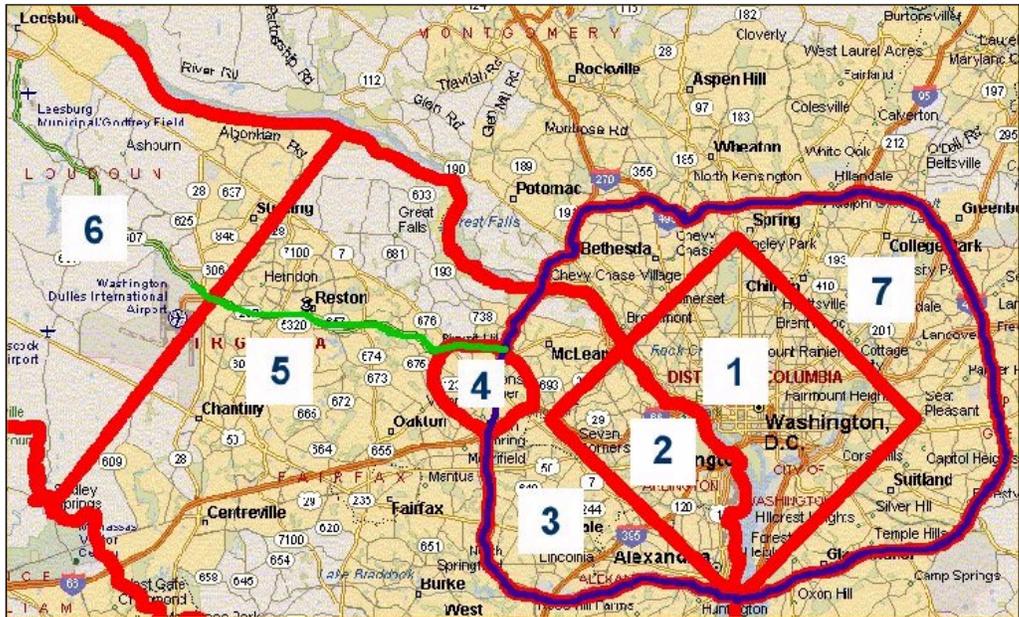


DULLES TOLL ROAD TRAVEL STUDY

Where did this trip **END?** (If you're unsure, please see the map provided below)

- 1. District of Columbia
- 2. Arlington County, Virginia
- 3. Fairfax County, Virginia, **INSIDE** the Capital Beltway (I-495)
- 4. Tysons Corner
- 5. Rest of Fairfax County, Virginia, **OUTSIDE** the Capital Beltway (I-495)
- 6. Loudoun County, Virginia (including Dulles Intl. Airport)
- 7. Maryland, **INSIDE** the Capital Beltway (I-495)
- Elsewhere, please specify:

Please scroll to the bottom of the page and click "next" once you have made your selection.



NEXT 

Done Internet



Figure 7: Toll Road Entry Location

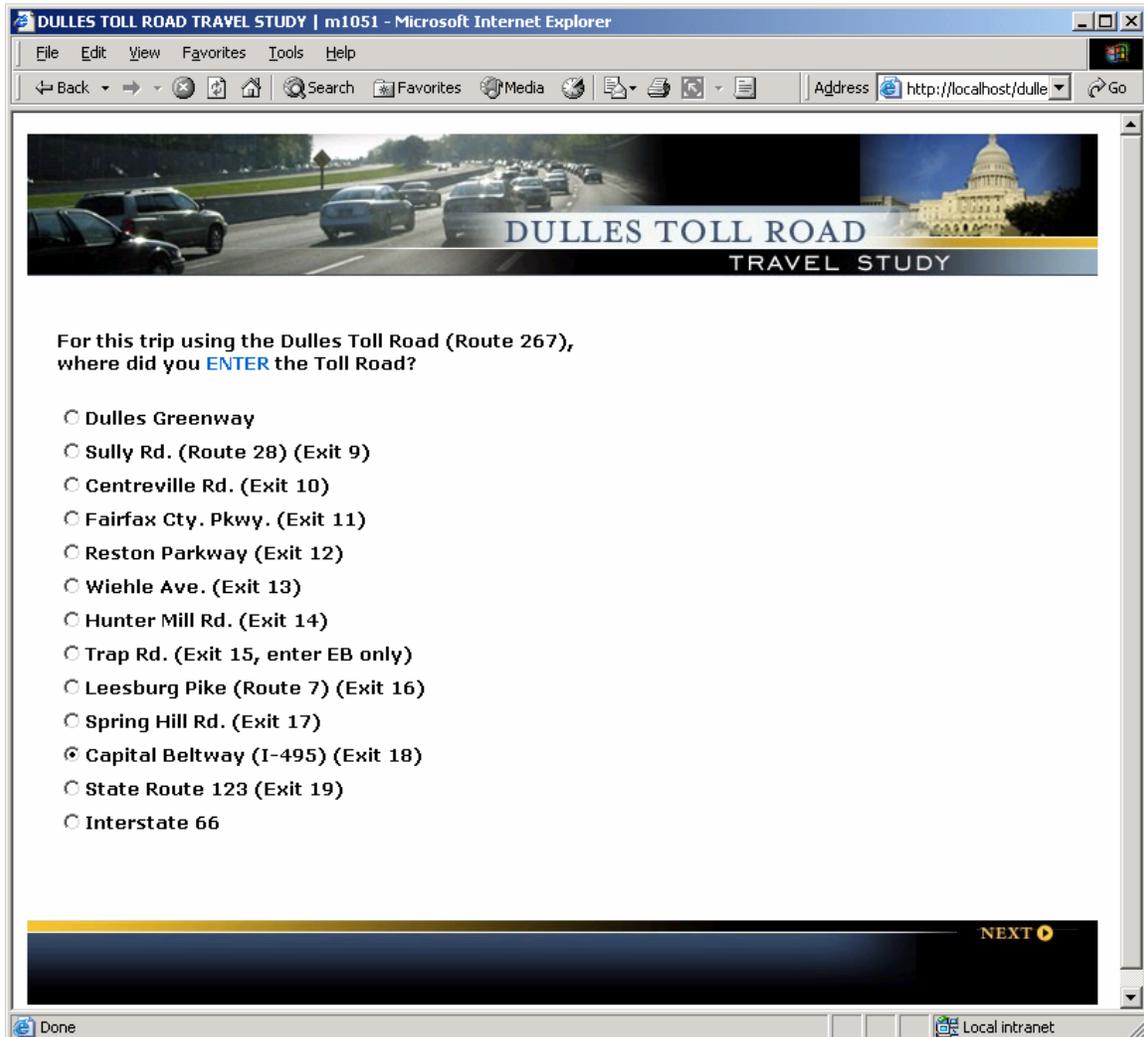


Figure 8: Toll Road Exit Location

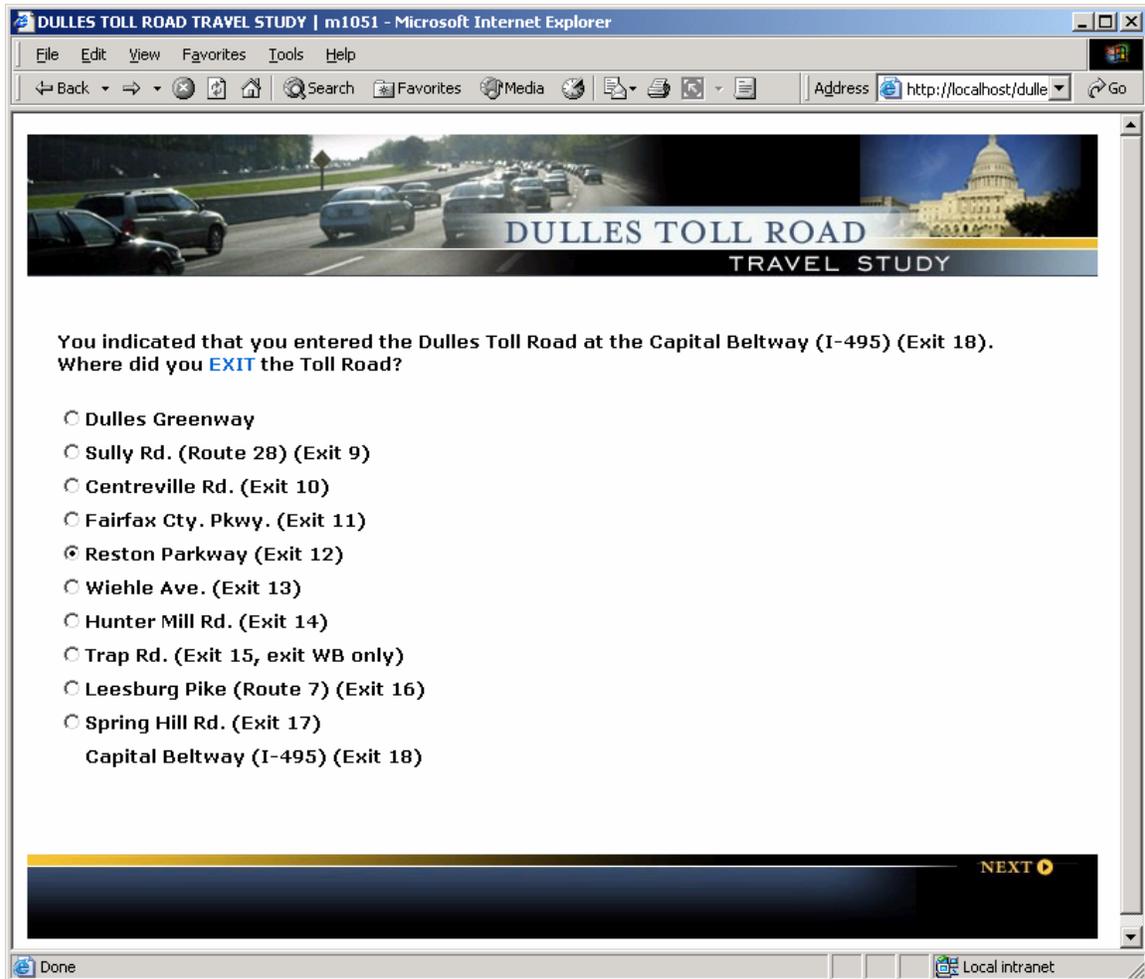


Figure 9: Trip Purpose

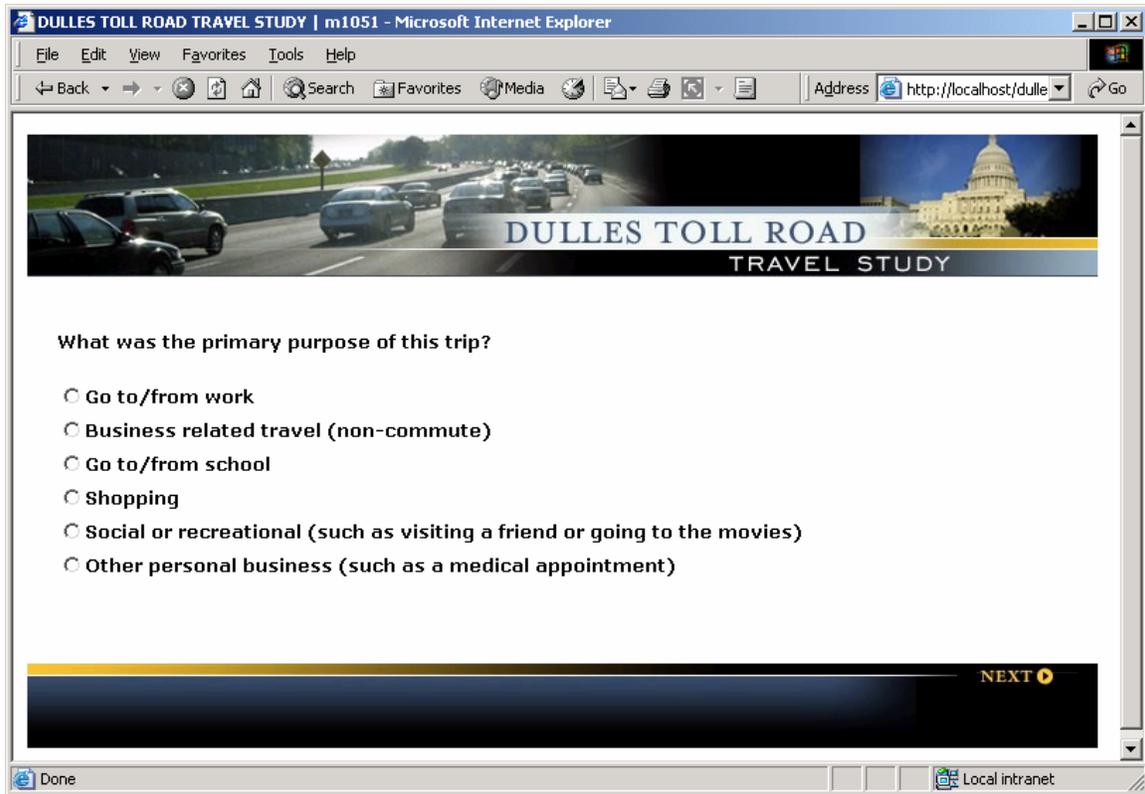


Figure 10: Trip Begin/End Point

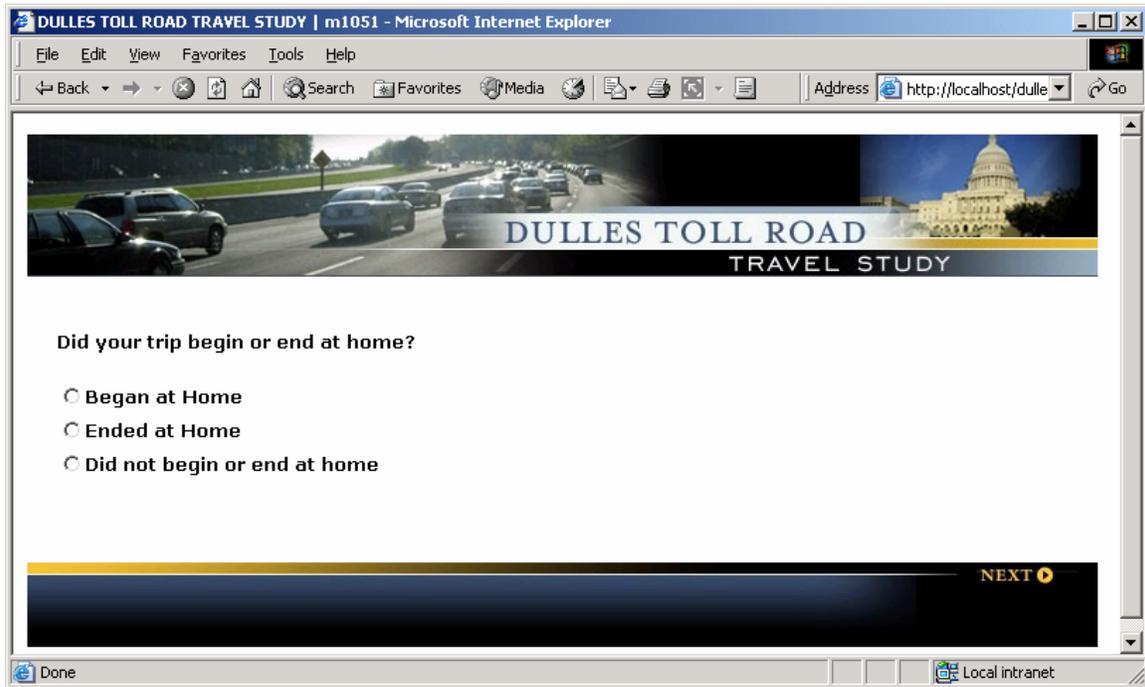


Figure 11: Day of Week

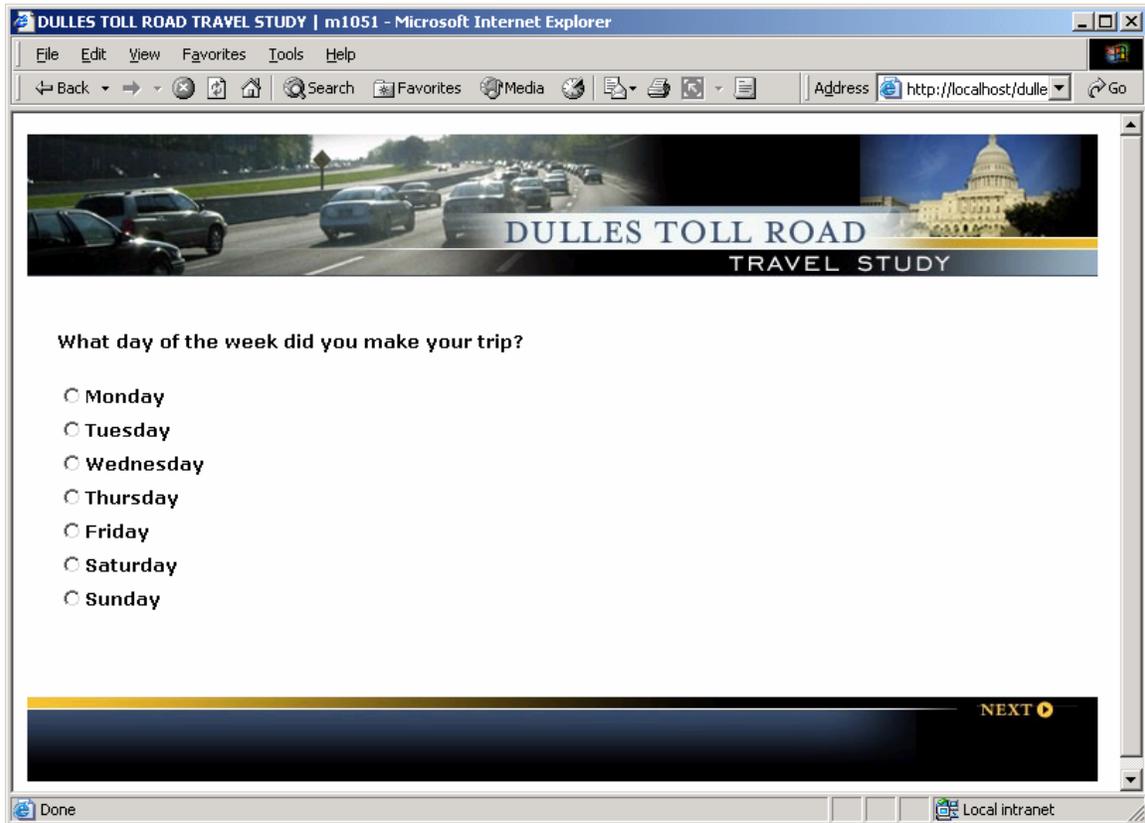


Figure 12: Trip Frequency

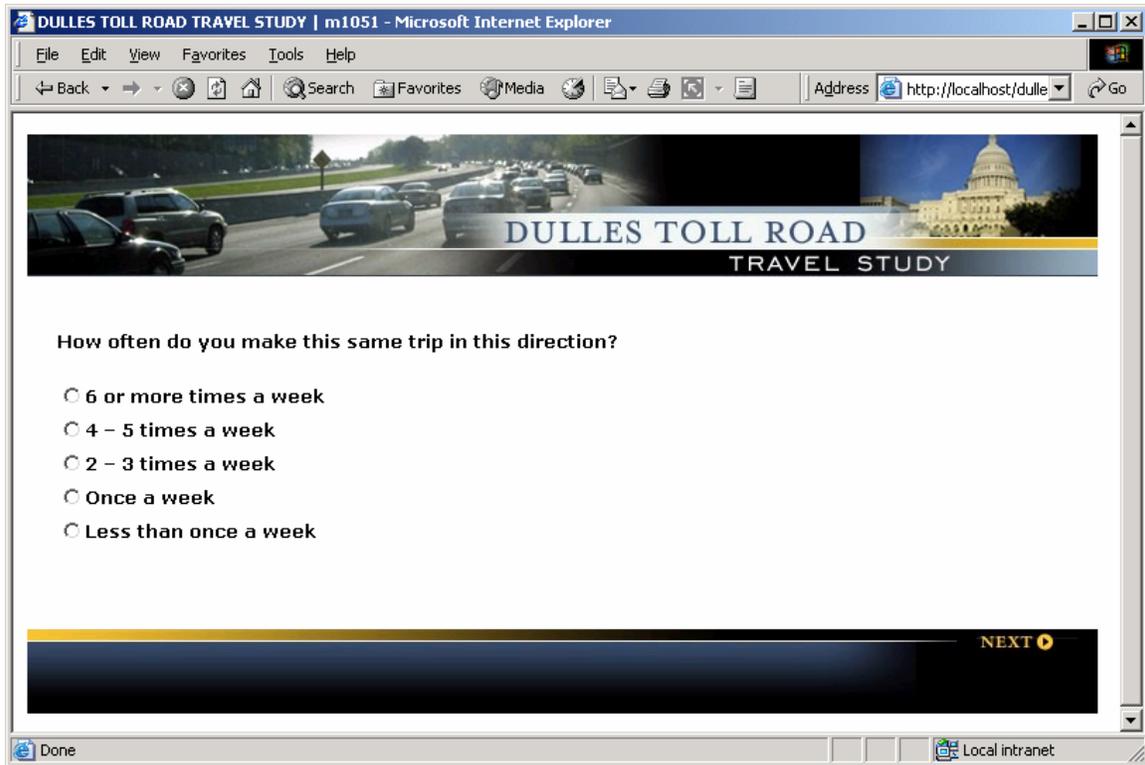


Figure 13: Trip Start Time

The screenshot shows a Microsoft Internet Explorer window titled "DULLES TOLL ROAD TRAVEL STUDY | m1051". The address bar shows "http://localhost/dulle". The page features a banner with a highway scene and the text "DULLES TOLL ROAD TRAVEL STUDY". Below the banner, the text reads: "Please keep in mind your trip from Arlington County to Fairfax County (outside I-495). What time did you BEGIN your trip? Please select hours and minutes and click on a.m. or p.m." The form includes two dropdown menus for "Hour:" and "Minutes:", both currently set to "not selected". There are also radio buttons for "a.m." and "p.m.". A "NEXT" button with a right-pointing arrow is located at the bottom right of the form area. The browser's status bar at the bottom shows "Done" and "Local intranet".

Figure 14: Trip Length

The screenshot shows a Microsoft Internet Explorer window titled "DULLES TOLL ROAD TRAVEL STUDY | m1051". The address bar shows "http://localhost/dulle". The page features a banner with a highway scene and the text "DULLES TOLL ROAD TRAVEL STUDY". Below the banner, the text reads: "How much time did you spend traveling, door-to-door? Please select hours and minutes." The form includes two dropdown menus for "Hours:" and "Minutes:", both currently set to "not selected". A "NEXT" button with a right-pointing arrow is located at the bottom right of the form area. The browser's status bar at the bottom shows "Done" and "Local intranet".



Figure 15: Time Spent on Dulles Toll Road

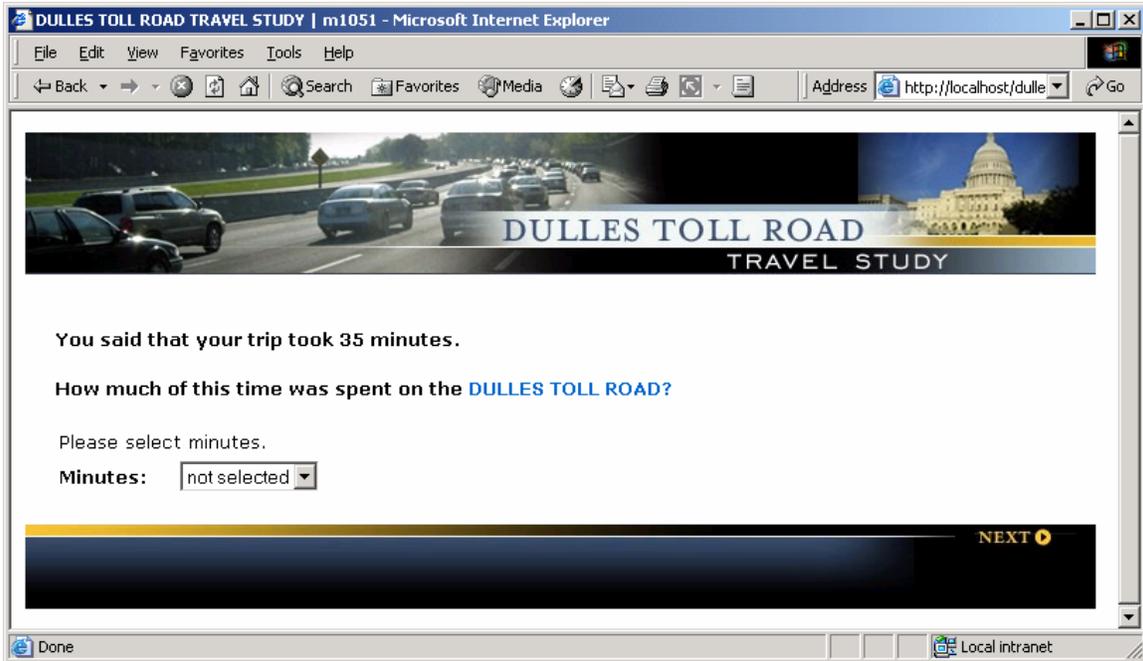


Figure 16: Off-Peak Travel Decision

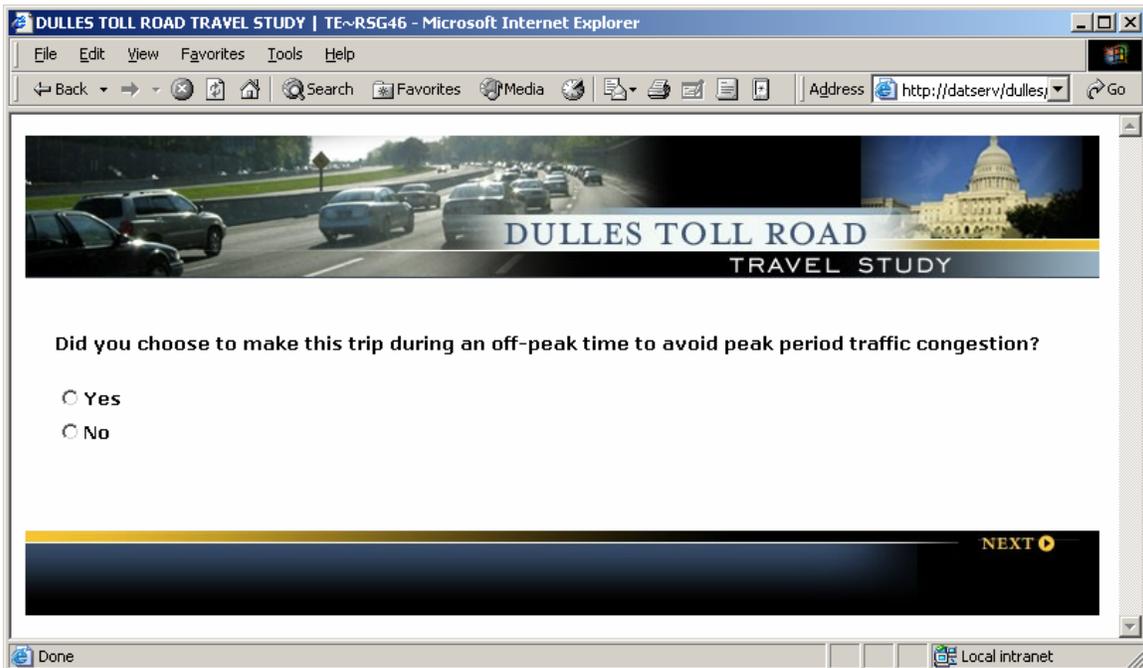


Figure 17: Check on Travel Time

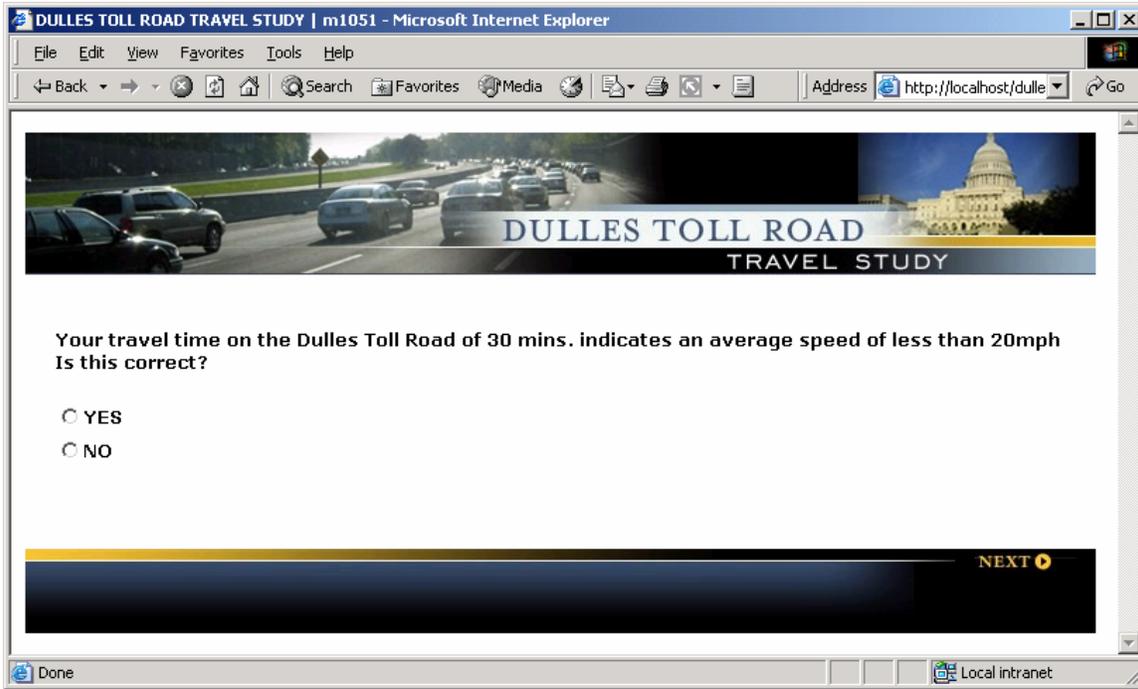


Figure 18: Trip Time for Different Route

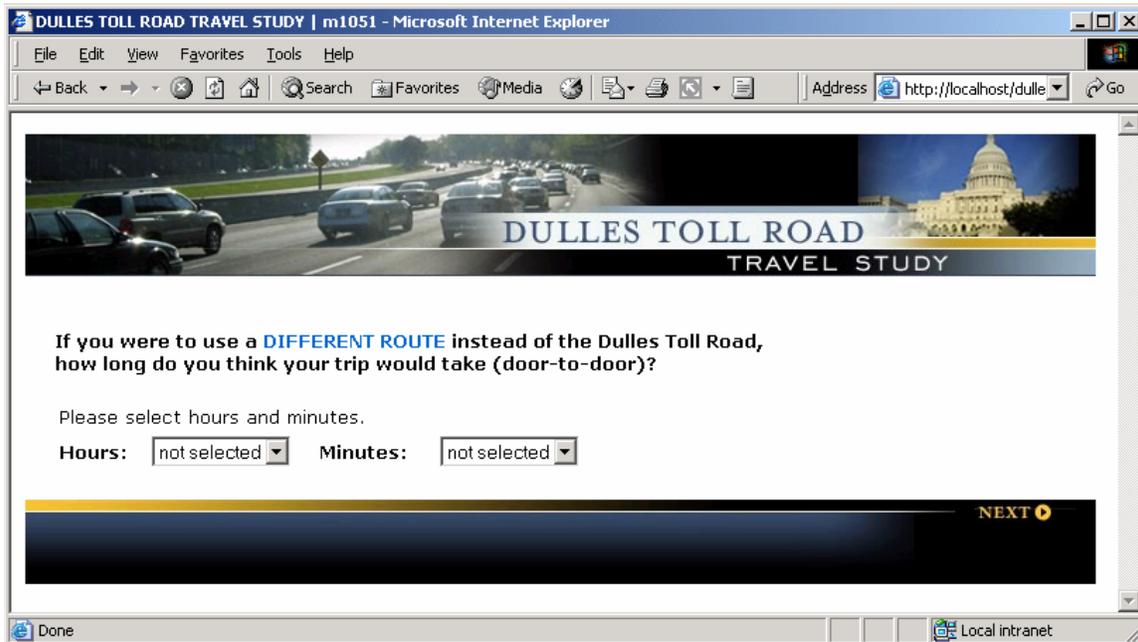


Figure 19: Check on Travel Time for Different Route

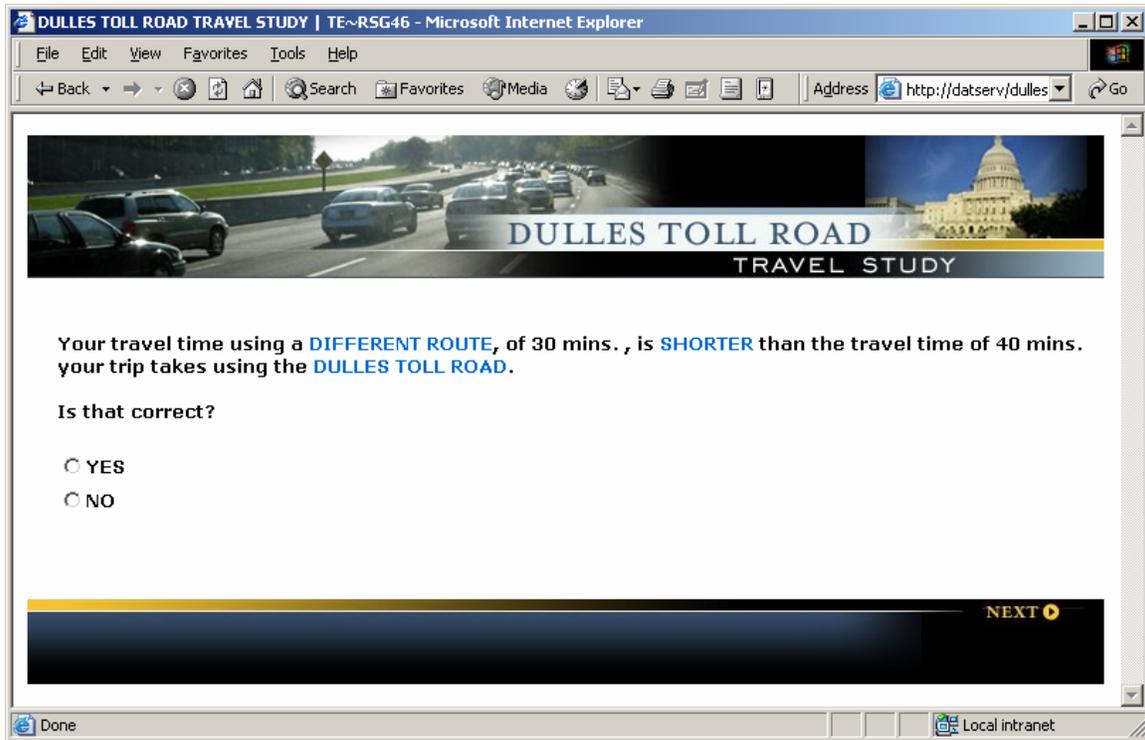


Figure 20: Mode

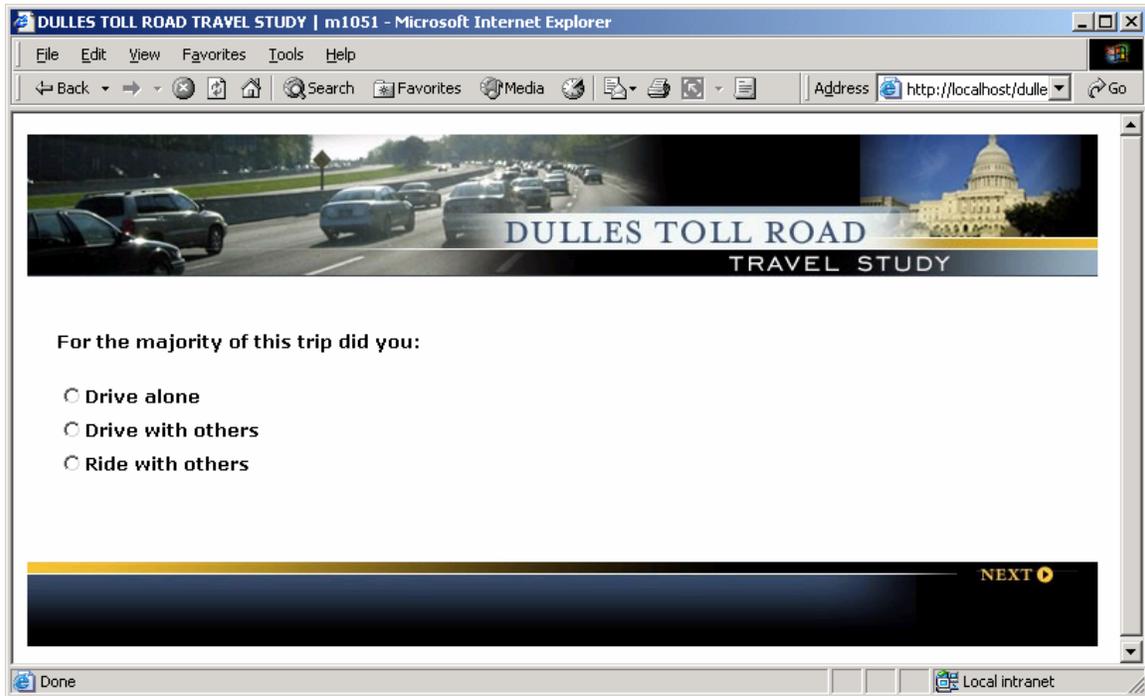


Figure 21: Occupancy

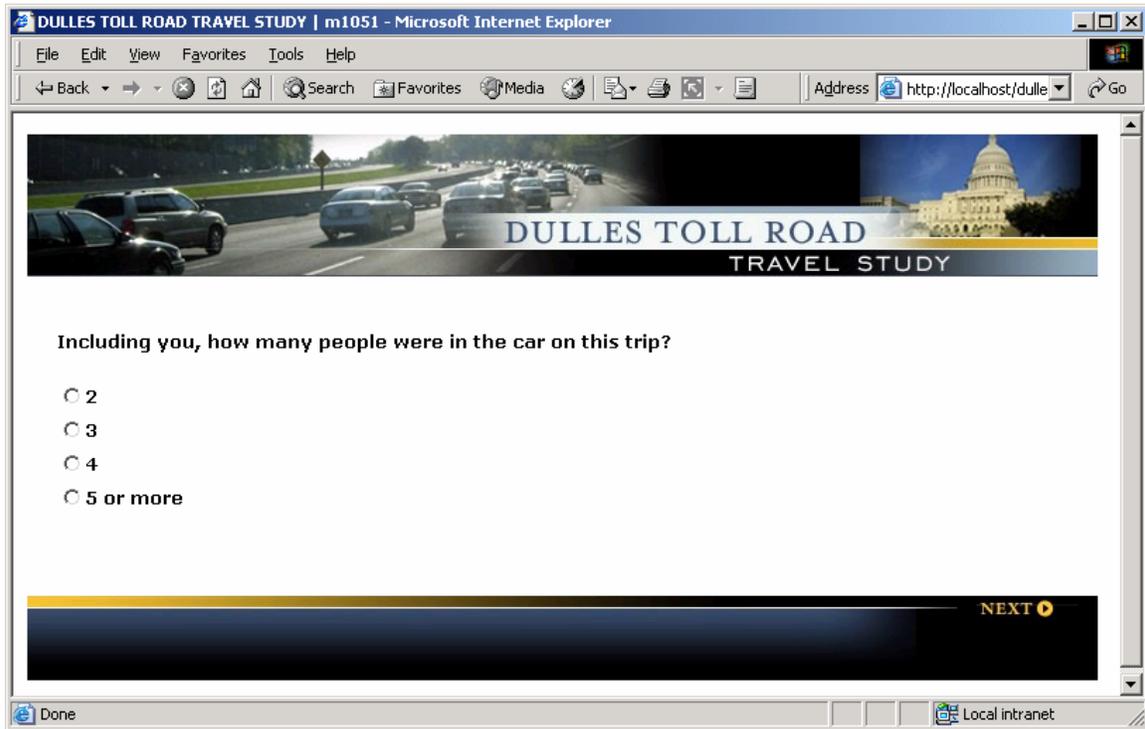


Figure 22: Type of Other Travelers

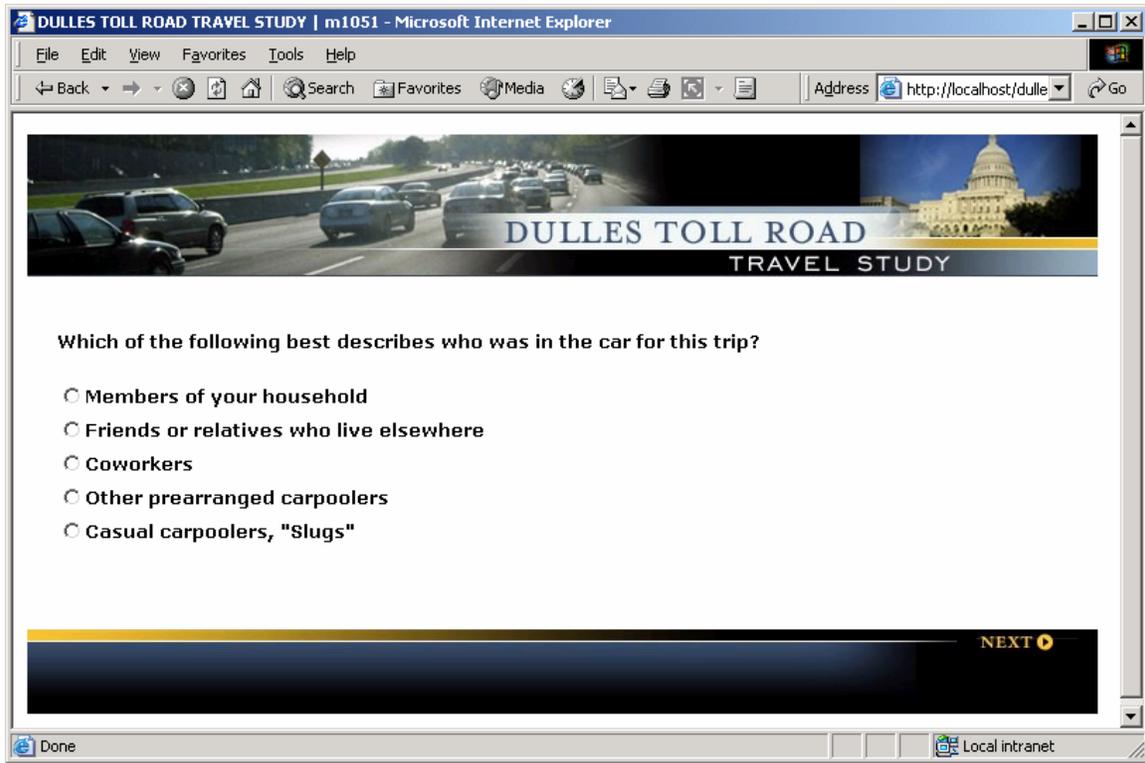


Figure 23: Carpool Start Location

DULLES TOLL ROAD TRAVEL STUDY | m1051 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media Print Address http://localhost/dulle Go

DULLES TOLL ROAD
TRAVEL STUDY

Where was the carpool formed?

At your home

At someone else's home

At a park and ride site:

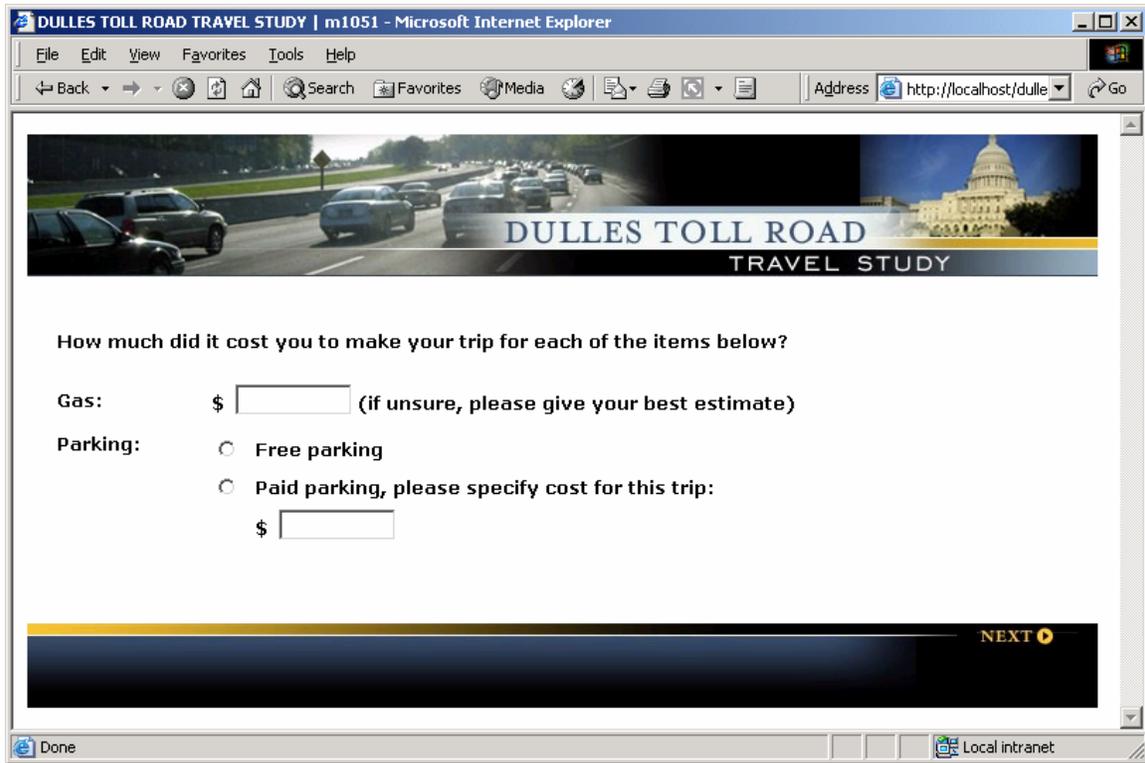
- Reston South Park & Ride (Lawyers Road and Fox Mill Road)
- Reston North Park & Ride (Sunset Hills Rd. and Wiehle Ave.)
- Reston East Park & Ride (Wiehle Ave. and the Dulles Toll Road)
- Tysons West Park Transit Station (International Dr. and Spring Hill Rd.)
- Herndon-Monroe Park and Ride (between Fairfax Cty. Pkwy. and Monroe St.)
- Another Park & Ride, please specify:
- Elsewhere, please specify:

NEXT ➔

Done Local intranet



Figure 24: Gas and Parking Costs



The screenshot shows a Microsoft Internet Explorer browser window titled "DULLES TOLL ROAD TRAVEL STUDY | m1051". The address bar shows "http://localhost/dulle". The main content area features a banner with a road scene and the text "DULLES TOLL ROAD TRAVEL STUDY". Below the banner, the survey asks: "How much did it cost you to make your trip for each of the items below?".

Gas: \$ (if unsure, please give your best estimate)

Parking: Free parking

Paid parking, please specify cost for this trip:

 \$

At the bottom of the form, there is a dark blue bar with a yellow "NEXT" button and a right-pointing arrow.



Figure 25: Payment Type

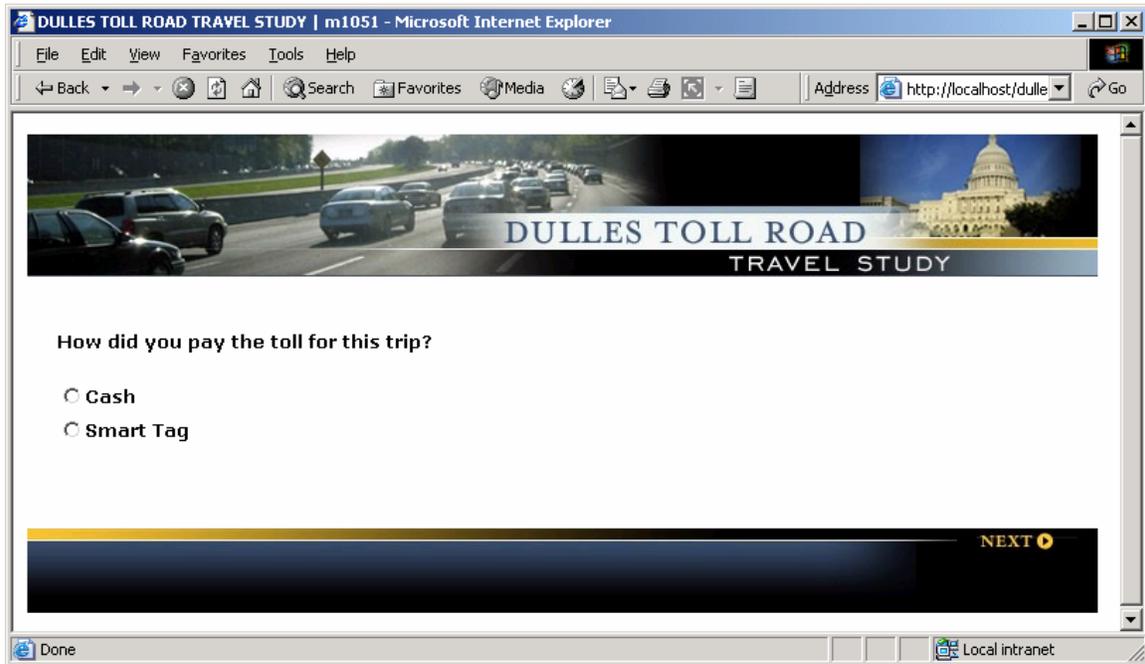


Figure 26: Estimated Toll Cost

DULLES TOLL ROAD TRAVEL STUDY | m1051 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Copy Paste Address http://localhost/dulle Go

For your trip on the [DULLES TOLL ROAD](#) from the Capital Beltway (I-495) (Exit 18) to Reston Parkway (Exit 12), we estimate that the tolls for a car would have been: **\$0.75**

Is that how much you paid?

YES

NO, please enter toll paid on the DTR: \$

NEXT ➔

Done Local intranet



Figure 27: Who Paid the Toll

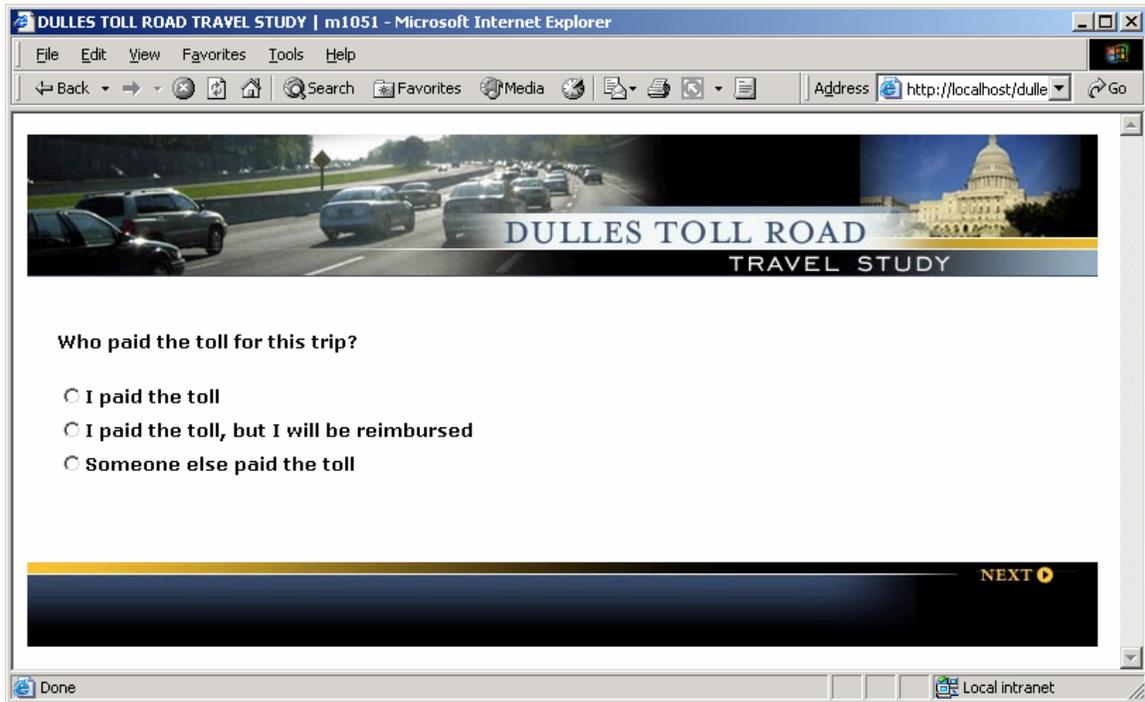


Figure 28: Smart Tag Ownership

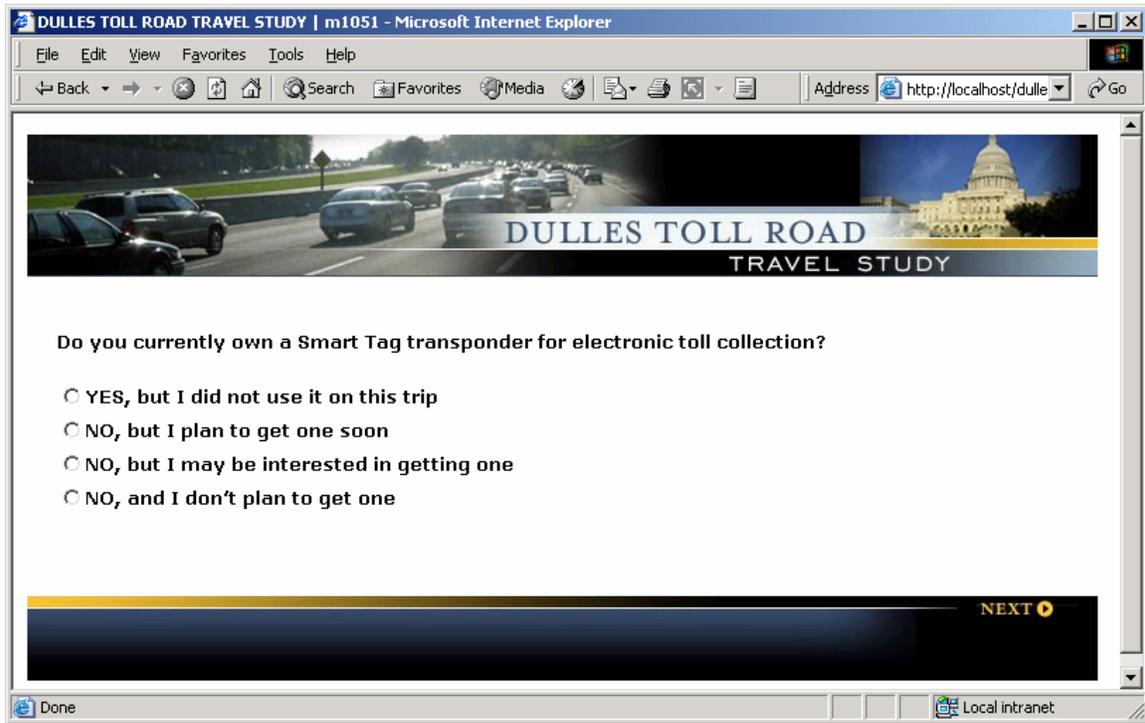


Figure 29: Reason for Not Using Smart Tag (if respondent owns Smart Tag but did not use)

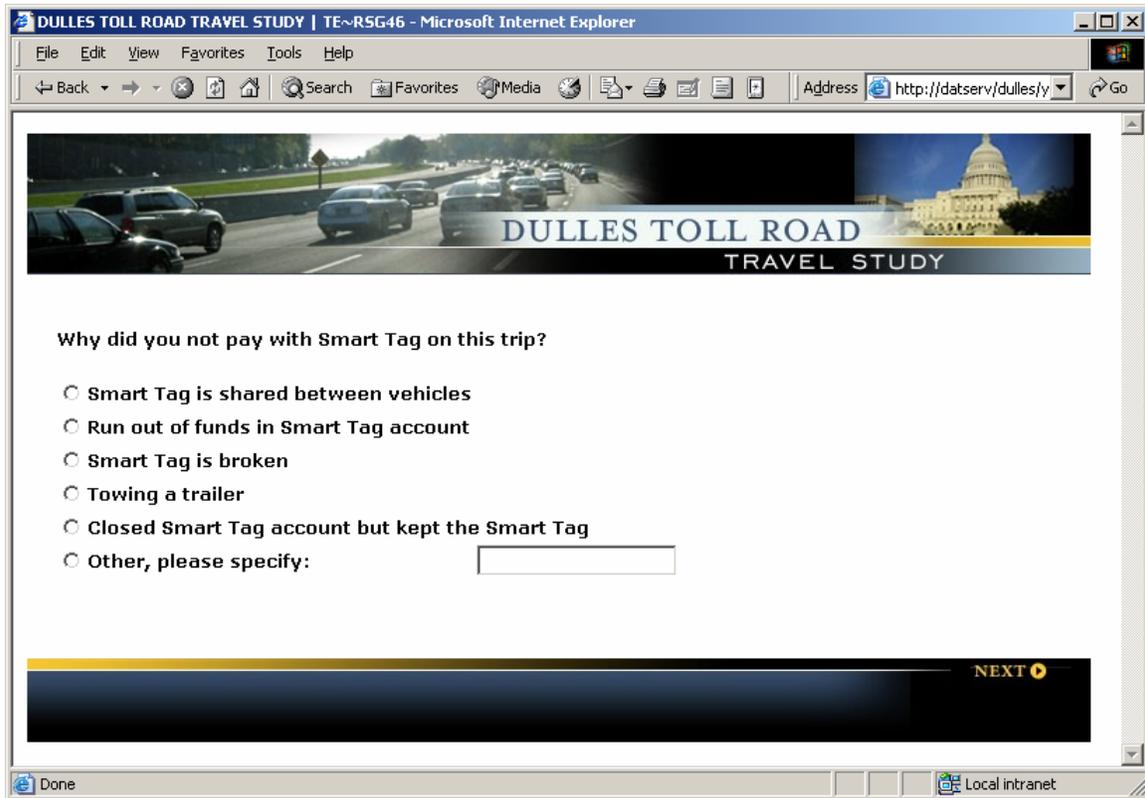
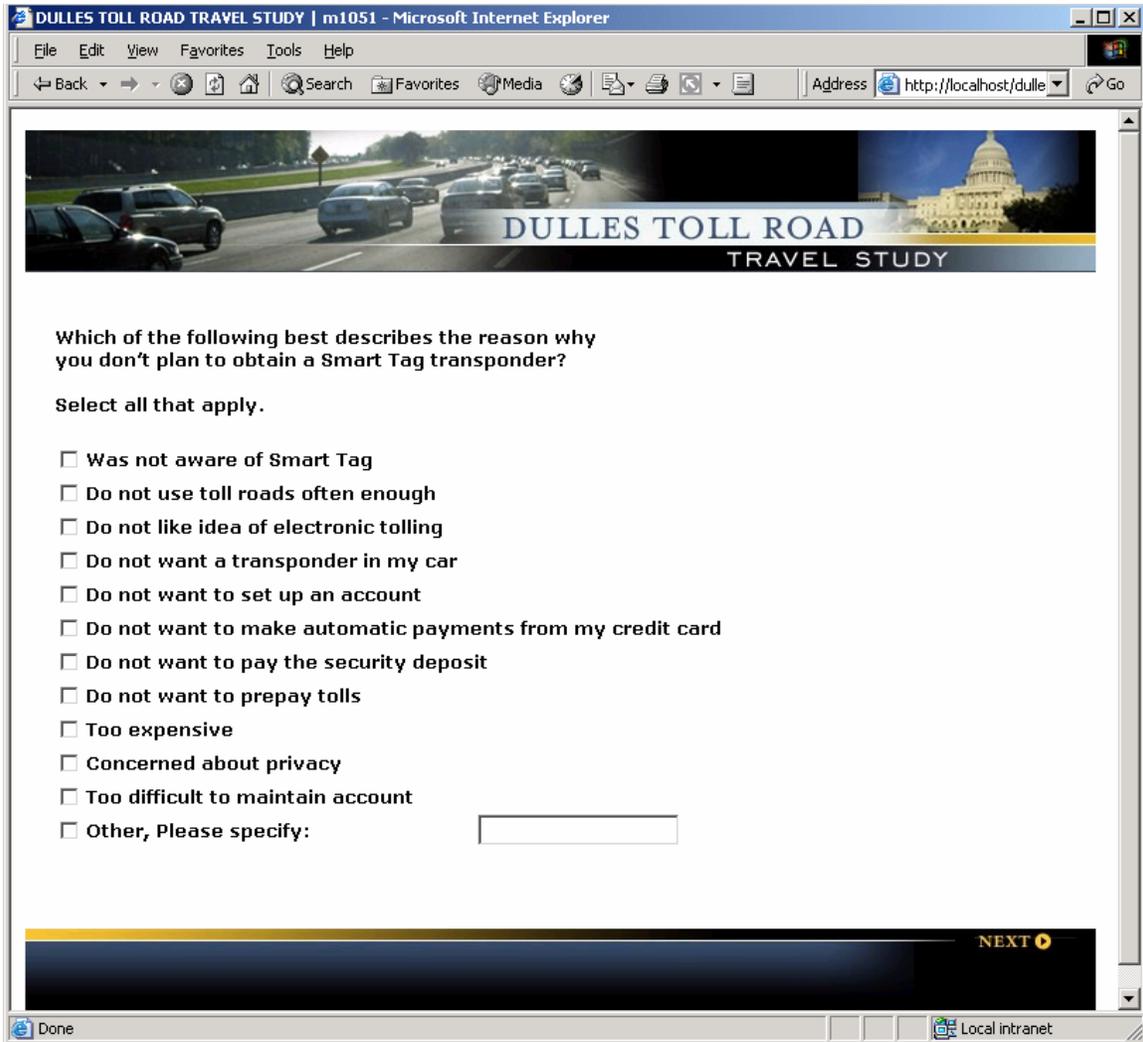


Figure 30: Reasons for Not Planning to Obtain Smart Tag



DULLES TOLL ROAD TRAVEL STUDY | m1051 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://localhost/dulle

DULLES TOLL ROAD TRAVEL STUDY

Which of the following best describes the reason why you don't plan to obtain a Smart Tag transponder?

Select all that apply.

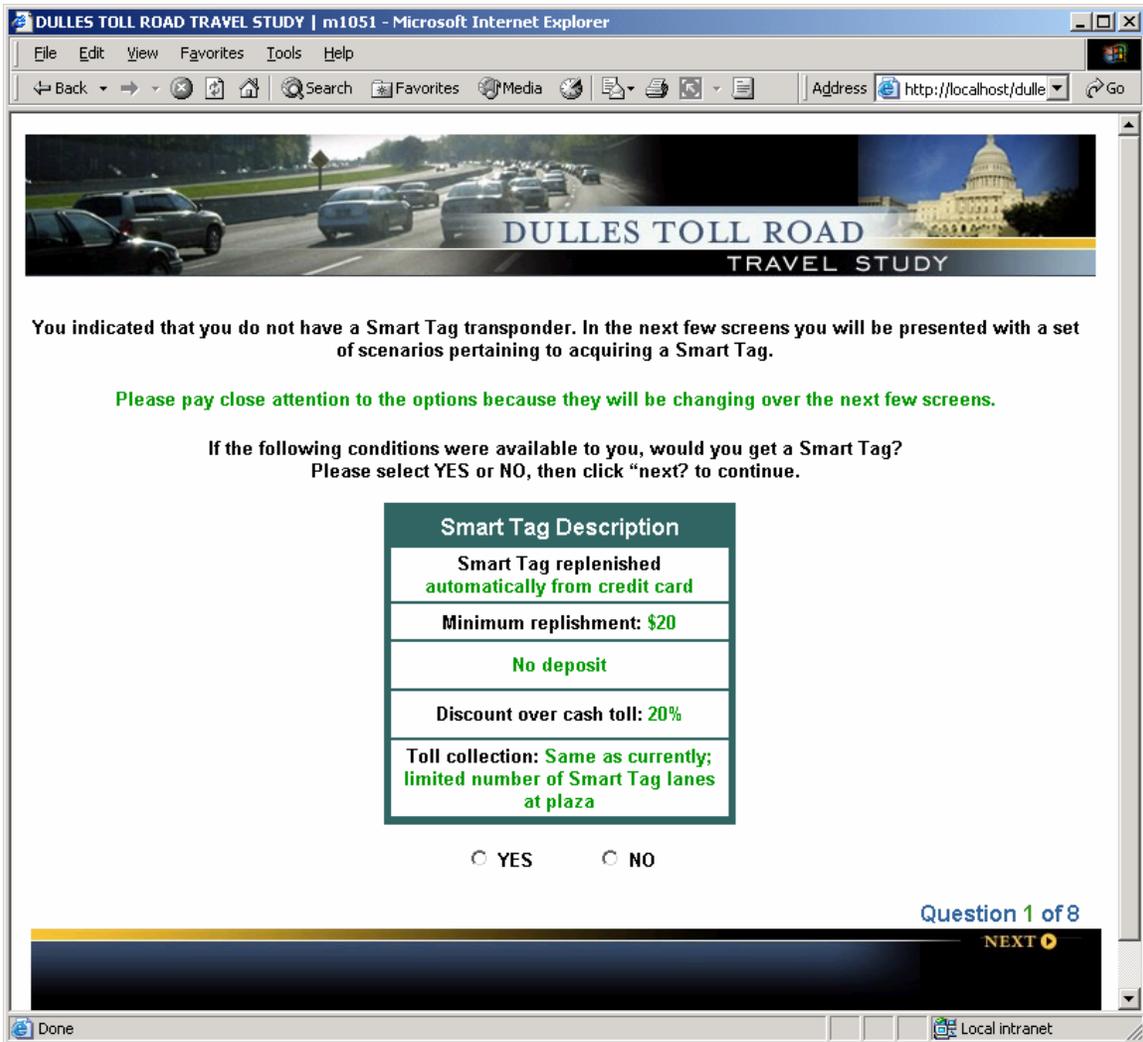
- Was not aware of Smart Tag
- Do not use toll roads often enough
- Do not like idea of electronic tolling
- Do not want a transponder in my car
- Do not want to set up an account
- Do not want to make automatic payments from my credit card
- Do not want to pay the security deposit
- Do not want to prepay tolls
- Too expensive
- Concerned about privacy
- Too difficult to maintain account
- Other, Please specify:

NEXT ➔

Done Local intranet



Figure 31: Smart Tag Scenario 1 (8 Smart Tag Scenarios presented if respondent doesn't own a Smart Tag)



The screenshot shows a Microsoft Internet Explorer browser window titled "DULLES TOLL ROAD TRAVEL STUDY | m1051". The address bar shows "http://localhost/dulle". The main content area features a banner image of a highway with cars and the text "DULLES TOLL ROAD TRAVEL STUDY". Below the banner, the text reads: "You indicated that you do not have a Smart Tag transponder. In the next few screens you will be presented with a set of scenarios pertaining to acquiring a Smart Tag. Please pay close attention to the options because they will be changing over the next few screens." The survey question is: "If the following conditions were available to you, would you get a Smart Tag? Please select YES or NO, then click 'next?' to continue." A table with a green border lists the following conditions: "Smart Tag Description", "Smart Tag replenished automatically from credit card", "Minimum replenishment: \$20", "No deposit", "Discount over cash toll: 20%", and "Toll collection: Same as currently; limited number of Smart Tag lanes at plaza". Below the table are radio buttons for "YES" and "NO". In the bottom right corner, it says "Question 1 of 8" and a "NEXT" button with a right arrow. The browser status bar at the bottom shows "Done" and "Local intranet".

Smart Tag Description
Smart Tag replenished automatically from credit card
Minimum replenishment: \$20
No deposit
Discount over cash toll: 20%
Toll collection: Same as currently; limited number of Smart Tag lanes at plaza



Figure 32: Smart Tag Scenario 2

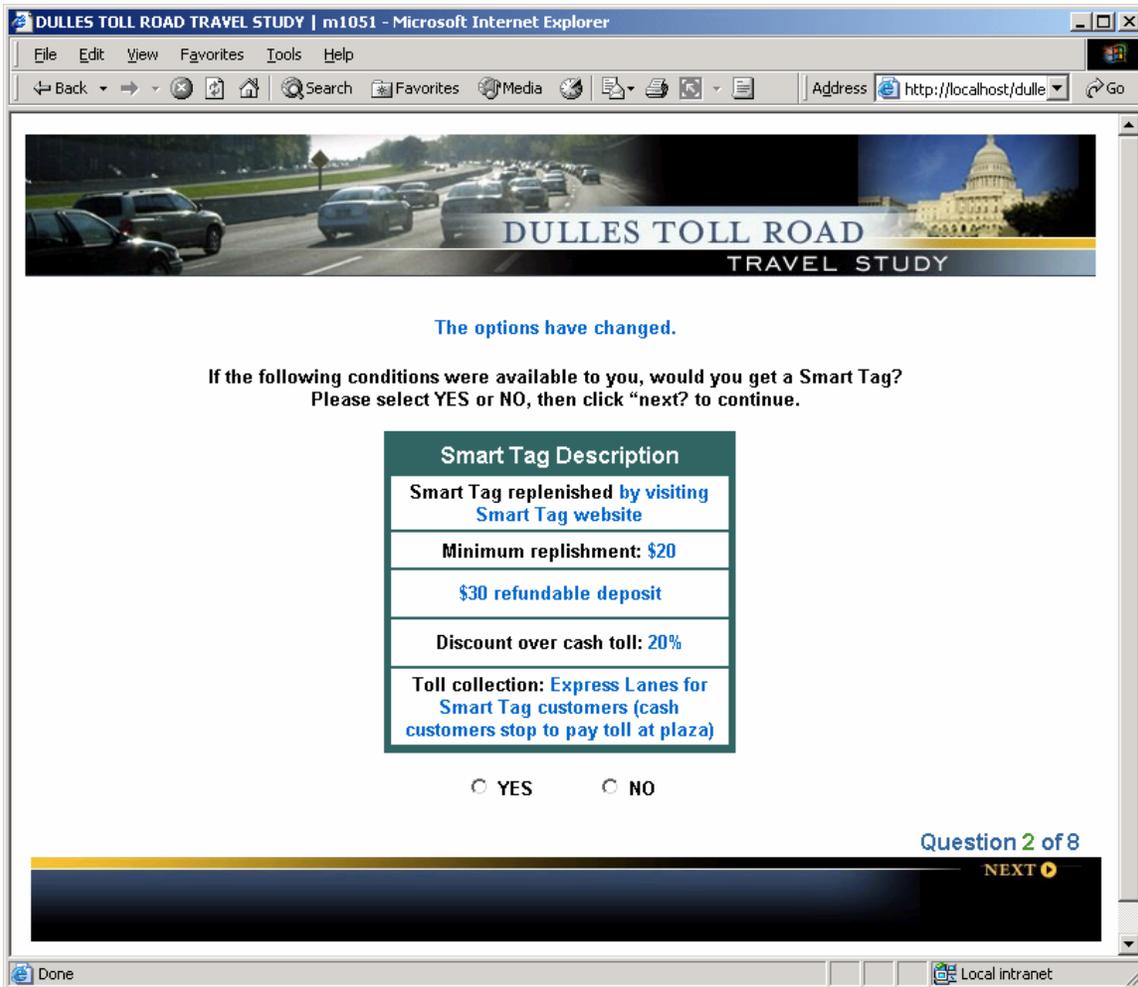


Figure 33: Smart Tag Scenario 3

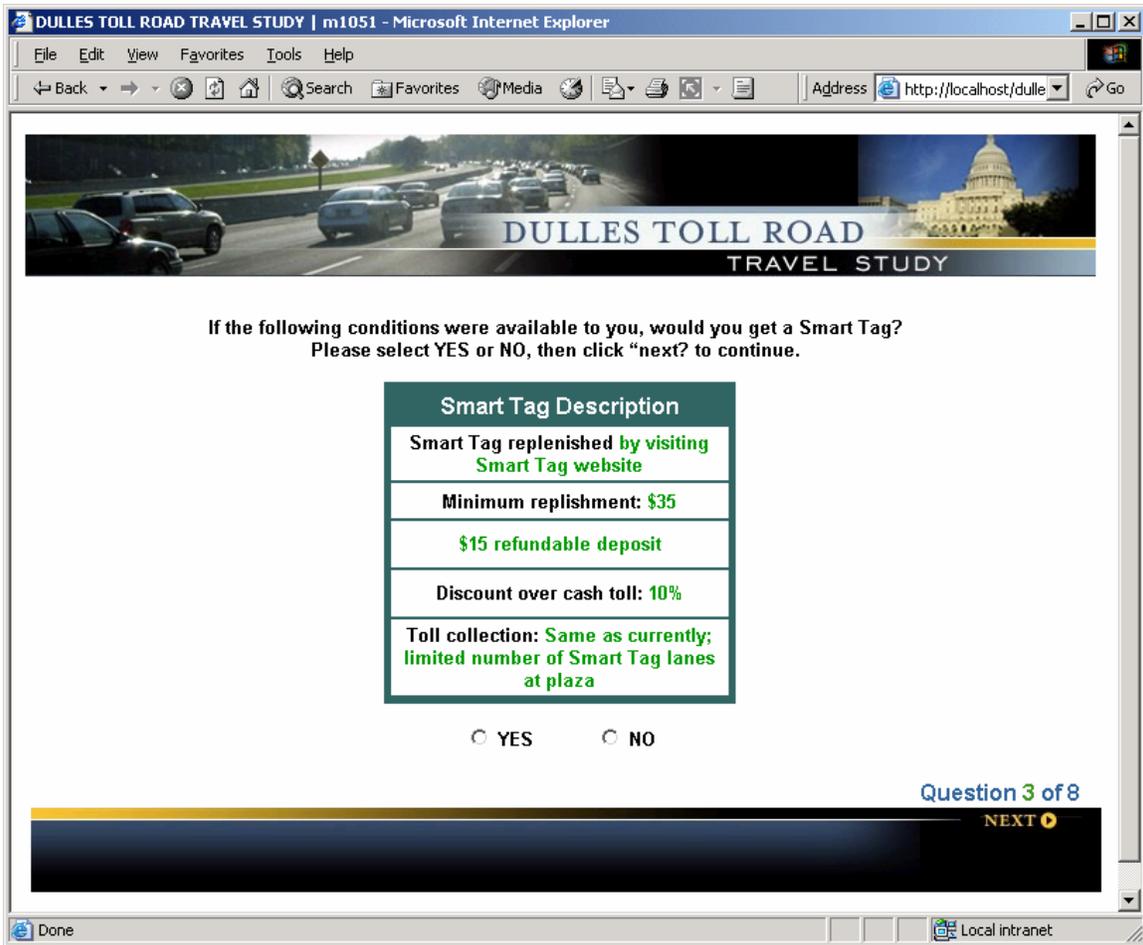


Figure 34: Distance From Trip Start Location to Closest Metrorail (if start location is within Metrorail service)

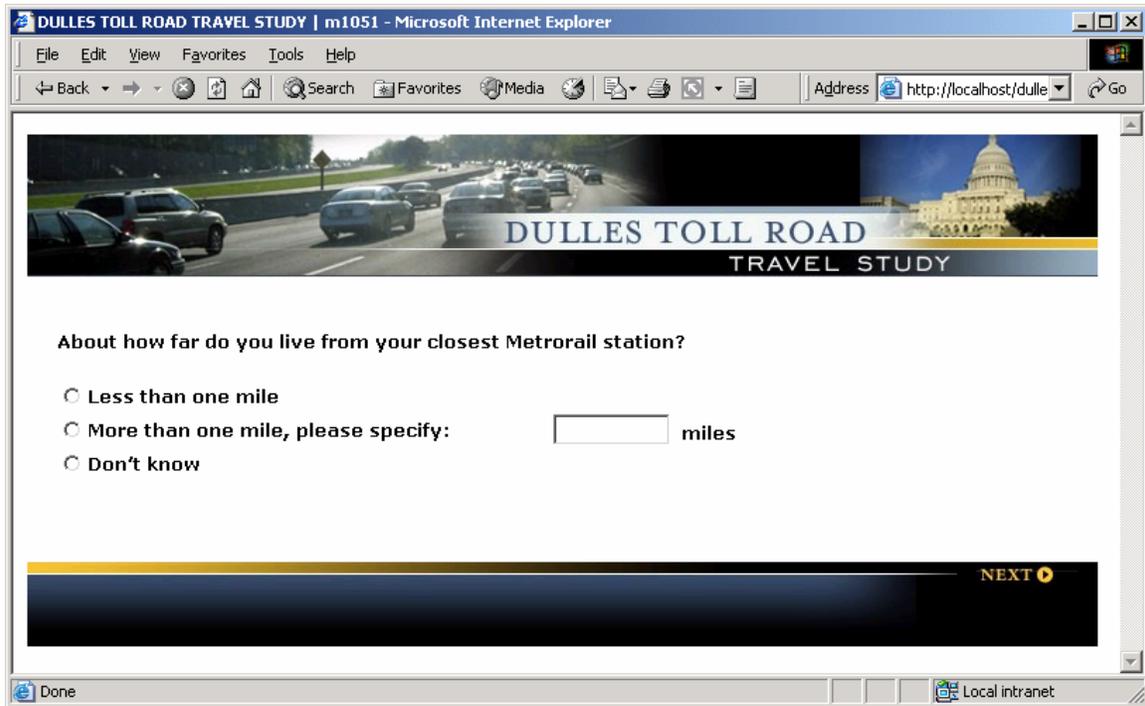
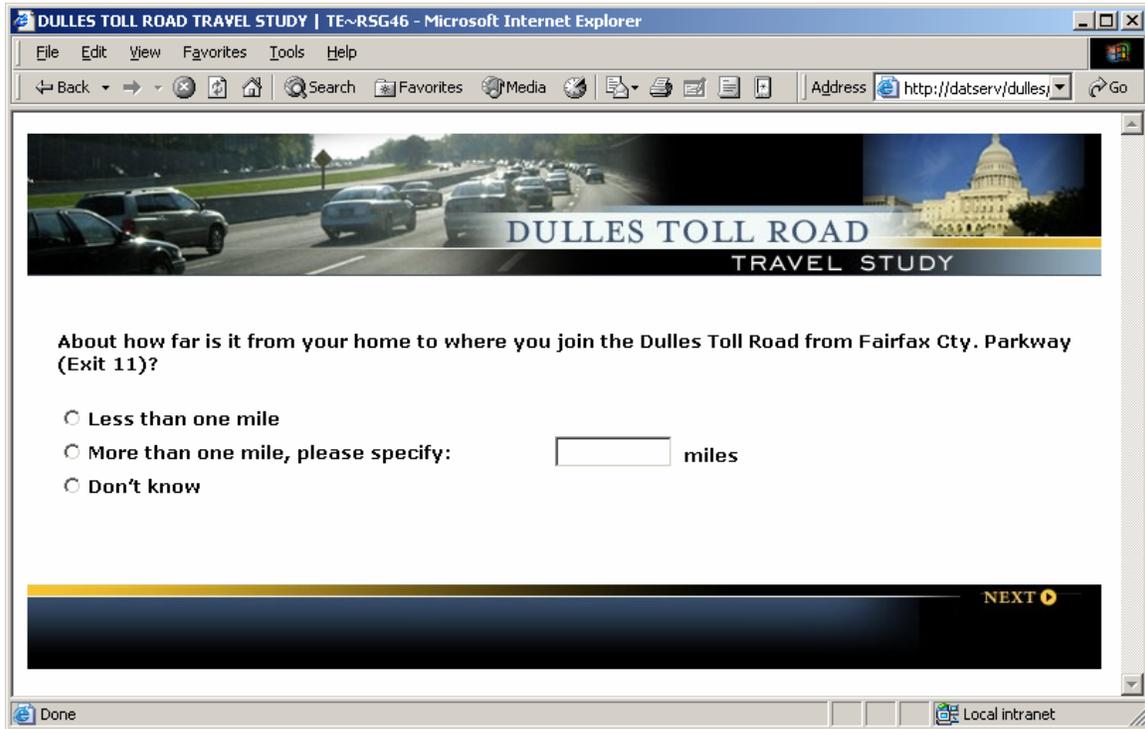


Figure 35: Distance From Trip Start Location to Dulles Toll Road (if start location is outside of Metrorail service)



The screenshot shows a Microsoft Internet Explorer browser window titled "DULLES TOLL ROAD TRAVEL STUDY | TE~RSG46". The address bar shows "http://datserv/dulles...". The main content area features a banner image of a highway with cars and the text "DULLES TOLL ROAD TRAVEL STUDY". Below the banner, the survey question is: "About how far is it from your home to where you join the Dulles Toll Road from Fairfax Cty. Parkway (Exit 11)?". The response options are: "Less than one mile", "More than one mile, please specify:" followed by a text input field and the word "miles", and "Don't know". At the bottom right of the content area, there is a "NEXT" button with a right-pointing arrow. The browser's status bar at the bottom shows "Done" and "Local intranet".



Figure 36: Distance from Dulles Toll Road to Trip End Point (if trip end location is outside of Metrorail service)

DULLES TOLL ROAD TRAVEL STUDY

About how far is the Dulles Toll Road exit at Reston Parkway (Exit 12) from the destination of your trip in Fairfax County (outside I-495)?

Less than one mile

More than one mile, please specify: miles

Don't know

NEXT



Figure 37: Distance From Trip End Location to Closest Metrorail (if trip end location is within Metrorail service)

The screenshot shows a Microsoft Internet Explorer browser window with the title "DULLES TOLL ROAD TRAVEL STUDY | TE~RSG46". The address bar shows "http://datserv/dulles". The main content area features a banner image of a highway with cars and the text "DULLES TOLL ROAD TRAVEL STUDY". Below the banner is the question: "About how far is the closest Metrorail station from the destination of your trip in the District of Columbia?". There are three radio button options: "Less than one mile", "More than one mile, please specify:" followed by a text input field and the word "miles", and "Don't know". At the bottom right of the content area is a "NEXT" button with a right-pointing arrow. The browser's status bar at the bottom shows "Done" and "Local intranet".

DULLES TOLL ROAD TRAVEL STUDY

About how far is the closest Metrorail station from the destination of your trip in the District of Columbia?

Less than one mile

More than one mile, please specify: miles

Don't know

NEXT ➔



Figure 38: Dulles Toll Pricing Options

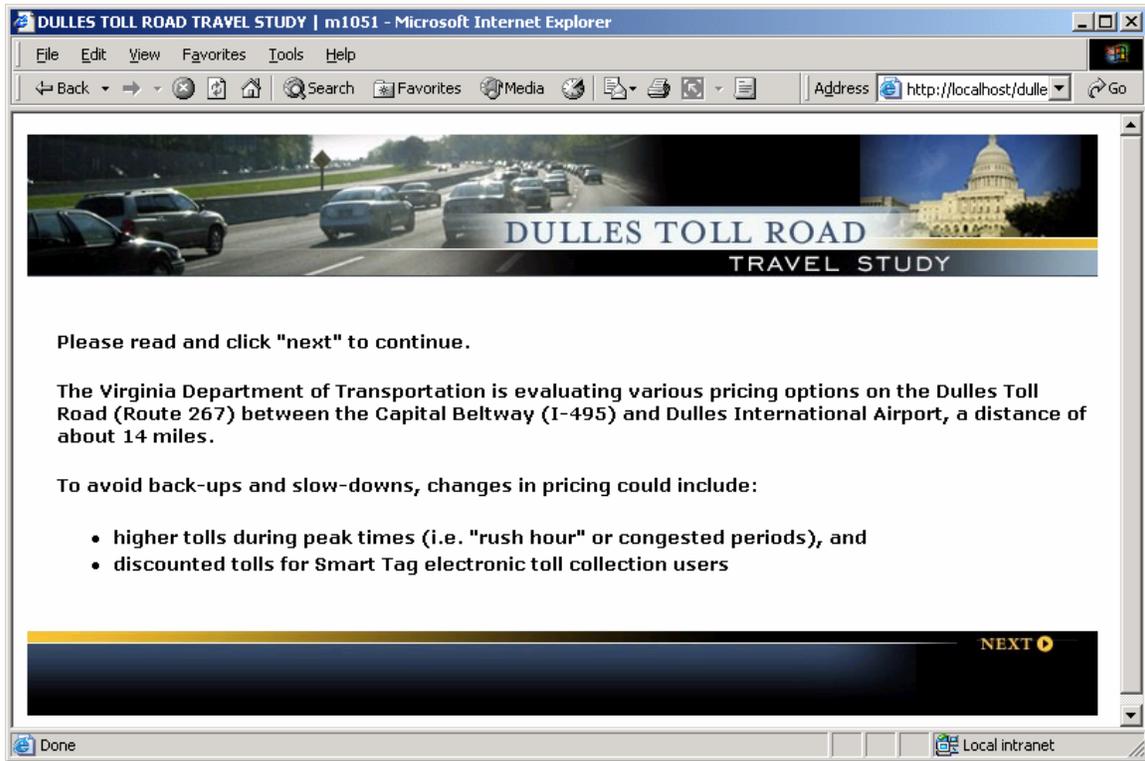


Figure 39: Metrorail Explanation

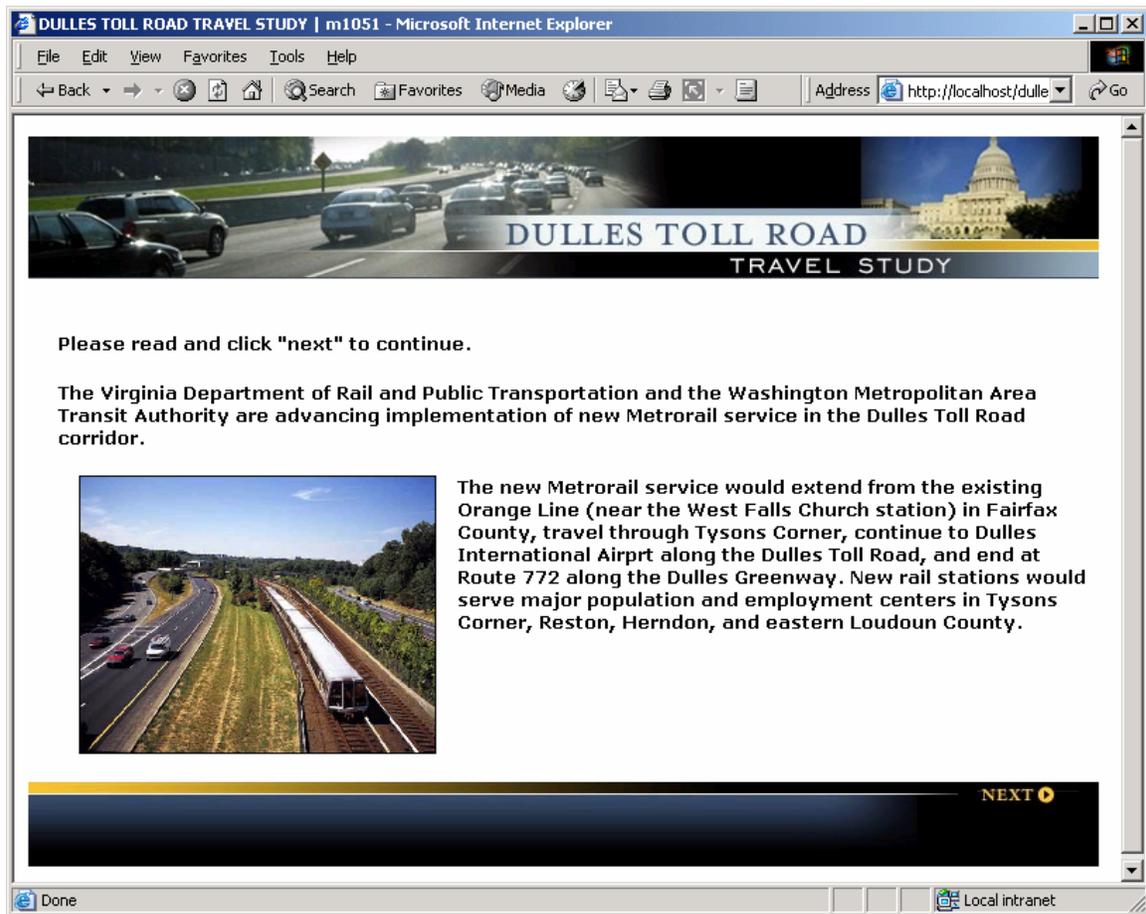


Figure 40: Instructions: Dulles Toll Road Travel Options

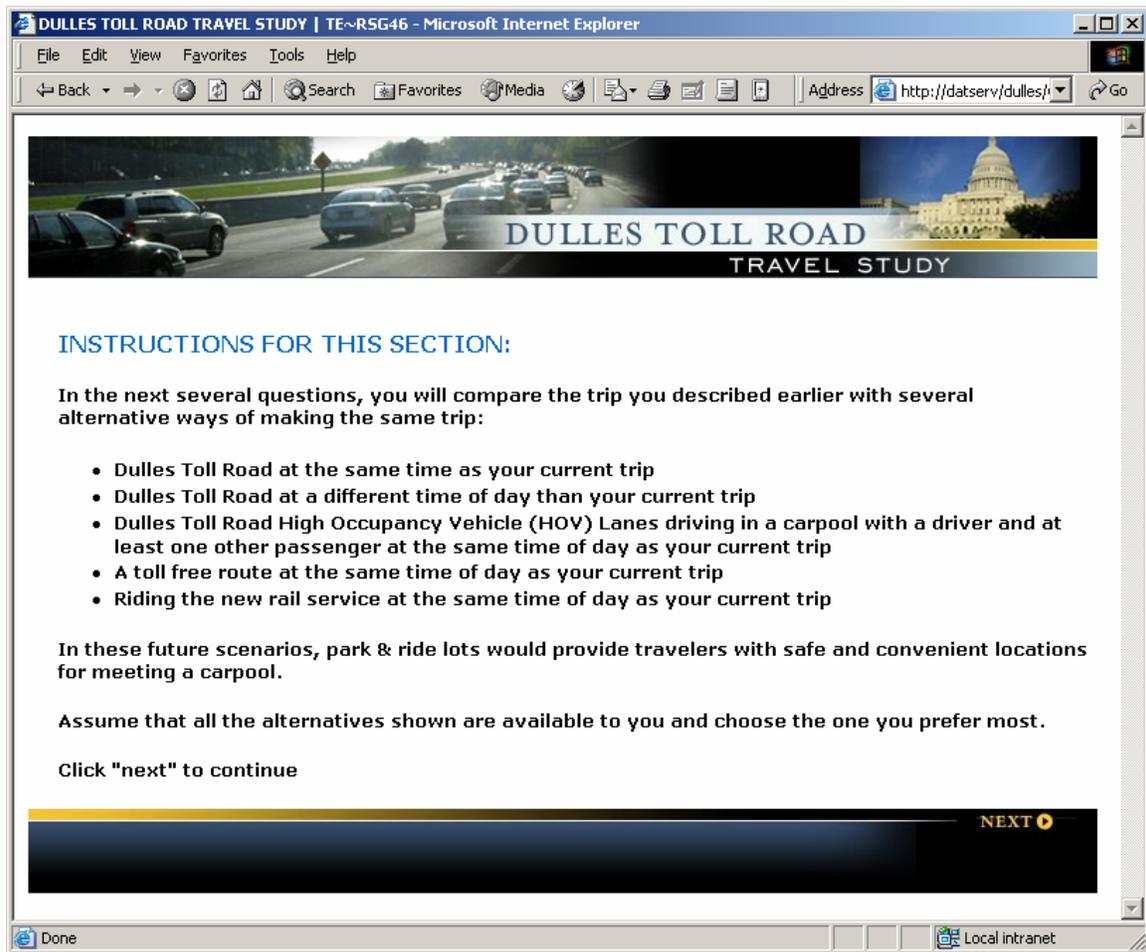


Figure 41: DTR Travel Scenario 1 (Same Trip Time, Different Trip Time, Rail, Non-Toll options)

DULLES TOLL ROAD TRAVEL STUDY

If the following options were available to you for making your trip, which would you choose?

Pay close attention to travel times and tolls because they will be changing over the next few screens.

(select an option by clicking the button or the text in the colored bar)

Traveling on the DULLES TOLL ROAD	
<input type="radio"/> At the same time as your current trip	<input type="radio"/> At a DIFFERENT TIME than your current trip
Total time: 32 mins.	Total time: 29 mins.
Toll: \$1.05	Toll: \$0.75
	Travel 1 hr. earlier

New RAIL service	A NON-TOLL ROAD route
<input type="radio"/> RIDING THE TRAIN	<input type="radio"/> With NO TOLL
Total time: 1 hr. 1 min.	Total time: 40 mins.
Fare: \$2.85	
(10 mins. drive, park at station, 5 mins. wait on platform, 36 mins. on the train, 10 mins. walk to your destination)	

Question 1 of 8

NEXT



Figure 42: DTR Travel Scenario 2 (Same Trip Time, Different Trip Time, Rail, Non-Toll options)

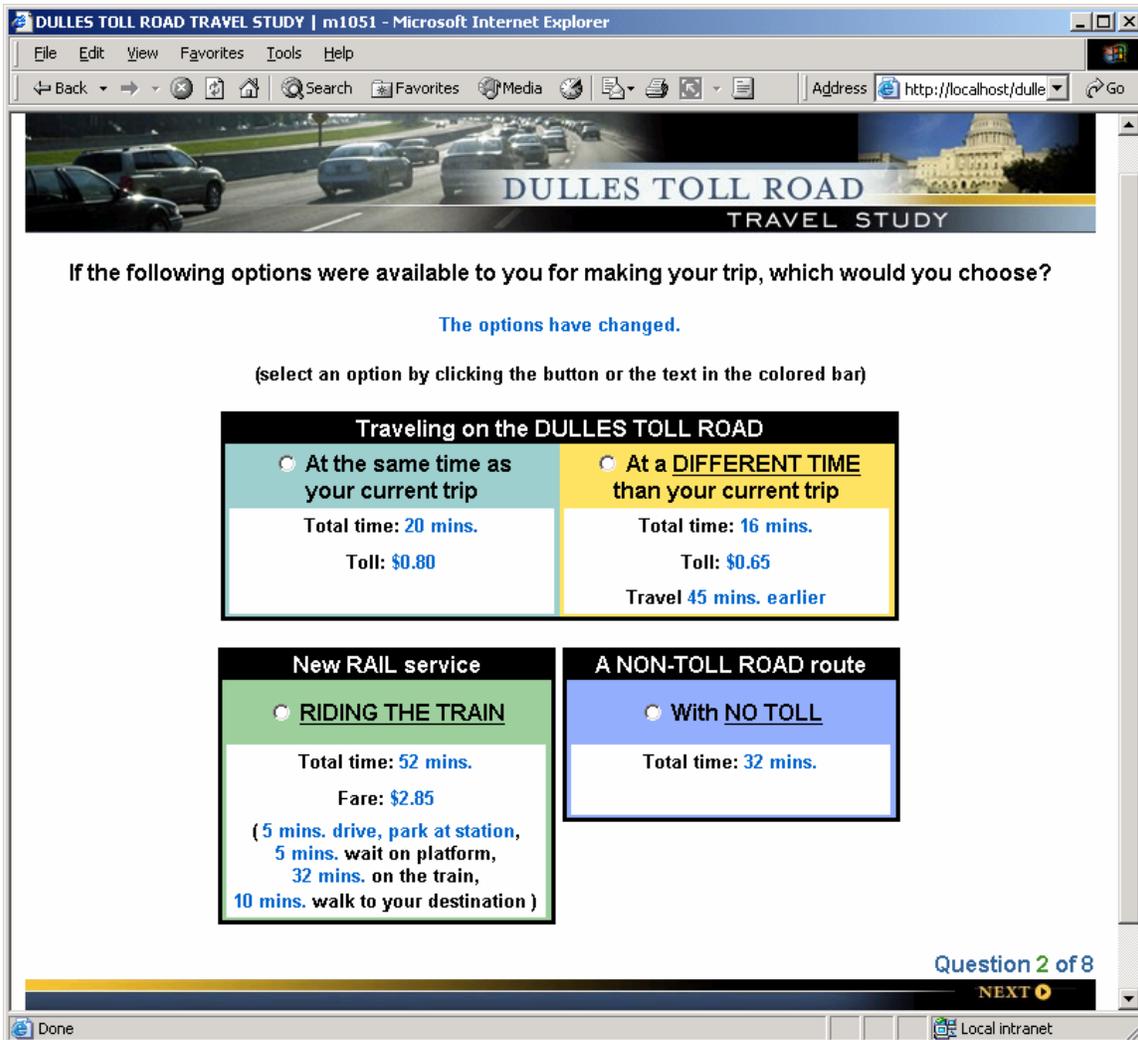


Figure 43: DTR Travel Scenario 3 (Same Trip Time, Different Trip Time, Rail, Non-Toll options)

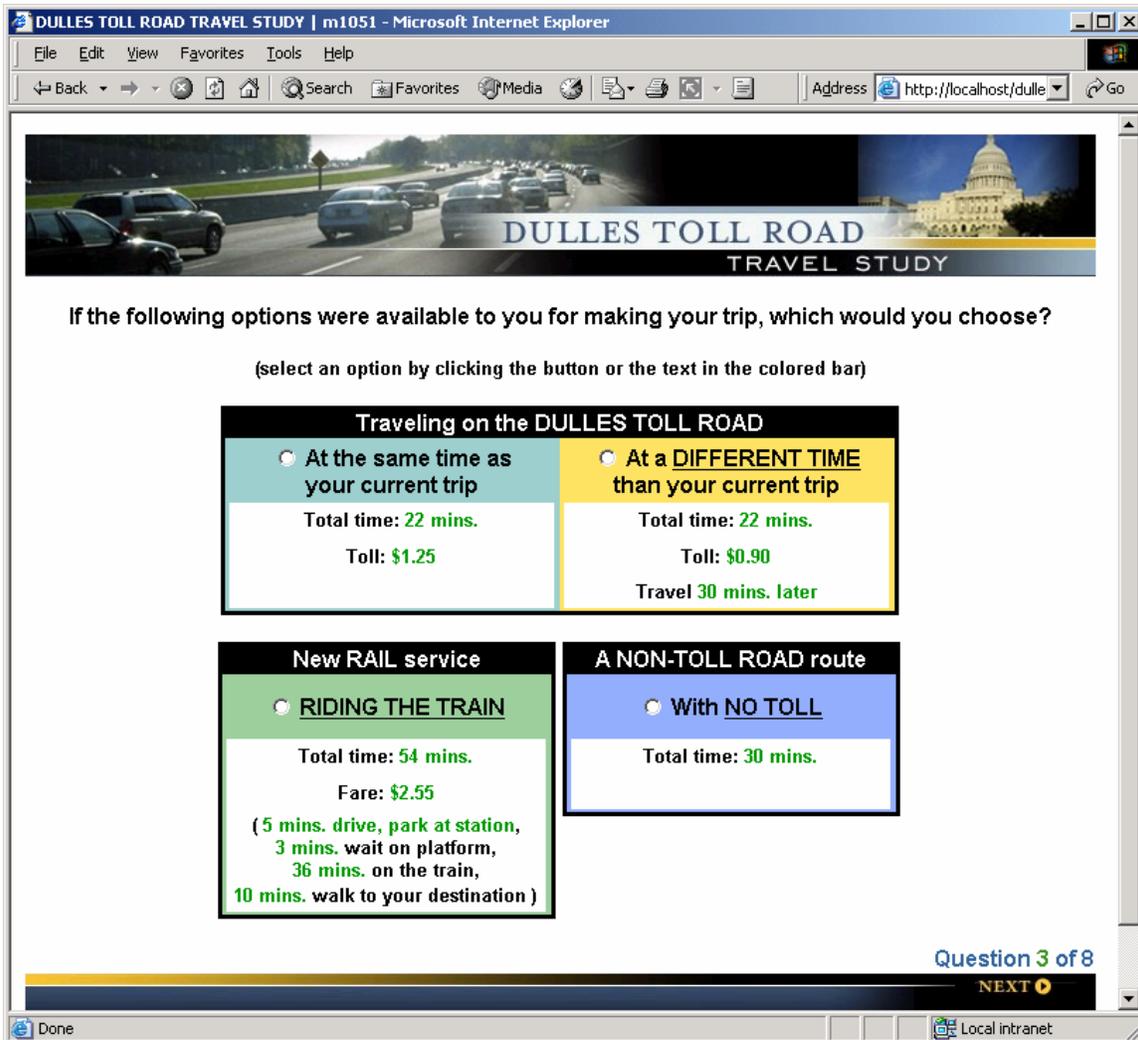


Figure 44: DTR Travel Scenario Sample (Non-Toll and DTR options)

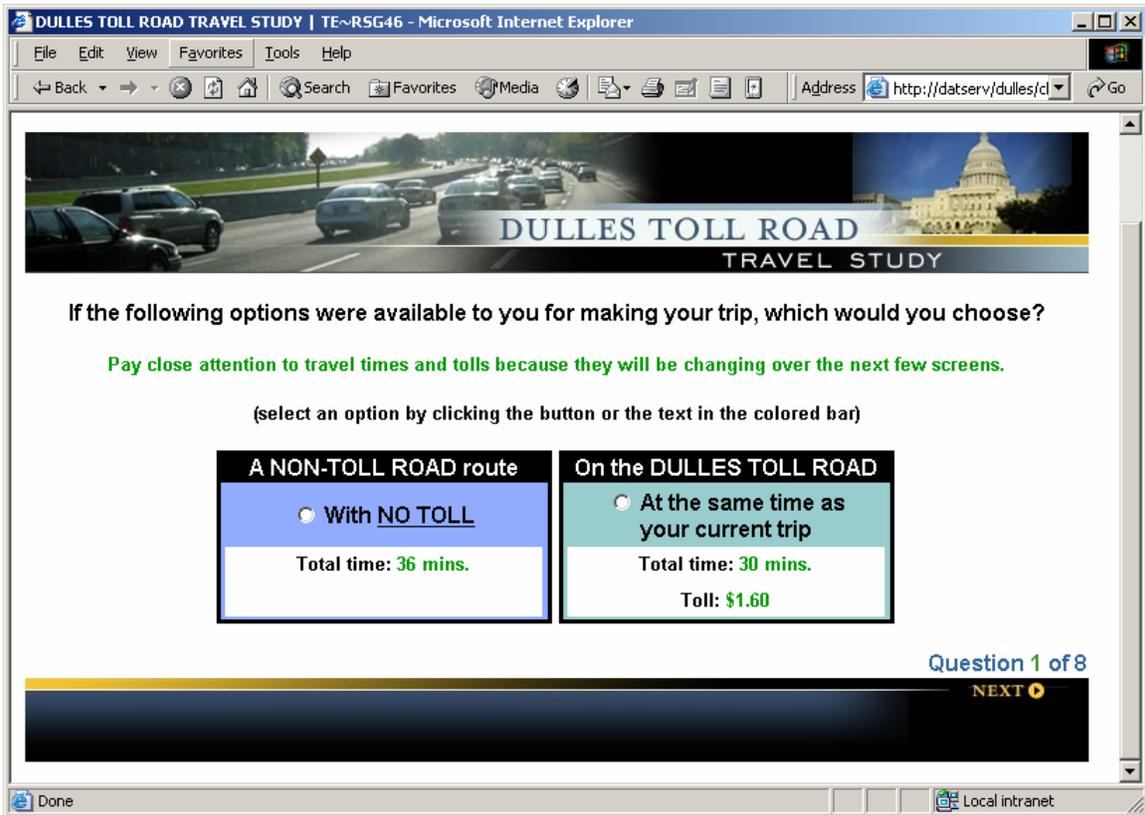


Figure 45: DTR Travel Scenario Sample (Same Trip Time, Different Trip Time, Non-Toll options)

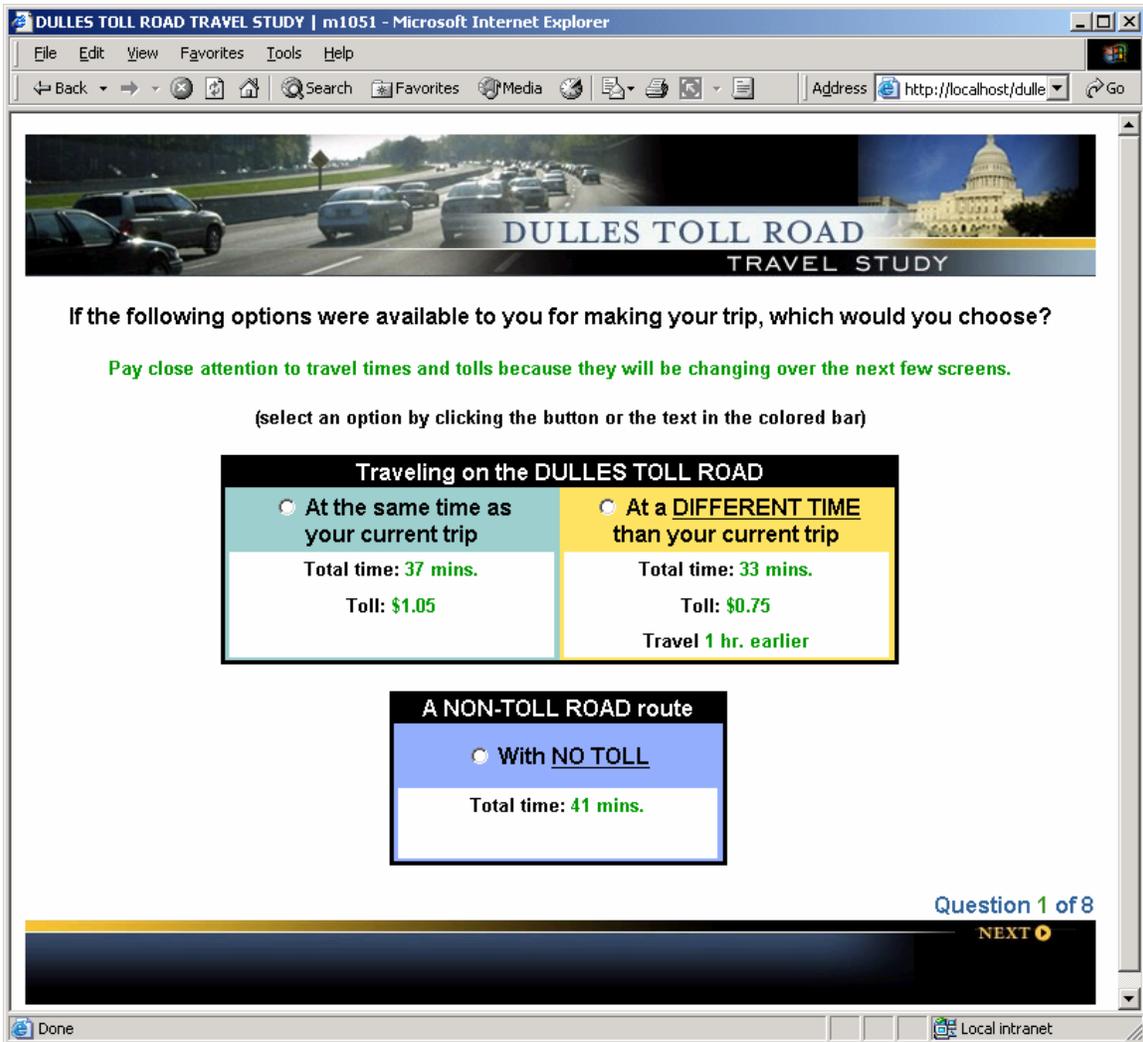


Figure 46: DTR Travel Scenario Sample (Non-Toll, Rail, HOV Lane, Different Trip Time, Same Trip Time)

DULLES TOLL ROAD TRAVEL STUDY

If the following options were available to you for making your trip, which would you choose?

Pay close attention to travel times and tolls because they will be changing over the next few screens.

(select an option by clicking the button or the text in the colored bar)

A NON-TOLL ROAD route	New RAIL service
<input type="radio"/> With NO TOLL	<input type="radio"/> RIDING THE TRAIN
Total time: 55 mins.	Total time: 1 hr. 3 mins.
	Fare: \$4.85
	(10 mins. drive, park at station, 3 mins. wait on platform, 45 mins. on the train, 5 mins. walk to your destination)

Traveling on the DULLES TOLL ROAD

<input type="radio"/> In a CAR POOL using the HOV LANE	<input type="radio"/> At a DIFFERENT TIME than your current trip	<input type="radio"/> At the same time as your current trip
Total time: 49 mins.	Total time: 49 mins.	Total time: 49 mins.
Toll: \$1.50	Toll: \$1.20	Toll: \$1.50
(44 mins. driving, 5 mins. to form car pool of you and at least 1 more person)	Travel 1 hr. earlier	

Question 1 of 8

NEXT



Figure 47: Reasons for Not Selecting the DTR (if presented with, but never chose, the Toll Road option in the Travel Scenarios)

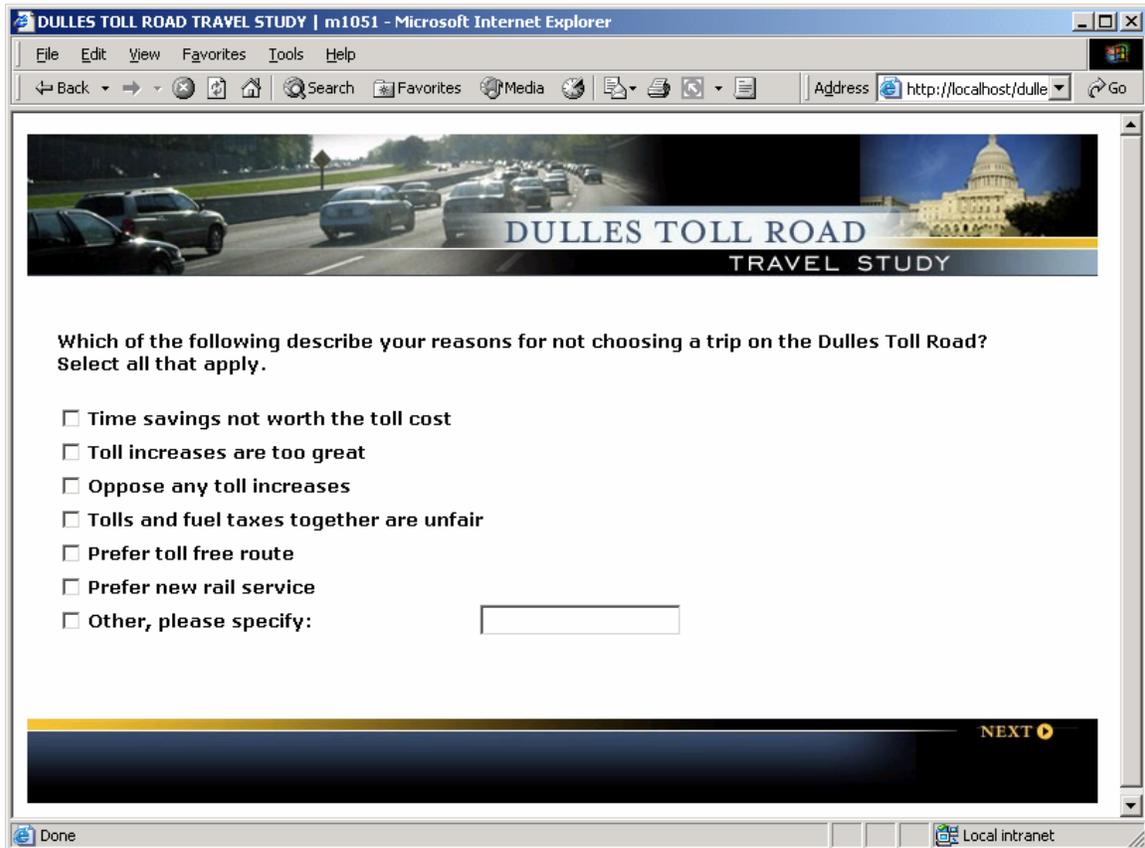


Figure 48: Reasons for Not Selecting the New Rail Service (if presented with, but never chose, the New Rail Service option in the Travel Scenarios)

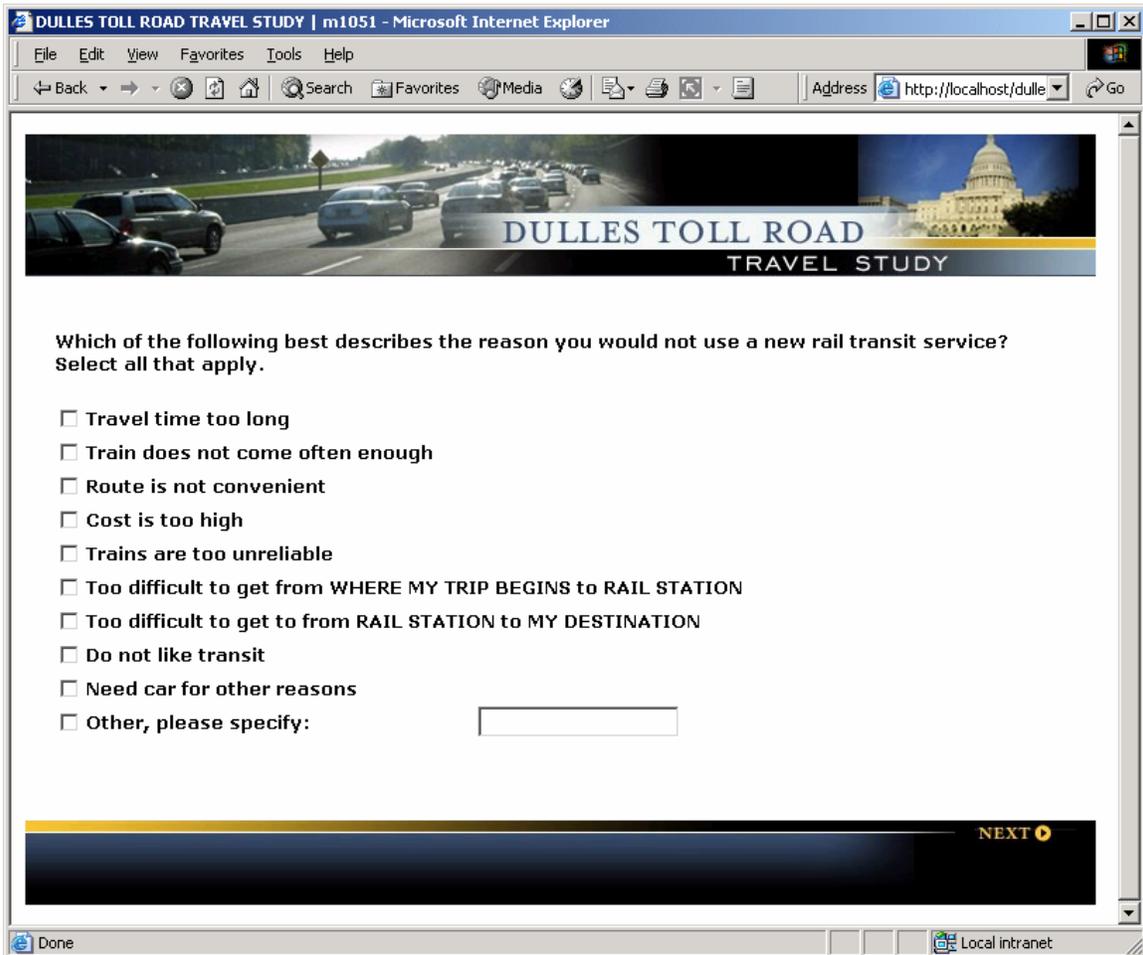


Figure 49: Reasons for Not Selecting a Different Trip Start Time (if presented with, but never chose, the Different Time option in the Travel Scenarios)

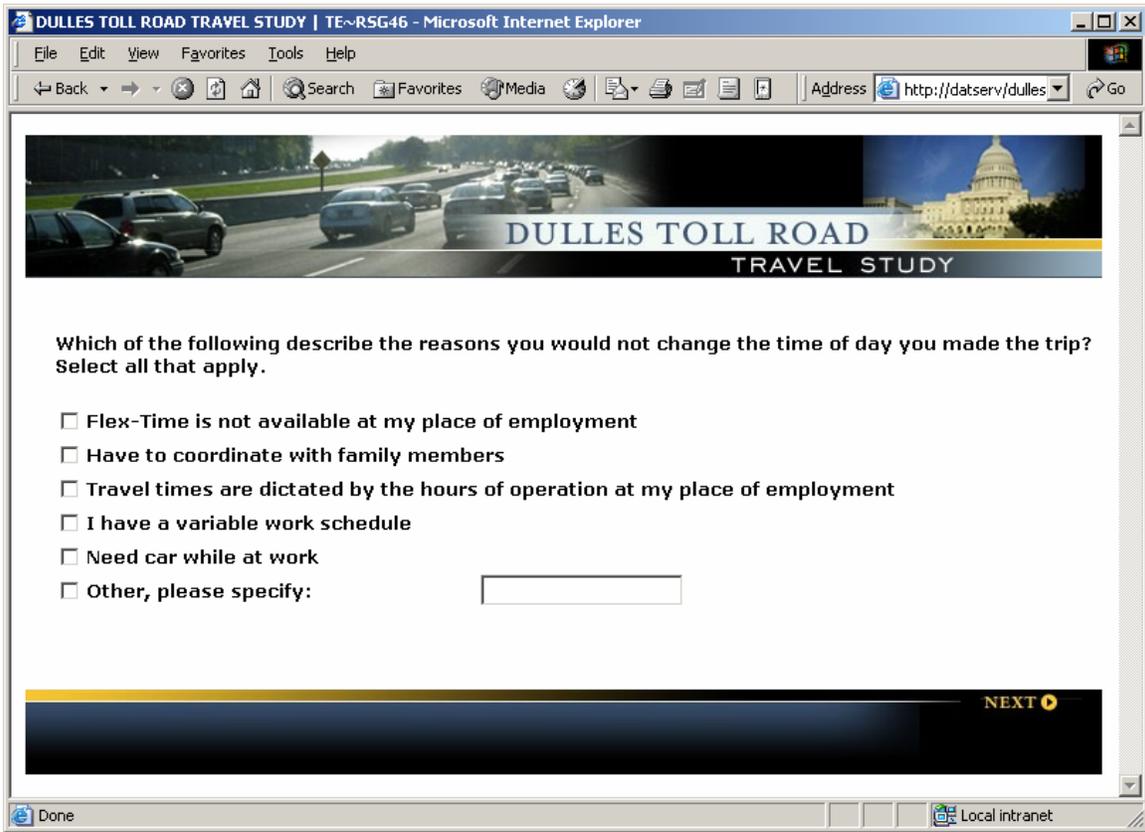


Figure 50: Reasons for Not Selecting a Car Pool Option (if presented with, but never chose, the Car Pool option in the Travel Scenarios)

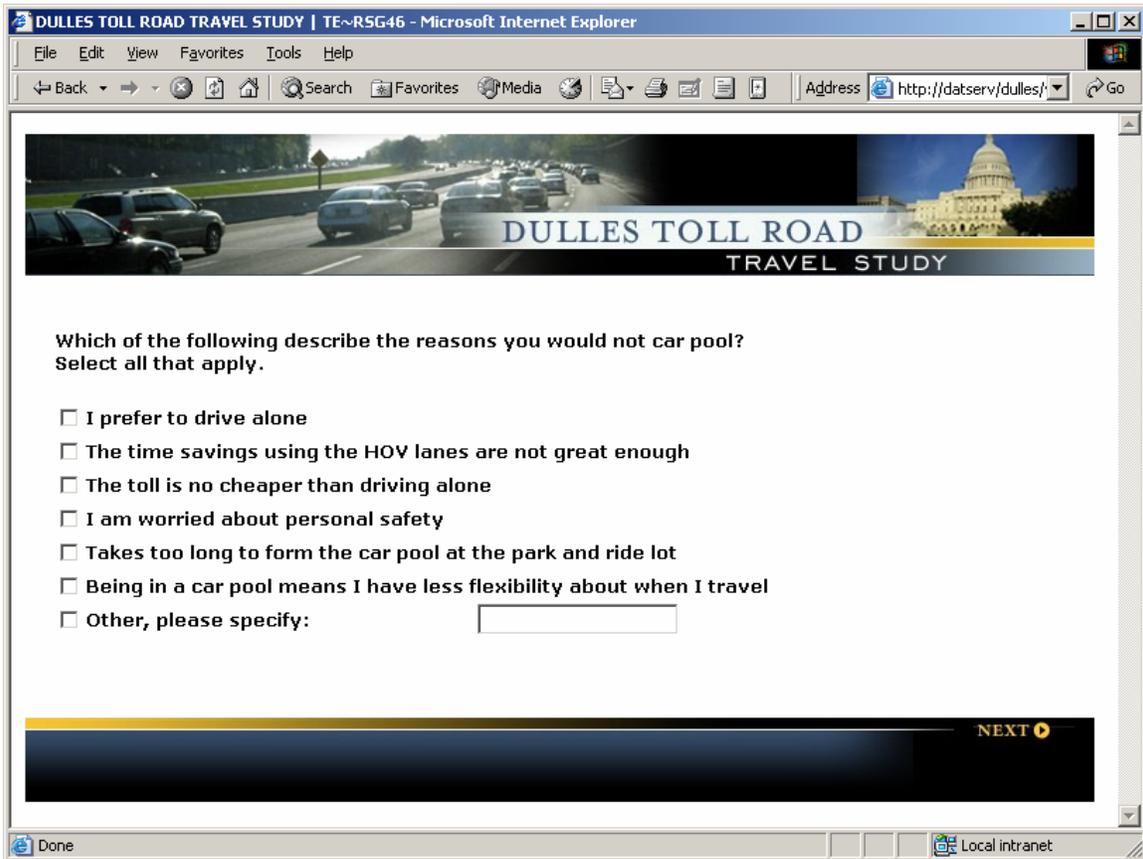


Figure 51: Household Size

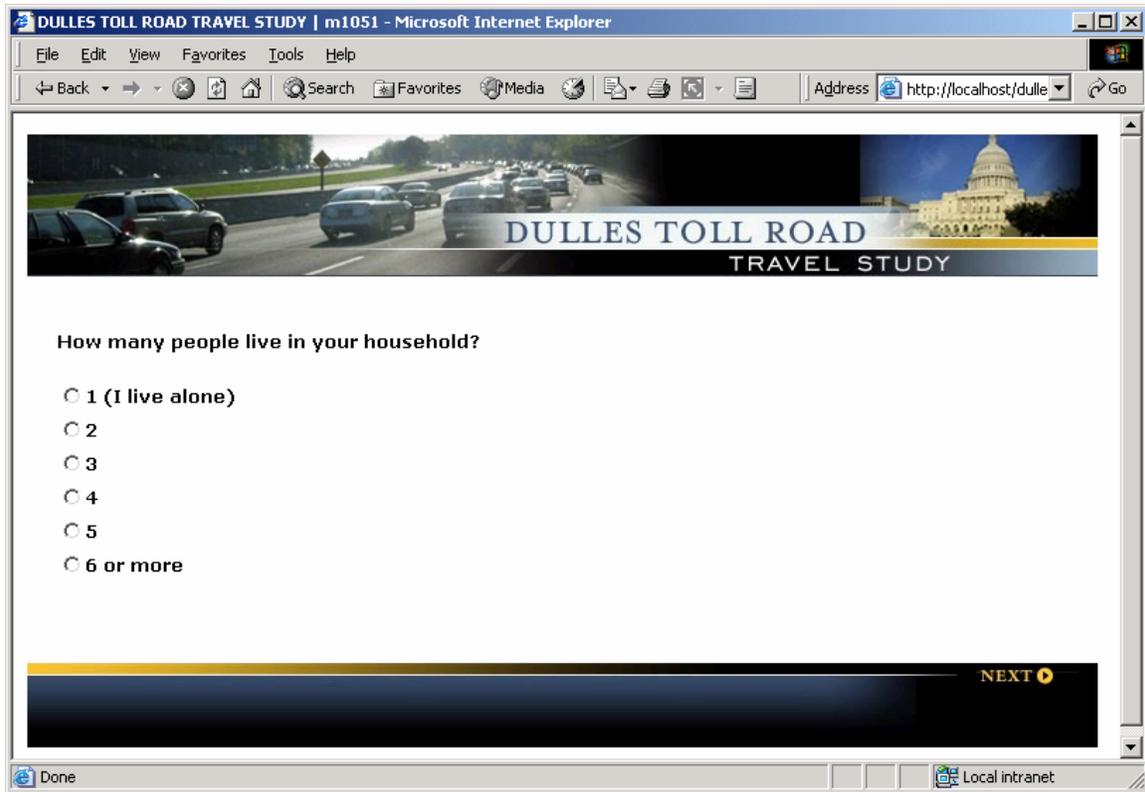


Figure 52: Number of Vehicles

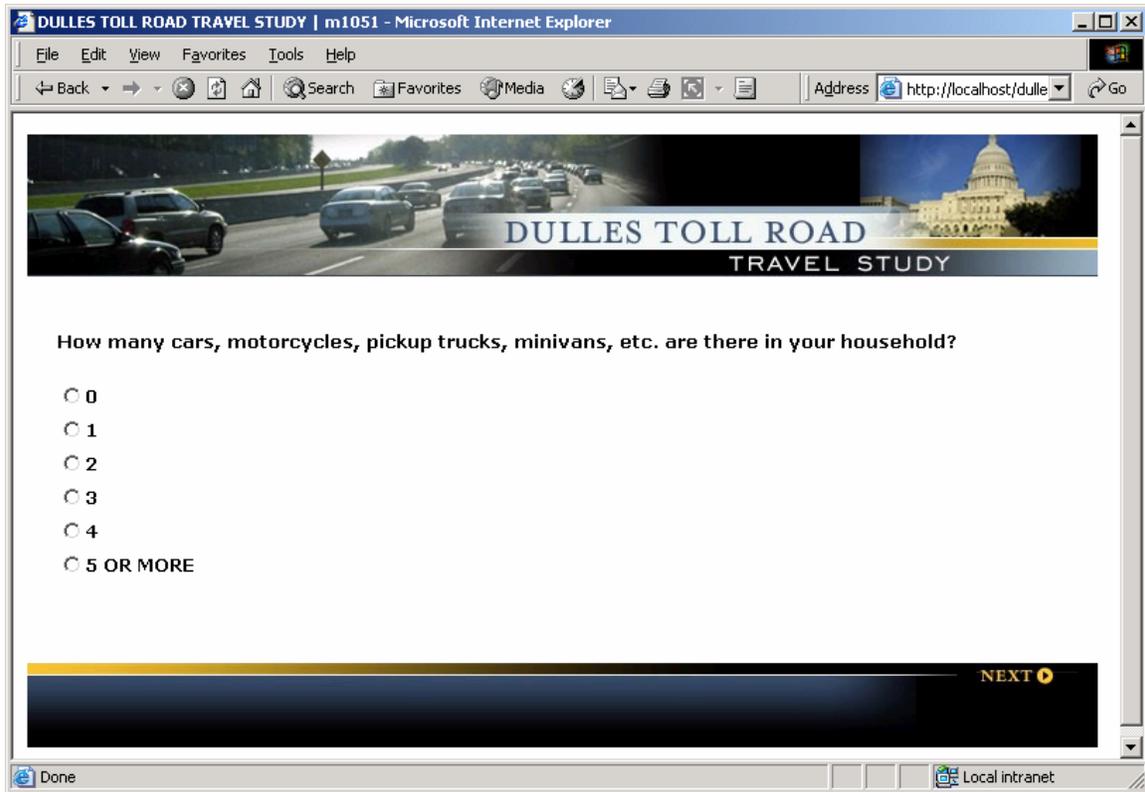


Figure 53: Gender

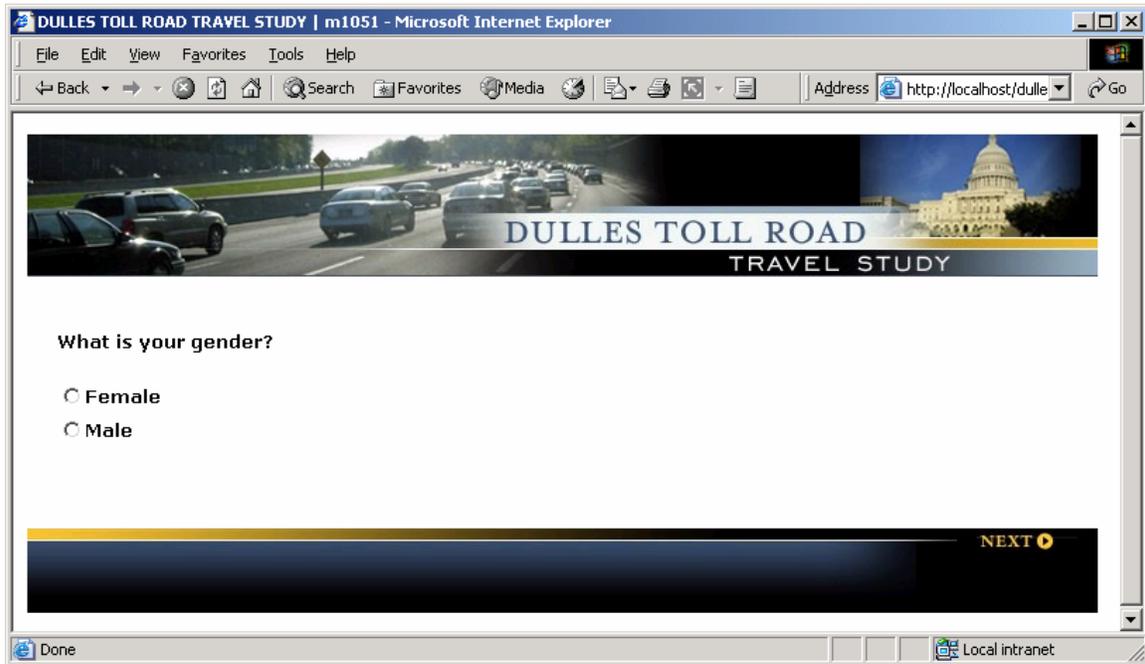


Figure 54: Age

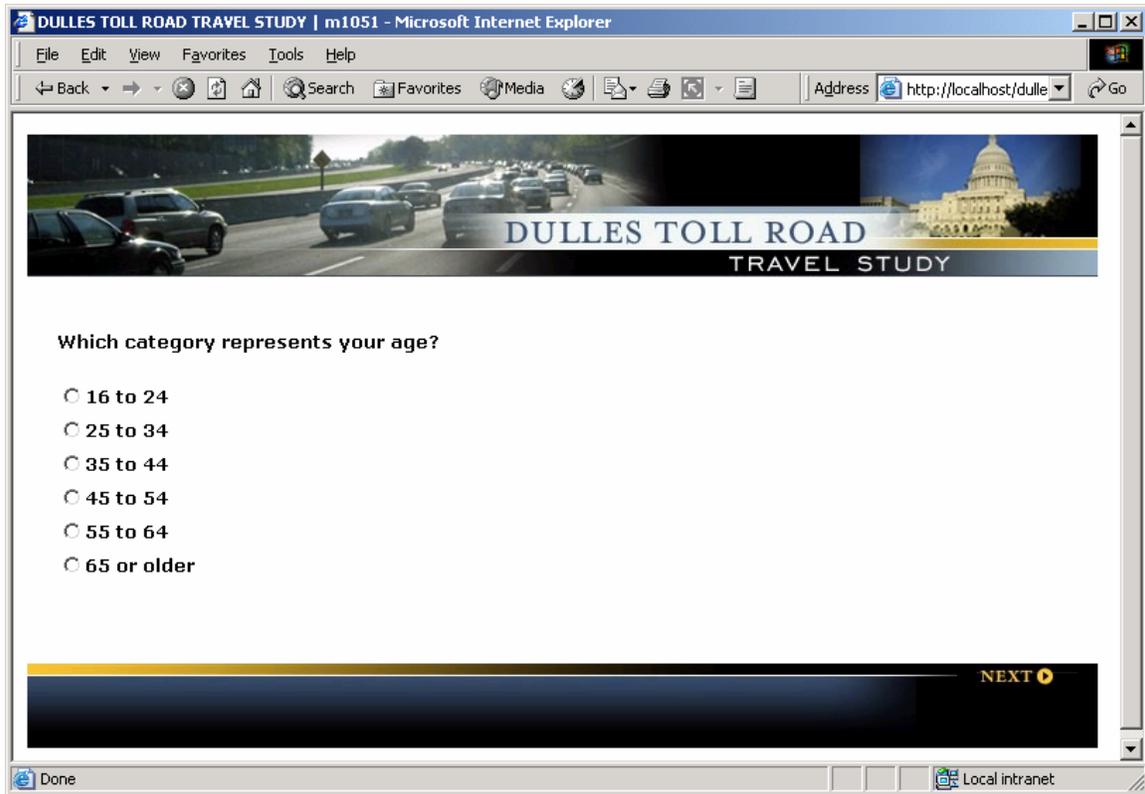


Figure 55: Employment Status

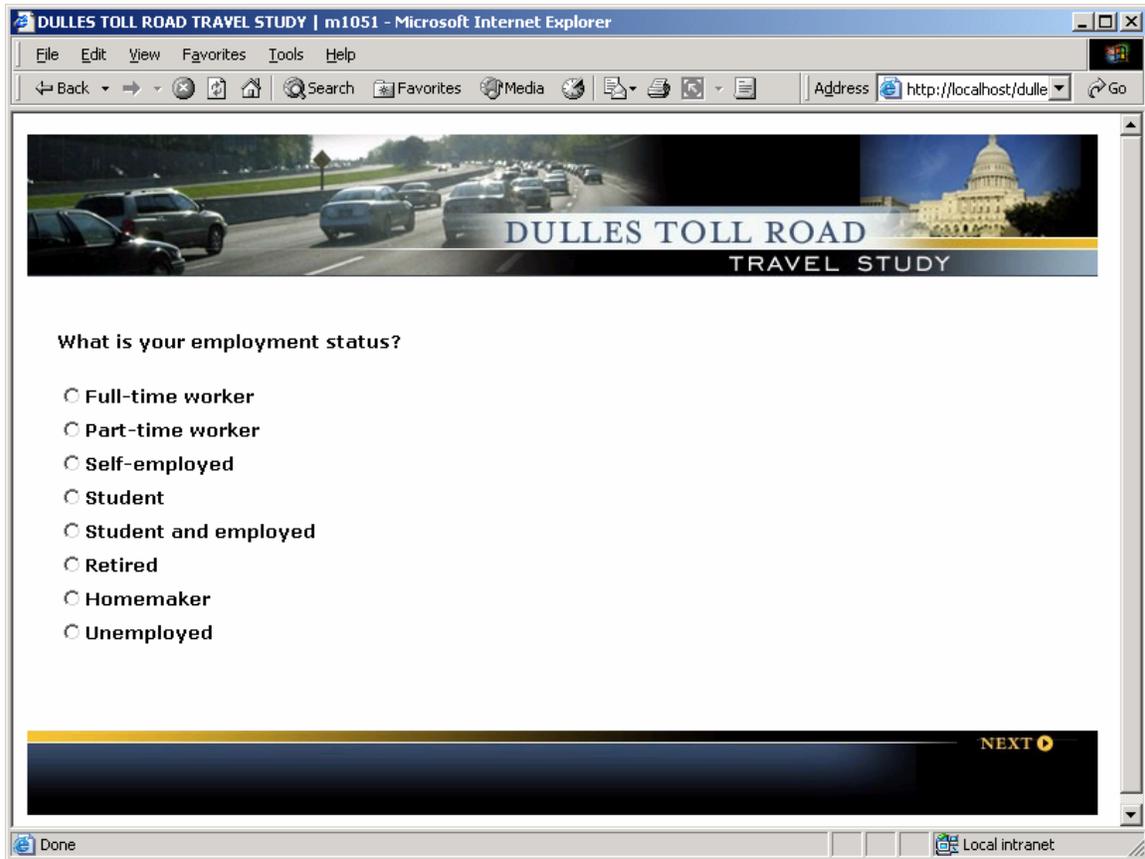


Figure 56: Household Annual Income

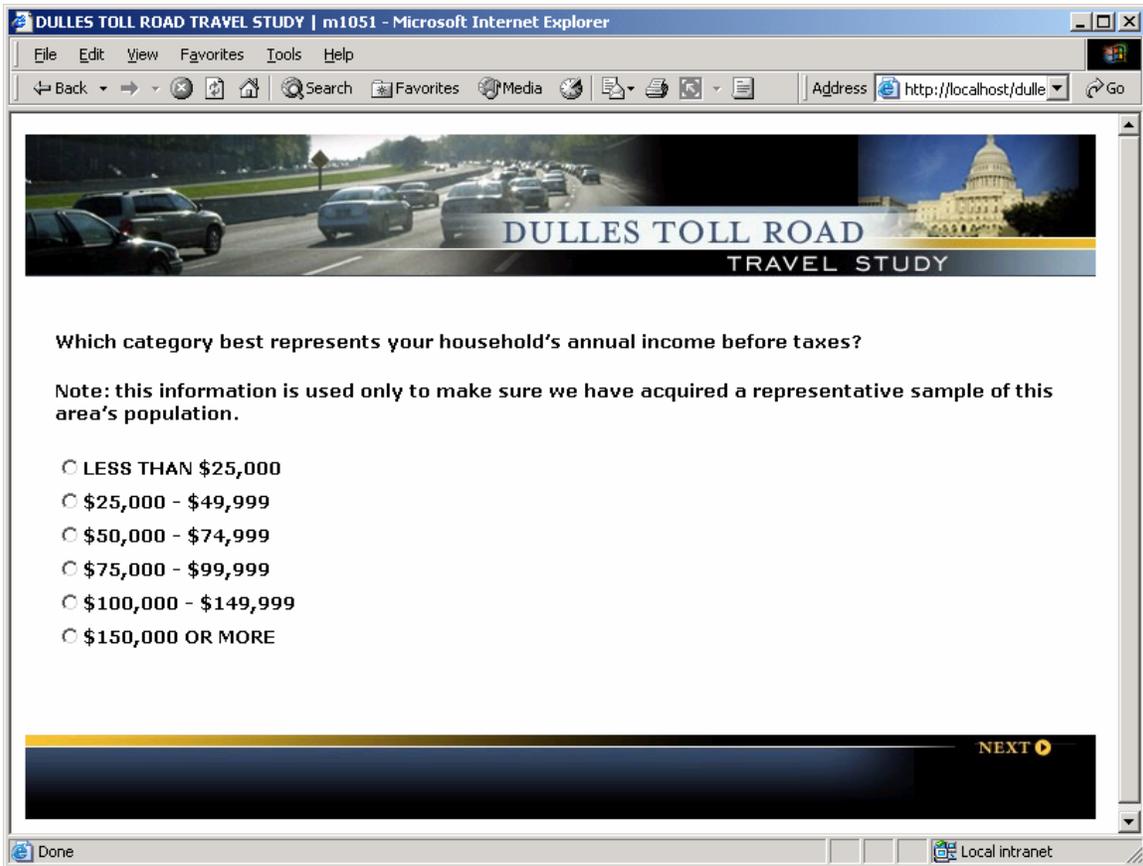


Figure 57: Zip Code of Trip Start and Finish

DULLES TOLL ROAD TRAVEL STUDY | m1051 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print

Address http://localhost/dulle Go

DULLES TOLL ROAD TRAVEL STUDY

What is your **5 DIGIT ZIP CODE** at home in Arlington County?

Please enter ZIP Code:

Don't know ZIP Code

What is the **5 DIGIT ZIP CODE** where your trip ended in Fairfax County (outside I-495)?

Please enter ZIP Code:

Don't know ZIP Code

NEXT ➔

Done Local intranet



Figure 58: Thank You

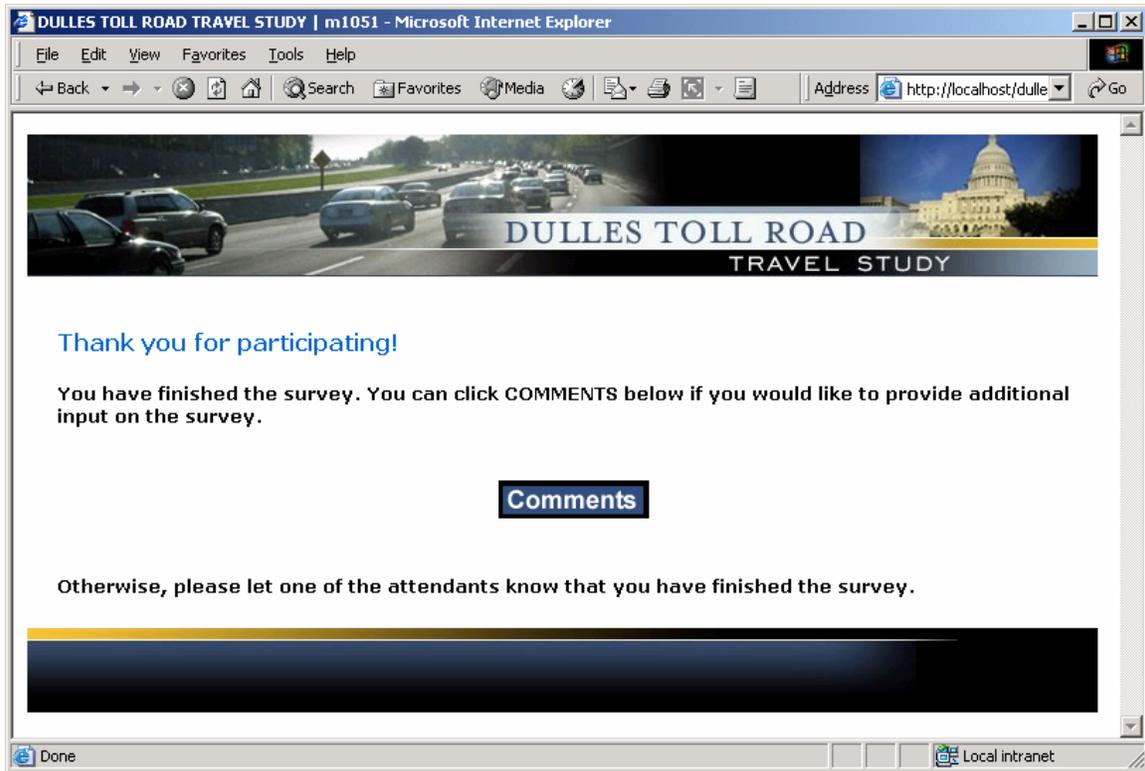


Figure 59: Comments

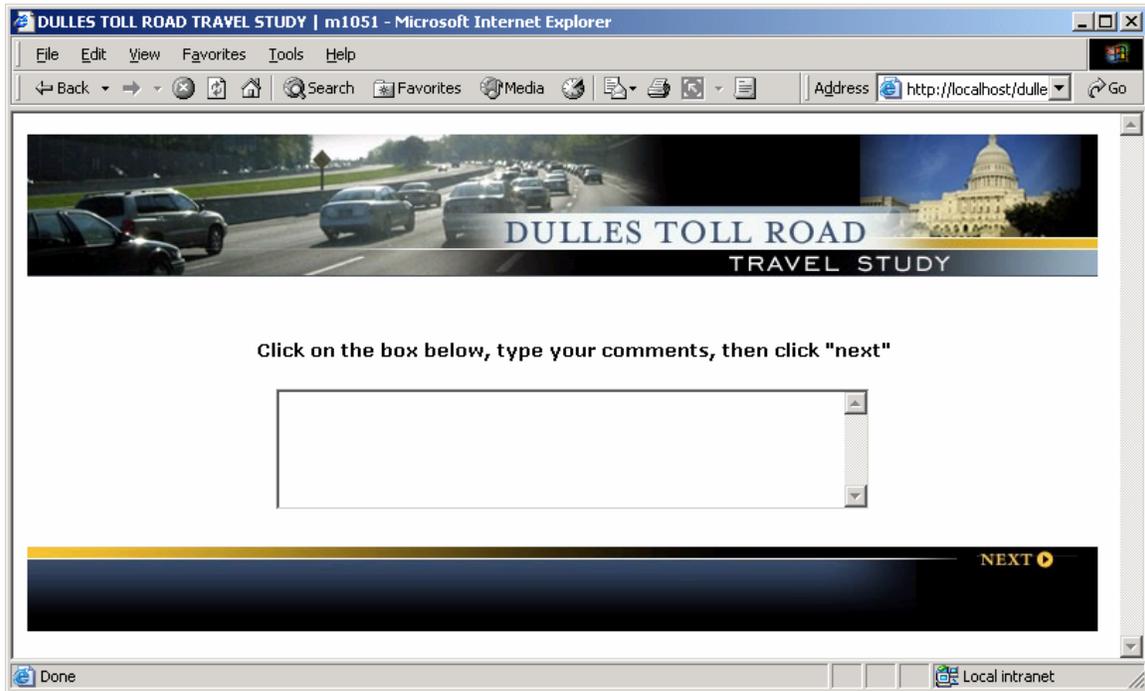
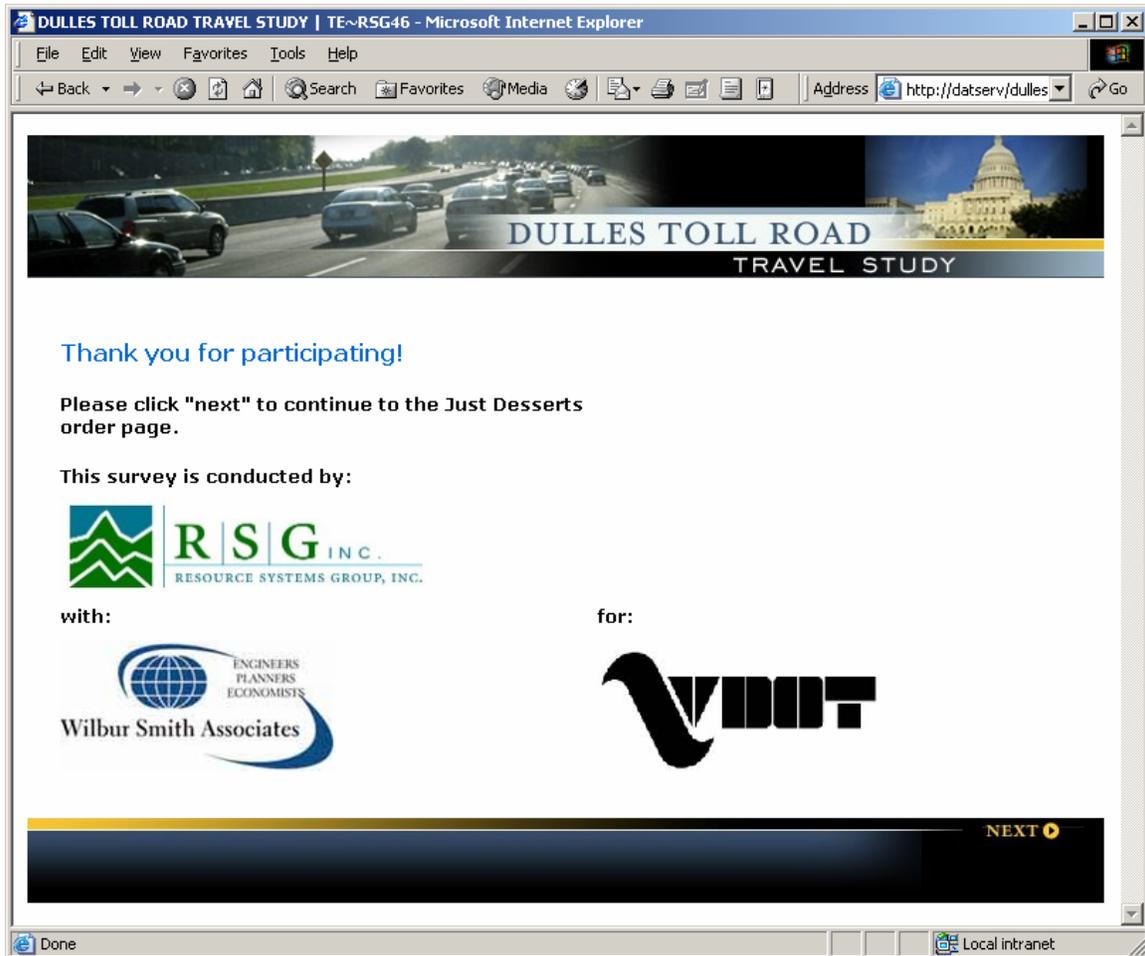


Figure 60: Thank You



APPENDIX C: STATED PREFERENCE SURVEY COMMENTS



APPENDIX C

DULLES TOLL ROAD STATED PREFERENCE SURVEY COMMENTS

Password Comment

1. New Metro Rail: Support	
W10053st	Train would be my preference, unless travel time is double driving. Legion Bridge and beltway are major problems.
W11577ru	I think congestion on the toll road will only increase over the next five years. Additional lanes and alternative pricing will not compensate for the growth in our area. I think rail service, extending to Dulles and beyond, is the only responsible way to address such problems.
m10033	I think personally that it is a great idea for a new metro rail out of Loudoun county. Thanks.
m10047	There is a great need for a metro line on the Dulles Toll Road and Tyson's Corner area. The traffic amount is getting outrageous in the area for shoppers and other recreation people.
m10057	Despite the fact that I find the toll road easy to use by car presently, I believe it's an absolute necessity to provide rail service to Dulles Airport. Furthermore, I think a terminus at Wiehle without guaranteed funding for "Phase 2" out to Dulles would be a grave error. Neither the current roads, nor infrastructure surrounding the Wiehle location can support a Metro terminus. To whatever end possible, mixed use zoning should be leveraged to avoid what happened at the Vienna terminus. No Metro terminus should be purely an origination point. Mixed-use zoning would provide ridership that sees that terminus as both an origination and destination point.
m1010	I would use a rail system, if it could be combined with a bus system to get me to my place of work.
m10103	I am all for the metro being extended out to Dulles.
m10110	I would love to have a metro connection to Dulles Airport and would pay a larger amount of \$ to take the metro there, all the way up to \$7.00 per trip. Please, please, please try to have metro access to Dulles Airport!! Thanks!
m1014	Need to add entrance/exit at West Falls Church for Fairfax Connector buses. Bring Rail Service to Tysons/Dulles!!!
m1027	I would definitely use rail service when it was going where I needed to go.
m1044	Bring rail out to Dulles. It is at least ten years overdue!
m11004	Please get the metro rail access out to Dulles Airport.
m11007	Take toll process off and add new train line on this area.
W10603uw	I drive against rush hour, and still Route 66 and the \$0.25 DTR exit at Reston Pkwy back up tremendously. The Reston/Herndon area is growing so quickly; this problem isn't going to get better on its own. As far as being a commuter is concerned, I can read a paper or catch a nap on a train ride, even if it is a little longer than a drive would be.
m11054	We absolutely must have metro rail service into the district, but if it is installed, it must be functional (without undue delay on a daily basis) or it will not be utilized. The toll road is not what would inspire people to use metro, it is the inability to drive I-66
m11056	Please extend the rail service. Life will improve dramatically and the outer suburbs will finally be connected to DC. The outer suburbs of VA will be a much more pleasant place to live if were connected via Metro. Please, please, please!
m12019	I don't use the toll road to commute. If I did, I would definitely use the rail system. I'm all for it. My weekend trips on the toll road are not problematic.



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m12024	We enthusiastically support rail to Dulles via Tysons and Reston. As gas prices rise, with the emphasis on reducing air pollution, and as a tool to divert some cars from the Toll Road to ease congestion for trips that must be made by car, we see rail to Dulles as the obvious solution. Build it now!!! Also, as the nation's capital, our international airport should be served by rail. Again, build Metro rail to Dulles now! Thank you.
m12032	This is a great way to get feedback from commuters, to ensure the best way to get rid of gridlock on the beltway. There should be a Metro rail station so commuters can have the option of driving or using the metro for transportation. Build the Metro, people will use the Metro, and part of the money can be used to finish existing projects for the highways. All business should confer with Metro to receive discount passes for their employees to encourage Metro use. Build the Metro rail to Dulles and you will see a major improvement in traffic and an increase in revenue for the state.
m12033	I think that the metro should go out to Dulles Airport.
m12041	I think a Metro Extension is a good idea as long as it is affordable. I've only traveled on the Dulles Toll Road twice. This was to go to the airport. A few people who work with me in DC take it everyday, however.
m12050	We need the rail for workers on Monday through Friday trips, but we do not need it on the weekends.
m12093	I would appreciate the metro going further out towards Dulles. It is a great idea and the best way to end congestion on the Dulles Toll Road to Tysons Corner. Personally I love the metro as long as it doesn't take up too much time. Thank you!
m12111	It would be excellent having the rail system extended to the airport, as I would use it traveling business & personal. Rail to Tysons Corner - convenient to shopping - would be a huge plus! I use the metro daily other direction on the orange line. The most recent trip I took to Reston was to the golf course - I would not use the train in that case anyway.
m13004	We should bring the metro rail service out to Herndon and Loudoun County. The traffic problem in this area during rush hours is unbearable, and getting worse. The rail service would bring some relief. I think taxpayers are willing to pay for the service if necessary. Also, you should consider having the large companies along the toll road subsidize this; after all, many of their workers will likely utilize the rail service as well.
m13064	Add rail network into Loudoun county and increase bus services so there is a crossover in public transport and then you'll see the roads decrease in traffic.
m13067	Although I indicated in the scenarios that I would not ride the train, that was in general. I am sure in certain times and circumstances I would. I do think the train is a good idea if the price to ride is reasonable.
m13078	I think a rail line out to Dulles would be great. I'm a realtor and need my car during the day, so I wouldn't use it to get to work, but I know a lot of people would use it! It would be great to connect the Dulles corridor to Metro rail.
m14019	Thanks for the opportunity to express my opinion. We need rail to Dulles!
m14028	Also a bike path and a no-toll, free ride for motorcycles will help with traffic congestion. More buses will help also. However, the best solution is rail.
m14037	I personally would love to see an extension to the Dulles Airport from my home and from Tysons. I would definitely use the Metro rail if was available. I might also look into getting a Smart Tag. Thanks so much for the concern with traveling and allowing hearing of the public voice.
m14057	I work for Independence Air (and have for Atlantic Coast Airlines for nearly 9 years). We desperately need to get Metro extended out to Dulles. So many people I know would travel from Dulles if it were just easier to get to.
m14064	Would like rail service to Dulles airport from Arlington. Only options are private car, taxi (very expensive) or bus.



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W11613td	Metro rail service to this part of the world (Virginia) is long overdue and would go a long way to alleviating congestion at the Toll Road/ Beltway interchange.
m14071	Having a metro rail in the Dulles Corridor would alleviate a lot of congestion and traffic and make things so much more convenient for the area community. I can't wait until it comes to fruition.
m2016	The last thing Northern Virginia needs is more roads. Build out the Metro!
m2034	Big fan of public transportation here! Keep up the great work VDOT. Make rail to Dulles a possibility.
m2037	We need a metro line going out that way.
m3022	Metro rail should be extended to Loudoun County.
m3029	Build a rail system please.
m9003	Please give us a metro rail.
m9006	We need rail to Dulles as soon as possible.
m9047	Please keep the daily cost to the commuter down. Rail from Tyson to Dulles is the best bet. Thank you.
W10025mm	Would like to see a rail system extended on Orange Line out to Reston/Dulles area. Or, would like to see a new line from Arlington area (just outside DC) to Reston/Dulles area, that you could connect to via a point or two on the orange line. Would be worth the 1 hour or more trip on the metro to no longer have to drive, pay gas, tolls, etc.
W10044fd	It is embarrassing to me that this nation's capital does not have rail service to its international airports. A rail or metro line on the Dulles corridor is a necessity. It would also pay for itself in time, especially with some federal funding. I would gladly pay a premium price to be able to use a Dulles metro line for both my personal and professional travel.
W10075wf	Let's get some more commuter rail. Extend VRE to Bealton, extend Orange line to Haymarket, and add rail to Dulles Airport and Leesburg with a few stops along the way.
W10084th	I highly favor improved public transportation options in the Dulles Corridor and, given that option at a reasonable price, would ride daily.
W10134kb	I would take metro 100% of the time depending on the station location and what options of transportation I then had to get to my office (e.g., only walking, shuttle, bus).
W10136he	A Metro Rail or rail system or a commuter bus from designated pick up locations would be ideal. I hate the commute that takes more than 2-1/2 hours most evenings, but unless I find another job I am forced to drive and pay both in expensive gas prices and tolls.
W10157be	I would take the metro if it ran early enough for me to make it to work. I have to be at work at 7 am. I also would have to catch the bus from the metro to Shepard Drive. Thanks a lot. Take care, Washington Commuter.
W10181fw	I would love to see a metro service to this area!
W10182fs	I would love to take public transportation to and from work. I did this for three months but it took an hour and a half (one-way) between bus-metro-bus from DC to West Falls Church to Edmund Halley Drive. This is 2x the time it takes to drive and the last bus leaves at 7pm. Extending the Metro would be great...long term. In the short run, perhaps express busses.
W10237fn	I am in favor of rail service to Dulles - we are just about the only area in Metropolitan Washington that doesn't have rail service. However, I am not in favor of increased tolls on the Dulles Toll Road - we are the only area in Metropolitan Washington paying tolls!! Why is that?



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W10287ea	I would like to have metro rail service as an alternative to driving. I have tried express bus service from Monroe Street to the metro in Falls Church but will not use it anymore because I do not like the long lines to board and the small seating capacities of the busses, the requirement to have exact fare, the smell of diesel fumes, the slow movement through backed up traffic on the toll way portion and the necessity to change from bus to metro at Falls Church, etc. With the bus to metro rail combination, the travel time is the same as driving the trip alone and is even more annoying.
W10343fs	I ride the metro rail to DC and love it. I might ride it to Reston and would love to ride it to Dulles Airport. It would be great to pack my bags and ride to the airport on Metro....
W10357wp	Metro Rail is the absolute best way to travel! Clean, on time (mostly), goes to where I need to go...I only wonder why this huge segment of the Metropolitan Washington DC area population has been ignored for so long. Were I to have my way, the rails would be in the process of being laid right now!
W10412hn	It appears there is consideration for increasing the costs to deter people from using the toll road during peak hours. The better alternative is to allow metro rail to Dulles to relieve some of the vehicle traffic off the roads. Many who currently live near a metro would take metro to work in the Dulles corridor. Another option is to open the toll road airport access to peak hours usage for all. I am not in favor of paying more to commute to work.
W10434te	It is of great importance to bring rail service to Loudoun County, Dulles Airport. As it is, most of our lives revolve around traffic congestion. (Case in point: My workday begins at 4:00am, arrive at East Falls Church at 5:40am, at work in DC about 6:05am; leave DC at 3:25pm, arrive at East Falls Church about 3:50pm, at home about 4:20) I work these hours in order to make HOV inbound and outbound, attempting to avoid most traffic, although traffic in the am and pm is more and more congested (especially Route 7). This service will benefit the health and well being of commuters, reduce traffic congestion and pollution, give commuters back lost time, and preserve the beauty of our communities. Our communities were not planned with foresight and we, the commuter, are paying for it everyday in so many tangible and intangible ways. Business and private industry should be the primary financial supporters of this endeavor. It should be mandatory that business and builders pay for roads and improved access to new communities. These groups build new homes and move on without regard for the environmental and community impact. There needs to be accountability and responsibility at the Federal, State, and local levels, including private industry, who has done the least - This is a good effort that needs to be put into action without delay! We will all benefit in countless ways.
W10449sw	My ideal commuting solution would be by Metro all the way, with new Purple line from Bethesda MD to Tysons, and new Dulles Rail line to Dulles, then by bus or bike to the office along Rte. 28.
W10454mf	I hope a Metro Rail service is constructed soon to the airport. It would make the airport easy to get to but also all of the people that work in the Reston/Herndon area would benefit greatly.
W10524mc	We have recently moved back here from London UK. I would love to see this area become as well connected with public transport as the Greater London area is. Part of why we can't use a train is lack of good, reliable bus service on the other end. Were you to offer more frequent busses and more extensive routes, we would gladly consider using mass transit!!
W10535uy	Please build the metro along the Toll Road soon. The bottleneck at Dulles Tolls Road and I495 during rush (carpool) hours is the major cause for the traffic on the Toll Road. Thanks.
W10596zw	We need rail now! You have more control over your arrival time and can better plan your trip (does not compete with traffic like buses). The train will relieve traffic and allow those who must use cars some relief. The train is long overdue. Fairfax county has really missed out on using rail to help guide development in this corridor. It is a real mess and has been for some time. The train connects me to my place of work and commercial centers. Train, train, train; now, now, now!
W10607ze	I am working 2 days/week only until I earn up to the SSA limit, so it is about 1/3 of a year. I may not work at all next year. Little reason to use the toll road then. I strongly support rail to Dulles, though.



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W10648nz	I plan to use the Metro Rail extension to Reston Town Center after it is built.
W10659yr	Would really like to see some type of rail service. For those of us living in Loudon county there is no service to Tysons corner. There is service everywhere else.
W10700th	I will love the metro rail, but not for working time, but for leisure
W10743tb	I am highly in favor of extending the metro - I moved from Fairfax County to Prince William County -Gainesville to avoid the congestion and for a higher quality of homes and life -- we have the VRE train here which is now taking people 20-30 minutes to drive the 5 miles to the train station! We need alternatives - I heard extending metro to Rte 28/Centreville was considered - this would be a Major plus for all the new development in Prince William County! I am a real estate agent very involved in the Gainesville/Haymarket/Bristow corridor with thousands of new residents - please feel free to contact me for further input 703-582-8720 Cherie Sexton, Weichert Realtors
W10765es	Please do whatever it takes to free up the morning congestion on the DTR (free sunglasses!) and implement the Metro rail to Dulles Greenway!
W10774sd	This is a good survey. I would like to add one more comment to my explanation to why I chose for the metro option: when driving, there are always more chances of being stuck in traffic compared to metro. Even though it might take a little longer with metro, at least I don't have to deal with traffic. The time spent on metro will be used for something more useful, like reading a newspaper. Hope the metro plan will go through.
W10908rp	If there were some light rail going to Dulles, I would use it for business trips instead of driving and parking at the airport. I do this now for National Airport.
W10969nf	I prefer to ride metro if it comes. I support metro system
W10999mh	I'd rather take Metro. However, the bus schedule is not convenient. I'd rather you put a Metro rail from West Falls Church to Tysons Corner.
W11055aw	Although I'm not fond of riding the Metro, I do think it would be beneficial to the region and would especially use it to attend events in Washington, DC.
W11061xs	I would love to see rail service to Dulles with a stop at Herndon-Monroe, BUT -- I am not in favor of extending the orange line -- it already has too many stops. Why not build a new line into Rosslyn? If you extend the orange line to Dulles, it would take an hour to get downtown from the airport.
W11072ey	I think having metro rail connect all the way out to Dulles is a great idea and would definitely use this service on the days I did would go directly to and from work. The only reason I would not use it would be when I have to pick up my child from school on the way home from work.
W11091ca	I sincerely hope the State of Virginia is doing all that it can to assist with the increased metro rail service. Additional lines are needed in northern Virginia, between Virginia and areas like Bethesda, MD as well as a line out to Dulles Airport.
W11127au	Tolls, train availability, time of week and purpose of trip highly influence the answers to these questions. Having rail access around Dulles would encourage much more off-hour and weekend use as well, not to mention use to the airport and not just use to work. Metro train is a great idea to Dulles area.
W11146pc	This was a very thorough and comprehensive survey. I wish I could take advantage of carpooling and using the HOV but my rotating schedule does not permit it. I fully support the Future Dulles Corridor Railway and Mass transit. It would be very suitable for those commuters that work for the Government & contractors in locations close to the District. It would also alleviate the rush hour congestion on the Toll Road of course!
W11307my	I would really like to see a metro transit line go along the Dulles Toll Road. That would be my preferred method of transportation and I would use it everyday instead of driving.



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W11324cz	The thing is I'm not sure if I would use the metro because for one, I don't know exactly where the possible stations would be put, and it's hard to judge if I would use it or not since my big concern would be if it was within walking distance from a stop. I obviously use the toll road mostly for work -- that is the trip I used for this survey -- but I have to take it other times too. If the metro was extended out here (i.e. Tysons, Reston, the airport), I would use it for other things. Like when I have to drive into D.C., that would be much more convenient than fighting traffic on 66.
W11370my	I am strongly in favor of the metro rail extension. Over the last two years, I have noticed an increase in congestion on the Dulles Toll Road during both rush and non-rush hour(s) throughout the week. I believe the congestion will only increase as areas in Fairfax, Loudoun and Counties beyond continue to grow and develop. Having grown up in NYC, and having done some traveling, I am amazed at how limited the metro system was and still is in the U.S. capital region.
W11439wb	A Metro Rail access should be required in Loudoun County, especially around the Dulles Airport and beyond. With the population growth and lack of road infrastructure the travel time Loudoun County to Washington DC could double in coming months. What that means is lost of productive and Quality of Life. Thanks. Zubair
W11454tm	Thanks - lets get Metro to the airport! Mass transportation is the way to go!
W11485xu	We really need to do something about the roads. Development has gone unchecked and we are running out of space on the roads. The 50 minute trip in the morning takes 1 hour and 15 minutes in the evening now. Please bring metro rail to Dulles.
W11506fj	Please build a rail line!
W11529ud	After about 6:30 a.m., the backup getting from Dulles Toll Road onto I-495 North is horrendous. Squeezing all those cars into one lane is one of the biggest engineering mistakes made in this region. This must be addressed soon or else well all be commuting at 5:00 a.m. to avoid the rush of cars that keeps getting larger, and keeps moving back earlier to avoid bigger delays. Additionally, an express rail from West Falls Church to Dulles Airport is a great idea. Do not build a stop in Reston or Herndon. Metro stations are filthy unaesthetic, and attract crime. I don't want that ruining my local community!
W11662ct	I strongly support light rail along the Dulles Corridor. If we weren't so strongly averse to the poor planning, density and lack of open space in the Herndon/Dulles/Sterling/Reston area, it would make sense to move back east and use a better transit system if it were developed. Ideally however, I'd bike to work. Cars don't belong in our future but in this area there is no alternative if you demand relatively pristine landscapes for your lifestyle. Well be leaving northern Virginia in 5 years; we've had enough of poor development and consumptive lifestyles that typify the area.
x21213td	I totally support the idea of the new Metro system. I am not able to use it because I have small children and must be able to leave work quickly if there is a childcare or medical emergency. However, I will pay higher taxes and suffer cosmetic detriment to environment because I strongly believe in the need for public transportation. It is imperative for the future of this region or we will choke in gridlock.
x21218hd	What I really hope happens is that the metro rail comes to us to Dulles from Falls Church. I believe we would be willing to pay anything close to a fair fare for this.
x21381rk	Although it doesn't seem like a good alternative for regular commuting, I strongly support rail service to Dulles.
x21421ex	Our family is very in favor of the metro rail to Dulles Airport, for travel between Reston and DC. Also for travel to the airport from Reston.



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x21532tj	I would love to be able to take the train to work! Unfortunately, between the cost of traveling by Metro AND getting to and from the train station both at home and at work, it just wouldn't be feasible for me. But I still strongly support developing rail service along the Dulles Toll Road--I think that this needs to be an option for commuters. I also wanted to mention that the trip I described in this survey is not my usual commute: On Tuesdays, I don't have to be at work until 1:00PM, but for the rest of the week, I have to be at work by 9:30AM--this means that my commute is usually about an hour long, rather than 35 minutes. While I do use the toll road because it is the most convenient route to my work (my trip would probably take about an hour and 15 minutes if I took another route), I really resent paying the toll each way. I make less than \$40,000/year, and it stinks having to pay \$1.50 each day on top of gas just to go to work! Thank you for gathering drivers' opinions through this survey--I really appreciate being able to share my thoughts!
m9009	Should like to see a greater investment in mass transit. The pollution in our area is terrible and the traffic is bad yet there are no real viable mass transit options available for commuters like myself
m12092	Will be nice to have a metro rail to conduct any business at any time of the day, I do at that time just for traffic and I have to change my life style upside-down just for "traffic", by the way I go to do my business on weekends just for traffic. Please consider the alternative of metro rail.
W10059ub	Extending rail service toward Dulles is an absolute must -- however, it will not benefit those of us who live in Western Loudoun or West Virginia, as it is too far to travel to a station, then catch a train, then sit on a train for the same amount of time it would take us in a car (especially at the hours I travel). Depending on ridership, I would suggest express trains from the locations further west than Falls Church. And if the total toll fare for the Greenway and Toll Road ever goes about \$3.50 one-way, I will stop using it altogether.
W11624nm	My quality of life has gone down since I've had to start driving to work (I used to work downtown and take Metro). The toll road is actually the faster route, but it is still incredibly jammed most of the time. Although the time spent on the train would be greater in the scenarios you provided in the survey (vs. the driving times), the time could be spent reading or doing something productive. The traffic going out of the city in the morning commute and the traffic coming back into the city during the afternoon commute is a nightmare. Also, the Smart Passes are great, but there needs to be more lanes for those routes. The Smart Pass lanes at the major toll plazas get really backed up.
W11297zw	Thank you. I choose a trip on Monday, May 31st and realized immediately that it was not a good example of how I use the Toll Road. I would definitely use the metro for work if it were more available to me. I would also like to either see a discount for Smart Tag and/or more lanes for Smart Tags. There has to be more incentive for commuters to buy the things, but it seems like many people do not do with for any number of reasons. I am, however, distressed to learn that the Toll aspect of the road was initially suppose to go away once the road was paid for ... surprise, surprise that it has remained. And lastly, consider using one lane of the Dulles Access Road for HOV riders ... Thanks for your questions. I hope you get the information you need.
W10295wr	Cost and time are high on your examples using metro. Metro does not serve my building downtown. I would love to use metro and read the paper instead of drive, but it must be cost and time effective.
W10809hy	I would love to ride the train to work everyday. If needed I would even leave earlier if it would help congestion at the station.
W10883rf	I would like to ride a train to work because I could accomplish more on a train. However, there currently is no Metro station close or a bus drop. One at Tysons would not help.



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W10925rj	I feel I would vary my choices depending on the time of year (weather). I most certainly would use rail service to go downtown, where I hate to drive because of the congestion and parking. Currently I drive to the East or West Falls Church station. I think rail service would impact Loudoun County citizens because they would have access to a lot more cultural opportunities.
W10987jz	For this survey my trip destination is Georgetown. If there was a convenient Metro stop in Georgetown I would gladly take the Metro.
W11275ud	I'd love to take mass transit if it were feasible. I travel at 6AM in the morning to my gym at Tysons and then drive to work at Fairview Park in Falls Church. If the rail had stops at these venues, I would use the metro.
W11318fy	I would certainly welcome the opportunity to use mass transit if it were to come out to the Dulles area. The only reason for me not to use it would be if it were significantly more expensive than the Toll Road/Greenway or if it took a lot longer (30 minutes extra or more.) I used to ride the metro when I lived in DC and found it a very agreeable way to get to work. I also think I would go and take my family down in to DC more often if I could step onto the metro rather than having to drive down and park.
W11334px	My husband and I moved to Loudoun, and we ride the Greenway and the Dulles Toll Road about 8 times a week round trip. Both my husband and I would ride metro rail if it were available to us.
W11467dn	While I cannot use the train for going to work, it could be useful on weekends especially for trips to the District. Also, while it may not work for me I believe there are many people who would use the train if available particularly if it made stops in Reston/Herndon and Tysons.
W11490mb	Virginia next new Metro train service, "build it and they will come!"
W11617at	I answered one question incorrectly --"Did you begin or end at home. It should have been "end" as I live in Clarke County not Loudoun. Really excited about the possibility of rail service. Much prefer it to driving -- presuming there's enough parking at the metro stop. This has been a real issue for those of us who want to use the rail, but don't travel during rush hour. The parking spaces are usually gone by the time we get there.
W11663jt	As the years go by, Rt. 7 and the Dulles Toll Road are getting more crowded and slower. Even though a train would take approximately the same amount of time, at least I could be doing something other than watching brake lights in front of me. Also, work offers commuter reimbursements, which would apply to metro trains (incentive).
x21443hc	I work in the medical field and have a changing schedule. Therefore, it is hard for me to join a carpool. I would use the metro for personal trip into DC and when my shift schedule allows it about 1-2 times a week. If parking cost a lot at the station that would prevent me from using it.
x21507wz	I specifically avoid the toll road because I am young and work for minimum wage. However, the rail is ecologically friendly, so I would pay for that. The concept of SmartTag is unnerving, because I do not like the automatic replenishment, and also, \$35 for tolls is far beyond my budget. If it had a \$10 replenishment, I may consider.
W11685fm	Why is that using rail is so expensive? Just for 10 miles of distance, more than \$2 is charged one way. Comparing with the \$0.75 we're paying one way right now, riding rail is not realistic from cost point of view. IF it can be cheaper (below \$1), I'll surely ride it.
W10617pa	I would choose the metro rail if pricing is reasonable and time of travel is reasonable to save on vehicle maintenance and gas costs that are becoming very expensive.
W10542pb	If the rail stopped right in front of where I live or if there is free parking then I would definitely consider taking the train. Having to walk to the train is a distance and with my work hours where sometimes I have to stay late for work I don't feel comfortable waiting for a bus nor do I walk the -1 mile at night. A regular shuttle service for a minimum fee can change my mind.

2. New Metro Rail: Opposition



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W10081yr	Monorail would be better, cheaper, and easier to build. Don't do antiquated rail systems.
m1050	Often one must wait for 2 or 3 trains to pass through Ballston before getting on the train as they are overloaded before they reach Ballston. We are therefore opposed to an extension of the Orange line to Tysons and Dulles. Although we would like the convenience, it is not worth the hassle for everyday commuters from VA to the District. If you do extend the Metro would you please add more cars?
W10489sh	Metro really wouldn't be convenient since the closest metro stop is Van Dorn (no parking) or Springfield. Both would entail going to Arlington and then switching to Orange to commute to Herndon. Expanding the SmartTag Only lanes/booths at the main toll would help. Making the exit/entry lanes SmartTag Only instead of SmartTag/Exact Change would help. I'm basically against traffic on the Dulles Toll Road Put the 495 north (Maryland) exit on the left! I'll pay the extra .25\$ eastbound during rush hour if you did that.
W10655wt	I believe a rail extension is too expensive a project. I would rather have more extensive bus services running the proposed route
W10705rx	I drive a company vehicle, please realize both you and the media act like there are no people that cannot use mass transit as we either drive company vehicles required for work or we travel to locations that mass transit does not serve. I also have a hard time with the concept of metro charging me money through taxes etc for something I do not and cannot use.
W11138pc	There should be no rail because it would be too expensive. Go with busses, perhaps in dedicated lanes (like the express airport lanes).
W11021ux	I moved out of Western Fairfax County knowing it is not Metro-accessible. If I wanted to live near a Metro, I would have sought that when we looked for a house. I do not like the thought of the Dulles Corridor turning into what Roslyn-Ballston has turned into. Too much density and still overwhelming traffic problems. And I dislike the fact that drivers in corridor will have to finance a transit system that most will hardly use. The metro is to help businesses and they should shoulder an even larger share of the Metro's construction project.
x21809ub	The biggest factors in my transportation decisions are time and flexibility. On most mornings, I can get to work in 30 minutes. It takes me close to 1.5 hours each way on Metro. Metro is expensive, slow and unreliable.

3. Dulles Toll Road: Support

m1026	The toll road is great! No increase on prices.
m2063	For me, the Dulles Toll Road is a time saver as well as an access to Dulles Airport.
m9012	Toll collection can take long for those who do not have the 25 cents. I was stuck behind someone like that; overall, however, nice experience.
m9045	The toll road works very well to connect Eastern Loudoun county to the Washington DC area, especially on weekends and during non-peak hours.
W10209yz	The time / toll comparisons don't really take into account the quality and predictability of the commute. I find the toll road preferable because there is less stop and go and because the time is more predictable when compared to surface streets.
W11253ec	Hi! One of the reasons I use the Dulles Toll Road instead of Route 7 for my early morning commute is the presence of fences and good sight lines along the DTR. This reduces the chances that I will hit a deer.
W11304mp	No matter what options you gave me, I opted to drive. That's because I like to drive and your toll road is the best solution to my commute.



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W11527pf	I am for the most part very pleased with the toll road. The extra lanes added eastbound after the tollgates just before the beltway have been most helpful. The one problem I have been having is a safety hazard. The back up at the exit westbound for Reston Parkway between 8:30 am and 9:15 am extends onto the toll road for several hundred yards and the traffic goes by at over 70 mph!! Also cars come up behind me at a high rate of speed. Something has to be done to avoid that backup and remove the safety hazard.
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4. Dulles Toll Road: Opposition

m1039	I am not happy with the Dulles Toll Road. It appears that it was set up initially to provide an easier commute at a price...now it is just as backed up in the morning as the beltway and sometimes worse. They need to eliminate the toll because it provides no value.
m11034	The toll road at the present time presents a very long trip, especially during rush hours. The original purpose was to decrease your travel time, but somewhere down the line it has increased the time traveled on a daily basis by more than half. It may be caused by the rise of residents to the area but it is more stressful to take the Toll Road than it is to take a back road. Hope this survey helps.
m13023	I do not like the toll road. It is very bad.
W10297rf	I do not believe in toll roads: they slow traffic and increase the cost of travel. States should increase their license, income, county, real estate, gasoline and other taxes before a toll tax. Get rid of the HOV lanes. I would have thought that VA would have learned their lesson with the traffic back ups when one lane was installed for HOV and then returned to all traffic a couple of years ago. The VA built an additional lane and did not open it until it was ready for just HOV traffic. See what happens when you close off a lane for HOV. You congest traffic. If I pay for a trip on a road I should no be restricted from a lane. The extra time I spend on the toll road is paying two tolls. One to get on and one to get off. Why not collect once instead of twice? Do not even try to say distance that is not the way this toll road works, it is not long enough.

5. Dulles Toll Road: Toll is too high

m2026	Toll on Greenway is too high so it should be reduced.
m2029	I don't understand why the Dulles Toll Road and Greenway have such high tolls when roads like 66, 95, 495, and the bridges are all free. The Dulles Toll Road residents are unfairly and disproportionately taxed. Instead of raising tolls on the Dulles Toll Road, why not tax the residents who use the mixing bowl everyday. Also, the airport road has to go!! Why not make that the HOV lane? It's a simple, cheap solution to a bad traffic problem. Not to mention, the airport road is not an efficient use of resources.

6. Dulles Toll Road: Congestion

W10239rd	As a part-time employee, I commute to work during rush hour, and find the Toll Road essentially useless due to traffic, but commute home during non-peak hours. The short piece I take is just from my workplace to my daughter's kindergarten, and I find the pace on the Toll Road consistent and just enough less aggravating than the alternate route stop lights to be worth the \$.25, especially since I am trying to pick up one child in Fairfax County and get home before the other gets home from school in Loudoun County. As of September 04, both children will be in Loudoun County schools, and the Toll Road will no longer be a viable option for me most of the time. I will still use it for occasional trips to other buildings during the workday, but it will not be consistent.
W10800uz	The reason I begin my toll road trip at Wiehle Avenue is that using the entrances closest to my home - Elden Street or Fairfax County Parkway usually leaves me stuck in traffic that is at a dead stop or moving very slowly.



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W11591tm	Kindly improve DTR intersections to cloverleaf level. The traffic jams on the cross roads are intolerable. Kindly create graduated tolls along the Greenway. It is absurd to pay the same large tolls to go two exits as to drive the entire length. Please eliminate the traffic lights on Route 28; some of the back-ups there are becoming enormous!
W11611tx	My trip into work isn't bad. The trip leaving the Toll Road in the evening has been terrible lately. I have been leaving the Toll Road at either Route 7 or Spring Hill Road to get to the Beltway because the back up on the Toll Road has been so bad.
W11664dc	Exiting the Toll Road onto Spring Hill Road in the morning between 8:30 and 9:30 a.m. is terrible. Entering the Toll Road at Spring Hill has improved with the Smart Tag only lane but the major problem here now is not the Toll Road but Spring Hill Road itself. Spring Hill Road is one lane and getting to the Toll Road is a tremendous problem and seems to be getting worse. I believe strongly that there should be Smart Tag only entrances and exits to the Toll Road. This will encourage everyone who travels the Toll Road regularly to get a Smart Tag. I believe that this would drastically reduce the backups at the tollbooths. Evelyn Mercantini.
x20878ee	My answers are based on the perception that the Dulles Toll Road is overcrowded and unsafe. I would be more willing to pay a toll if I was traveling on a highway that didn't scare the bejeebers out of me. AT the point where the toll road intersects I-495, there are so many cars trying to cut in so many different directions that I feel I'm caught inside a pinball machine with a bazillion cars speeding toward me driven by sociopath jerks. In the time it takes me to take the toll road I can make the trip by backloads at no cost and far less ago.
x21210sy	The most frustrating part of the Toll Road drive is you can't plan--it takes 15 minutes to get to the Beltway from Centreville Road one day, and 50 minutes the next. Traffic in the evening usually flows well, after I get on the Toll Road, but it takes 30 to 45 minutes to get on the Toll Road coming from the American Legion Bridge. If a ball field is built at the intersection of Rt 28 and the toll road, on nights when there is a ball game, the traffic will be considerably worse.
x21425yf	Fix the exit ramp leading from the Toll Road unto I-495 and the exit off of I-495 unto to the Toll Road coming from MD. This is the worst part of my daily trip on the Toll Road. How about a work swap plan between people working in MD but living along the Toll Road and those individuals working along the Toll Road but living in MD. That would be a great idea to reduce the amount of traffic both ways. I also wish the State Police could enforce the HOV restrictions better. I get really tired of seeing single people driving in the HOV lanes.
x21984hk	Except for the cost of paying tolls, driving each day on the Toll Road, is no different than taking any other road in northern Virginia. Several years ago this was not the case. Over the years, the amount of traffic has greatly increased, making this an undesirable route. The greatest problems seem to be where traffic exits onto the Beltway (495). Perhaps, it would be better to fix these bottlenecks, instead of trying to change the routes that drivers prefer. And if this survey is about increasing revenue for the state, (i.e., spend revenue from No. Va. in Richmond and the remaining parts of Virginia) then perhaps Governor Warner should deprive Richmond of any current or future transportation projects. The idea that you can increase costs, to the commuter, and they won't care. This is something only a 1-term politician can do. Who do we hold accountable? What's next, increased sales tax...oh yeah you already did that. R.Everton, 1704 Ascot Way, #F, Reston, VA 20190

7. HOV Lanes/Additional Lanes on the Dulles Toll Road

m13009	I think that hot lanes should be used on the Toll Road.
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W10104wc	<p>There needs to be more leeway for the HOV status of 66 and the connector from the toll road to 66. If HOV could start at 7:00 a.m. instead of 6:30 am it would give everyone a lot more flexibility in how they commute. 6:30 a.m. is too early to start HOV. Everyone pays so much in tolls everyday and I have no idea where that money is being spent. I don't see any improvements or maintenance that would require all the money the toll road collects each day. I don't believe the toll prices need to be as high as they are. I would like to see a booklet or document showing itemized expenses paid for with the toll money that is collected, so the public knows if all the toll money should be collected.</p>
W10381aj	<p>Why in God's name do we continue to allow the HOV lane on the toll road? It is often underutilized and frustrating to have to pay a toll and sit in traffic day after day. You are not going to change the commuting habits (with carpools and subway) of many people like myself who need their cars and cannot travel in carpools because of the type of work and the hours I keep. Many jobs do not fit neatly into the traditional 9:00 - 5:00 sit behind the desk office mold. I can understand having an HOV lane on a non-toll road, but its adding insult to injury to have to pay and not be able to use the road that we already paid for with tax dollars. I question the effectiveness of the HOV lane on the toll road. Is it being done to help the environment? Is it just politically correct to assume that any HOV lane is a good thing? Is the State of Virginia afraid of loosing Federal funds if they don't endorse the HOV lane? How long will we continue to have to pay tolls on this road? I don't mind having to pay a reasonable toll, but I do mind being penalized by not being able to use the whole road.</p>
W10505aw	<p>The current HOV policy causes more congestion during rush hour. To alleviate congestion, the Airport Access Road should be opened for non-airport HOV traffic. Additionally, the back-ups at tollbooths during the afternoon rush hour are horrendous. Why get a Smart Pass when you have to wait in a line of 10 more cars when you exit the toll road, as there are no timesavings there?</p>
W10651ba	<p>Get HOV lanes! I'd pay more to get there faster.</p>
W11160za	<p>In my opinion the HOV lane is a joke. I sit in traffic every day, and see these people only 1 person in the car driving by me. The police are nowhere to be seen, these people know its not enforced and they continue to abuse it. It's the most irritating thing about using that road, besides the cost of the Greenway anyway.</p>
W11313at	<p>I would like better enforcement of the HOV lanes.</p>
W11413dn	<p>I don't know if this has anything to do with the Toll Road, but it would be great if there were more lanes that merged from the Toll Road onto I-495. If I leave my house 15 minutes later than usual, the time spent merging from the Toll Road onto 495 can be up to 20 minutes. Otherwise, I am willing to pay money to use the Toll Road because it does reduce the amount of time I spend driving.</p>
W11489te	<p>Need a second exit lane from I495 to the toll road from the outer loop.</p>
x20868wk	<p>I strongly support HOV lanes and congestion pricing, with such options available for single occupant vehicles as well for those days when car-pool use is not convenient. You should have asked questions on that point. I would be willing to pay double tolls on the occasions when I need to drive alone.</p>
W10716hp	<p>There needs to be a better way for people to commute from Northern VA to Maryland and back. Using the American Legion Bridge is currently the only option. Use of the Toll Road still takes a long time and is congested but is better than the other two routes (7 and I66). Also there is no way to get to I66 from I267 once you are east of 7100 (in case there are accidents). A bridge from Route 28 or 7100 over the Potomac would reduce traffic on I267 as well as the American Legion bridge. Another comment is an express road on I495 for HOV traffic so there is not congestion merging onto I495. Even Jersey walls to create this lane would not be too expensive to implement.</p>



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x21256fw	We've heard talk of letting people buy their way into the HOV lanes. This would be terrible. If you want the privilege of HOV, you should car pool. And the cops should enforce HOVs. They don't now.
W11556ux	You need to create more entryways onto the airport road that can be used when the toll road comes to stop b/c of accident. Can be used on exceptional occasions with extreme backups. Its extremely frustrating when in severe back-ups (lane closures) to obey the law and be forced to sit in traffic for hours - even when legally in HOV - when I can look over 10 feet to my left and see miles of open airport road. I'm sure that a high % the people using the airport road during these times are not airport related but to avoid traffic.
W11638zf	I use the Greenway and Dulles Toll Roads regularly and successfully. However, better police attention is needed to enforce HOV!!!! Also, why are trucks allowed on Dulles HOV and no others? Please disallow trucks!! Thanks.

8. Other Routes: Congestion

W11203uk	There are 3 or 4 ways in and out of Tysons that I could take. With no traffic, the toll road is the fastest by about 10 minutes. But during my commute, the routes in and out are almost always congested. I continue to take the toll road with perhaps the flawed logic that if it's shortest with no traffic, it'll be shortest with traffic too. If I had reliable, up-to-the-minute traffic info, I'd be better able to choose alternate routes: taking 123 to the GW Pkwy, for instance. Or 7 to 66. Radio reports often gloss over certain areas, and the web traffic reports tend not to be as current either (by the time I'm on the road).
W10721zt	I think you need to add extra lanes to the Beltway, not build rail lines. Most of the congestion that is built up on the Toll Road is a result of the congestion on the Beltway backing up onto the Toll Road. I live in Maryland, and it is outrageous that the third most congested highway in the country at times drops down to three lanes (Bethesda area). The roads have not kept up with the capacity of cars on them. Also, if other highways were built in Maryland, then some of the traffic would come off the Beltway. The Beltway is pretty much the only highway available in Maryland to go east/west. The Maryland Government should be ashamed of themselves for their poor, poor planning. I spend about 3-4 hours a day commuting.
W11629xh	The traffic back up getting onto the Beltway when existing the eastbound toll plaza is frequently unacceptable. Traffic should be able to reroute to the Access Road to get around the backup that is caused by people trying to get on the Beltway in either direction. Also, the exchange from 267 onto 66 should be improved. It is backed up every single day whether there is an accident or not. Lastly, the \$.50 charge to go onto Rt 7 is too expensive. Itss 100 yards that has to be a perpendicular shot across traffic from the EZPass lane all the way on the left. That is dangerous.
m12052	The toll road was not the problem on my "reverse rush-hour" trip. It was the beltway and I66, both of which clog at this time in the evening. I would have taken rail for sure if it went out to Reston. However, the toll road serves well at this hour.
m12108	Remove all the traffic lights on Route 7!
x21418br	I live in Clarke County and regularly take Route 7, then the Greenway and then the Dulles Toll road to get to Reston. Would be interested in improvements in this trip, i.e. very bad slowdown at the West-bound Greenway toll plaza and also on Route 7 West from Leesburg to Route 9.
m2081	Please do something about the congestion on Rt 7. You cannot allow more development in the area without some kind of a plan to take care of the extra cars that you are attracting to the area. Now even on weekends we have traffic problems
W10193fa	Most of the time I spend is on Spring Hill Road exit (the traffic light makes the car line too big).



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W10213aj	There needs to be some kind of dividing section on the Dulles Toll Road Eastbound where the traffic from Route 7 merges onto the beltway, too many people change lanes before they are legally supposed to and it causes unnecessary back ups. If there were cones or some sort of division in the area, I think there would be a smoother transition.
W10638zn	Just my thoughts. Increasing the toll amount to force people off the road during rush hour times will do nothing but cause the local road to be over congested. Rt 7 is already a parking lot; Fairfax County Parkway is the same. Increasing the toll amount will do nothing but cause an increase on those, and many others already congested roads. If you want to better the roads, increase the number of express lanes at the main toll plaza, as very few people actually use the cash only lanes. During rush hour, I have found that the cash lanes are faster than the express ones, as too many people are trying to get over to the 2 left hand lanes, causing a bottleneck on the approach to the main toll plaza. Make 4-6 lanes available during rush hour for speed pass only, and if needed flip them back to cash lanes during the day. If you make speed pass more of a benefit, more people will start to use it. Until then, it's faster and easier for me to keep flipping quarters out my window
W10751at	Often the big tie up is getting onto the Fairfax Parkway after the toll plaza. The toll doesn't take as much time as the long light at the exit. Lights too long.
W10813uu	One thing that adds additional time to my commute is time spent at the Route 7 toll plaza. The backups there can take 10-12 minutes. On some days. Other days, there is no wait. Also, the travel time is reduced on Monday and Friday mornings substantially. Also, the traffic seems lighter during the summer months, but as soon as area schools are in session, the Toll Road grinds to a halt in the mornings.
W11298ub	The biggest obstacle of travel on the Toll Road and Greenway is link between Arlington and the Toll Road during rush hours (restricted lanes). I66 is the greatest bottleneck and the determining factor of when I travel the Toll Road.
W11474zh	Please do something about the unbelievably long and dangerous traffic line that forms at the Spring Hill exit in the morning. The line down Jones Branch in the evening is also annoying. One simple solution for both is to have a "Don't block the box" policy like they have in NYC at the Jones Branch/Spring Hill/International intersection. Just an idea!
W11484mc	I would even pay more tolls if DOT would fix some of the daily bottlenecks. Westbound as the toll road passes over 28 backs up every evening, backing up the Route 28 south bound exit lane over the bridge could possibly eliminate this, would lose the breakdown lane but overall traffic would improve. Also the Greenway needs to add booths or add specific booths for Smart Tag similar to the booths at the toll road main plaza that allows the poor drivers to traverse the tolls at more than 1mph. Also the alignment of the Smart Tag lanes in the AM east bound is very awkward and confuses many drivers that for what ever reason decide 30 feet from the tolls that they can not use the Smart Tag lanes, also people constantly switch between the two Smart Tag lanes, making things worse.

9. Smart Tag: General

m10017	Smart Tag works fine and all the people who live locally should have Smart Tags. Tourists won't be able to get one.
m12114	We should receive a discount for using the Smart Tag.
m13068	Definitely there should be a discount for using Smart Tag, as in other areas.



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m13073	With the pricing options, I would like to be able to apply for the Smart Tag online. I really dislike having to call service centers and be put on hold. However, some us may not use the Toll Road often enough for us to want to purchase a \$50 Smart Tag replenishment. I also do not see the purpose behind a refundable deposit...is it for the tag itself? I think that it should be an option to either call in or use the online service and you should use a variety of replenishment costs...maybe some with only \$20, some with \$35, some with \$50 etc so people that use the road less don't have to buy in such bulk and people that travel frequently could purchase many trips at one time.
m9032	Discounts for using the Smart Tag would be excellent and encourage people to use the faster system...also, the Greenway is insanely overpriced.
W10088kw	Need an option for Smart Tag users who do not use credit cards. Pay by check over the phone for example. Many of us do not use credit cards these days. Thank you. \$50.00 minimum would be about right with a 30 percent reduction in fee over cash.
W10101he	I would use a Smart Tag if there was a discount over cash price.
W10173af	For folks who are wary of giving up any information about themselves (credit card, etc.), you might consider commuter stores where Smart Tag users can purchase and replenish tags. Also, you might explore asking whether--and under what conditions--people might carpool.
W10261td	I don't have a SmartPass (or whatever its called) because it's not a flat fee and there are too few "SmartPass" only lanes.
W10406ur	Having a discount for SmartTag users is a great idea. Higher tolls at rush hours are ok as long as it is well posted and consistent. Variable tolls that are not predictable are unfair to the driver, and would most likely cause me to discontinue use.
W10450kf	I called Smart Tag all day and got only a busy signal. This was very frustrating. What can I do?
W10715he	I would get an automated pass if it were useful on a wider variety of toll roads or parking facilities.
W11214nb	As a construction inspector I need to move equipment and material to many job sites through out the day. Typically a construction inspector/engineering technician works alone, therefore HOV is a hindrance. The toll may be reimbursed but it may take up to 2 months to receive payment. The Smart Tag does not offer a record that could be used in an IRS audit therefore it is difficult to get reimbursed. Smart Tag drivers should be exempt from HOV enforcement!
W11419hn	Please consider discounts for people who use Smart Tag.
W11505wc	I fully support HOV lanes and I wish that Smart Tag users will get a break on toll fares, not because I think the toll is too high (it's WAY too low), but because I think everybody should be using Smart Tag (and they will if it's cheaper on a daily basis) and more such lanes should be put in at all the major exits. Getting through the toll plazas is my number two complaint about the Toll Road; number one being the 495 interchange that backs up every single day without fail.
x20890tb	Discounts for Smart Tag should have been instituted years ago, years!! Raising the tolls during the commute hour is stupid - rather you should open the airport road at a raised amount during commute hours and remove the toll on 267 - we've paid for that road many times over, many.
x21885ha	It is unacceptable for Fast Toll users to not have a discount for using Fast Toll. Reality is that the Toll Road is usually the best option for the fastest travel. To pay full price for Fast Toll is taking advantage of the situation. I never see an accounting of where all the toll money goes or how it is used. It certainly can pay for a lot of road work in the Northern VA area.



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x21484xh	It would be nice to give the Smart Tag holders a discount especially if they use the Greenway or the toll road more than 3 times a week. I did live in Fairfax County but the high real estate costs forced me out towards the west. Now I own a nice house, but I have a further commute. Thanks for the survey!
U441bp	Would like to have optional Smart Tag device for motorcycles. One maybe that fits on a keychain.
m11067	Recommend: a discount for Smart Tag users. Recommend: more toll roads, i.e. American Legion and Woodrow Wilson bridges become toll bridges (Like New York City) again with significant discount for Smart Tag users to alleviate congestion. Recommend: increase in gas tax to fund another bridge across the Potomac linking Rt 28 in Virginia with I-270 in Md. Justification - Home land security issues in the Wash DC area.
m12038	Make the fast toll system on a monthly pro-rated payment system like NJ, connect the systems nationally too i.e.. FL, NY, PA, MA

10. Smart Tag: EZPass Compatibility

m2021	Any Smart Tag transponder must work with other States on the east coast so I do not have more than one device. Please get on it with MD, DE, PA, NJ, NY, CT, and MA.
m10042	The Smart Pass system needs to link with EZPass - like the rest of the Northeast Corridor. Until that is done, it is not worth it.
m11021	I would like my EZPass to be compatible with the toll road. I use EZPass more often and it saves more time. I don't use the Dulles toll road during heavy traffic hours.
m12063	I have an EZPass and travel up and down the East Coast. It needs to work here!!!!
m13025	I would get Smart Pass immediately if it was combined with my EZPass.
W10004ze	Get EZPass for the toll road! I travel to NY a lot and I do not want 2 different tags. One would make it easier and more manageable.
W10011df	It is a shame, shame, shame that the metro isn't getting built any faster. It is great, however, that SmartTag and EZPass will accept each other's tags. A discount for SmartTag users makes a lot of sense, too.
W10496mx	Forget Smart Tags--go to EZPass--why would you want to continue with a tag that is not regionally compatible?
W10511wp	EZPass is accepted at tolls in MD, PA, Delaware, NY, etc. It would be much more convenient if the toll road accepted EZPass as well as or instead of Smart Tag.
W10529tu	To solicit more smart card business, a great incentive to the consumer would be to join with other states (MD/PA/NJ/NY/MA) allowing their use for all tolls!
W10828mj	I have EZPass but it doesn't work in Virginia, which doesn't make any sense. It works all over NE in US.
W10881zt	It is so annoying that you don't use the Fast Toll transponder system used by MD, DE, PA, NJ, NY, etc. I will not get a second transponder. What an unnecessary hassle for the public. Get on board with the East Coast standard!
W10968uf	When will the EZPass work on the Dulles Toll Road?
x20862fh	I will purchase a Smart Tag when it is compatible with the northeast corridor - I already own a Fast Pass that can be used in MD, NY, NJ, etc.



x21268zp	<p>The toll is unfair to those of us who live and or work in McLean, Vienna, Reston, and Herndon and beyond. Wasn't the original intent to pay for construction of the road itself? I have to assume that that bill was paid in full long ago. If I'm right, then why does the toll remain necessary? If it's not necessary (to pay for the road) then how is the toll not a supplemental tax on a geographically targeted segment of the driving population? Its geographic tax bias; is that fair? And, its not like the Toll Road provides a benefit. If you live out here, it's direct, but is usually slow and congested. The residential alternatives move faster and are free even if they require a few extra miles. Furthermore, if the toll must persist, and if you want to increase SmartTag adoption and driver behavior, you should do so by providing toll discounts and added convenience. I converted to EZPass when living in NYC because it gave me access to EZPass-only ("only," as in not EZPass plus exact change) lanes and was cheaper than paying cash. SmartTag has no such incentive and, as a result, adoption is low. Furthermore, SmartTag missed the mark by declining to integrate into the EZPass system. I know that integration is finally coming, but what was the delay? EZPass is accepted up and down the Eastern Seaboard. I cant tell you how many times I blew through the Dulles Toll plaza but with my EZPass instead of my SmartTag affixed to the windshield -- an easy and honest mistake to make.</p>
x21581rc	<p>I hope that the Smart Tag will be replaced by EZPass to facilitate trips on I-95 very soon.</p>

11. Smart Tag: Express Lanes

W10168dj	<p>It seems to me that the people who are backed up the most are at the .50 toll who have a Smart Tag.</p>
W11539wf	<p>Suggestion: During Rush Hours, make at least one lane at the on and exit toll plazas (Fairfax City Pky, Reston Pky, Wheile, etc) a Fast Toll only, don't include exact change with the Fast Toll users. Make the exact changes users use the toll lane with those that want change.</p>
m10040	<p>I would like to see Smart Tag only lanes at all toll booths.</p>
W10112mj	<p>Please, please, please, put a Smart Tag booth on the right side of the roadway at the main toll plaza!!! Please!</p>
W10156as	<p>Because of the increase in traffic on the toll road heading toward the airport, you need to increase the fast toll lanes to at least three during peak rush hour times. I have a Smart Tag and it is the slowest lane sometimes because drivers go as far in the pay toll lanes then cut over. I would suggest either a Smart Tag lane to the far right to accommodate those coming from 66</p>
W10199dr	<p>Please, please, during rush hour, make one of the lanes that enter/exit to the Toll Road Smart Pass only. People who are stupid or miss putting their quarter in really slows down Smart Pass users who could easily merge onto the Toll Road while they are forced to wait in line. This might also encourage more people to use Smart Pass, which is what you want, because you probably make interest on the money we deposit every month.</p>
W10368xw	<p>On westbound toll road maybe add a Smart Tag lane on the right so cars don't have to travel across four lanes to get to the Smart Tag lane on the left. Also I think there needs to be better traffic enforcement. Most days I see no police on the toll road.</p>
W10502kr	<p>To lower traffic congestion, create more Smart Tag-exclusive toll lanes, or give Smart Tag users a discounted rate. I need the Toll Road to get to and from work, so exploiting that need by raising the already high tolls is inexcusable. There is *no* logical alternative to get to Reston from Ballston if the tolls are raised beyond my ability to pay - I'd need to get a different job somewhere besides Fairfax County.</p>
W10516wy	<p>If you guys also fixed up I-66 between the Fairfax Drive exit (#71) in Arlington and the split to the Toll Road to have at least one extra lane (and perhaps a second for the mile between the on-ramp from Lee Highway to the Toll Road), and added at one more lane on 66 between the Toll Road and Fairfax Drive in Arlington eastbound, I may consider still driving. Also, you need to reconfigure the toll lanes. The toll tag lanes need to be separated and given two distinct lanes so that toll tag users can cruise through without having to deal with last second merges, and have signs encouraging a higher speed through the toll plaza for toll tag users. I am only suggesting this for outbound traffic on the Toll Road. The mess of 495 would make it too dangerous the other way.</p>



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W10534nx	Suggestion for main toll plaza: Have the Smart Tag only tollbooths offset from the rest of traffic. Often a line forms to get into the Smart Tag only booths (longer than the lines for the rest of the plaza), and people cut into line at the last minute, creating a safety issue, slowing traffic, and making the line build up.
W10540rz	I fail to see the point of the options with the 15 minutes earlier etc. On any given day the Beltway/Toll Road back up starts as early as 3.30pm and continues that way through 7pm. Plus or minus 15 minutes makes little or no difference and I fail to see any benefit of HOT lanes. The biggest delay on the Toll Road is around the Toll Plaza itself since VDOT insists that the SmartTag lanes are on the far left...traffic entering the westbound Toll Road from the Beltway has to move four lanes to the left to jam into a single approach lane; after exiting the Toll Plaza traffic has to move right to get out of the HOV lane. Brilliant...everybody knows that the way to improve traffic flow is to get people to change lanes more than necessary. (Access to/from the Beltway is another nightmare but you already know that!) If you really want to improve traffic flow, remove the Toll Plaza; the road was paid for years ago and no other road in the area requires a toll to maintain it. The tolls are now an easy way to collect revenue and clearly no politician (of any party) has the strength to admit that they are simply another tax on a group of people who have no reasonable alternative. Unfortunately, through incredibly poor planning, this area is dying under the crush of traffic. I moved here in 1996 and the massive expansion in Loudoun City has overloaded the Toll Road, Fairfax County Parkway, 28, 7 and all other major roads. It has reached the point where I've decided to move purely because of traffic and congestion...I'll be leaving VA soon and moving west.
W10643mm	I think there should be an additional Smart Tag only lane at the main toll plaza on the opposite side of where the two lanes exist. Too many people need to cross 4 lanes of traffic when they come out of the main plaza from the Smart Tag lanes. It would also relieve some congestion in the Smart Tag lanes. I have Smart Tag but use one of the non-Smart Tag lanes at the main toll plaza because the back up is a lot less. Thanks.
W10680rh	Having reverse commuted for 4 years from Tysons to Leesburg, I have been able to watch the traffic patterns closely. The #1 congestion problem is the single lane access to I-495 N & S. That's fairly straightforward to deal with. #2 is the back ups at the tolls. At the main tollbooths, I strongly suggest you consider making all but the right two toll booths Fast Toll only. Also, commercial trucks should be forced to use the right lanes so they don't impede the normal flow of commuter traffic. Thank you.
W10827mc	I would ride the train if I worked and drove at rush hours and I would use the train for nightlife transportation to and from D.C. Suggest more SmartTag lanes and less cash lanes at main toll plaza and improve lane designation signs for SmartTag users.
W11165am	For my return home, I enter the Toll Road from Route 7 and head East. There is little room and time to cut across the 6 lanes of traffic to get to the Smart Tag lanes. It would be a good idea to make another lane, closer to the right a Smart Tag only lane. It defeats the purpose of using a Smart Tag if I have to wait in line at the booth because I could not make it over in time.
W11274fe	Need Smart Tag only lanes on all tollbooths. Please improve signage on Centerville Rd south (and all similar occurrences) to indicate toll lanes. Currently cannot tell, as bridge embankment is visually impeding and visitors/tourists don't know in advance what lane to take.
W11336nn	The Smart Tag lanes are the slow lanes - traffic would move faster if you had more of them forcing people to get the Smart Tag like other toll roads on the East Coast. Smart Tag lanes come to a stop in the a.m. while pay lanes don't! Add more Smart Tag lanes and less cash lanes.



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x21263ft	<p>At the beginning of the survey, I saw that you were considering giving Smart Tag users discounts, but you did not include a question about that option in the survey. Smart Tag users in other parts of Virginia receive discounts (e.g., bridge over the York River connecting Yorktown and Gloucester Point), and I would like to see the same incentive applied to the Dulles Toll Road. I would also like to see at least 2 travel lanes approaching the Main Toll Plaza dedicated to Smart Tag users. The current arrangement of having just the HOV travel lane near the Main Toll Plaza (traveling east on the Toll Road) designated as the Smart Tag lane (which splits into two lanes right at the toll plaza) creates more traffic congestion for Smart Tag users at the toll plaza than for cars paying cash for toll at the toll booths. Incentives like discounts and more lanes set aside for Smart Tag users would attract more drivers to the automated toll system and move traffic more efficiently through the Dulles Corridor. I would also like to mention that I strongly support a rail extension from West Falls Church to Dulles Airport. At this point in time, the most time & cost efficient way for us (myself and my husband) to commute to work from Herndon to DC is using the HOV lanes along the Dulles Toll Road and I-66 inside the Beltway (since my husband also has free parking available at work). We also need to have the car available in the afternoon 3 to 4 days a week to pick up children from after school activities, get to medical appointments in areas away from our commuting route, etc. I occasionally take public transportation to work when my husband is on travel, but would probably choose that alternative more often if there were a rail system that served the Herndon area of Fairfax County.</p>
x21354dx	<p>For what it's worth, I would like to add that it's clear more dedicated Smart Tag lanes are necessary. Now at rush hour the lines for the dedicated Smart Tag lanes are longer than for the other lanes.</p>

12. Other Non-Auto Modes

m13080	<p>Let's promote more carpools and hybrid vehicles. Reduce the oppressive hegemony of oil monopolies.</p>
m13002	<p>I support light rail or "Maglev" technology on the Dulles Toll Road. The Dulles Toll Road in my opinion has been paid for several times over since its inception. The Toll should be removed from this road. I will use alternative routes anytime I can to avoid this road.</p>
m10028	<p>I normally take the Loudoun County bus (reverse commute from West Falls Church Metro to AOL/MCI) everyday and only drive when I absolutely have to. The bus is less stressful and much cheaper. Wish more people did this!</p>
m11057	<p>I take the Loudoun County Reverse Commute Bus most mornings -- it is tthe best way to get to work from the West Falls Church Metro to Loudoun County. Have a great day. Katrina</p>
W10466mp	<p>I would use mass transit if there were a better schedule and terminal location closer to work. To get on a bus would add as much as a half-hour. In addition I need to use vehicle on occasions for business.</p>
W10909kf	<p>I chose the rail option also because I would ride the bus from my home to the station and not try to park at the station. I also do not drive to D.C. if avoidable because parking is so difficult (and expensive) and I don't know my way around well enough to be comfortable driving.</p>
W11080pu	<p>I cannot carpool because if one of my kids gets sick or if the other has an emergency then it will leave the other stranded. Also, if Route 7 didn't take me a little bit longer then I would travel Route 7 because the toll road costs me almost \$5.00 a day and \$25.00 a week. This is a lot to run on a road and my employer does not reimburse these funds. I am going to start traveling Route 7 where it is cheaper and will not take so much away from my family and the funds that are needed for three kids.</p>
W11499xh	<p>Today I had to be at work by 6:00, that is why I drove in. I usually take the LC bus from Dulles North Park and Ride. Taking LC bus is 50 minutes door to door and costs \$10/day. Driving to Herndon Monroe, to Fairfax connector bus to WF Metro to Rosslyn was 1 hour or more (depending on switching and traffic on toll road) and cost \$9 for tolls/metro/bus. I take the LC even though it is \$1 more a day because it is more comfortable, no switching and saves me 10-15 minutes each way. Hope this helps--Good Luck</p>



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W11513ax	I would use Rt 28 during non-peak times, but it is currently under construction down near the toll road with building new overpasses. It is actually a faster route off-peak without construction, but the route is very unreliable right now. Once construction is complete on the overpasses, I will go back to using Rt 28 to the toll road. I rarely travel from Exit 10 toward DC during rush hour on the toll road.
W11523th	I grew up and worked in Tokyo, Japan which has excellent rail systems throughout the region. Most railways support both "local" and "express" trains so that longer distance commuters can get to their destinations faster by selecting the type of rail car. I would love to take an "express" train from Loudoun to DC area. Less stress, more time to myself (on the train), reduced pollution, reduced congestion on the road, reduced wear and tear on my car. I hope this transportation method will be available very soon. KM.
W11635bc	I very seldom use the tollway to get to work. I tend to use it as an alternate route to get back from work. Alternate routes are free. Accessibility to the train is really unknown but generally takes extra time and half my trip is still ahead of me either before or after the rail portion. Not very desirable. However, since our business is in Tysons, we need public transportation to our work site. Since we are a training company, we need public rail transportation to enable our students to take that travel mode via a combination subway and rail.
x20004sc	Your choices did not include the cost of parking at metro stops - presently the Herndon Park Ride is free, and I take the 5b Metro bus to/from Rosslyn. If I was charged \$4.00 to park there then driving might be cheaper than Train/Bus. So unless you don't plan to charge for parking all your answers will be skewed (biased)! [RSG Note: This was true and after this comment, we changed the survey accordingly]
x21249hr	On weekends, if I know there is parking in Washington where I'm going, I take the car. On weekends if I'm going to the Mall and on weekdays, I take Metro.
x21774tw	I take public transportation most of the time and it works well. I answered these questions based on the trip I needed to make for which I had to have a car to cart around art supplies. Your options were immaterial since I had to have the car. If I were commuting on a regular basis as I used to before retirement, I would have been influenced by the change in times and prices.
m2106	Get Maglev train. Old train track systems are slow, expensive to maintain, congest surface traffic. Maglev is fast, low cost to maintain, lasts longer, and elevated tracks reduce cost of obtaining right-of-way.

13. General Comments: Time

W10292cy	I don't want to be paying more, or spending more time traveling. If the price I pay or the time I spend go up significantly (\$0.25) or the 13 minutes in your questions, I would have to start considering other options, and I would have to involve my employer in these considerations.
W10856sa	I found some the questions about travel alternative difficult to answer, as I do not know the alternate routes and the road and traffic conditions. If I would be in slow and heavy traffic I would rather pay, but if it is less traffic that would be fine. I would love to be able to ride the metro the majority of my trip and not deal with traffic and driving.
m10007	I would pay up to \$1.50 to reduce my commute time by 20 to 30 minutes.
m10076	Time is most important factor in all my trips.
m2082	How about setting up the tollbooths so payment is made at one stop (and not at both entry and exit points). This would save time and congestion.
m9049	As long as my employer is reimbursing me for my toll, any reasonable amount that reduces my travel by 20 min or more will cause me to take the toll road. For leisure travel I'd avoid the toll.



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W10410kx	Hi. Just to let you know I ended my trip at the outlets. I did not know the exit or road. I do not mind paying a toll on the way there. It saves a ton of time, so I can shop longer. However, on the way home I take Leesburg pike to avoid the tolls. If there were a metro I would shop out there much more. Leave DC at 7:30pm to avoid traffic sometimes getting there with only 30-45 minutes to shop. As for Smart Tags, I do not know much about them. If it were a cheap start up fee I would get one. Really, if it got me through the toll line quicker no need to discount the toll. Time is much more valuable. Have a good day. Kathy
W10411be	Since my work schedule is fairly flexible, I am most interested in adjusting my commute time such that the time spent in my car is minimized. I'm definitely willing to pay slightly more toll for a faster trip. Also, I do occasionally take the Metro system from Arlington to West Falls Church and then take the Fairfax Connector to my office, but this is less convenient for me because I cannot run errands at lunch or on the way home from work, or easily get to a destination after work that is not Metro-accessible. Even if the Toll Road part of my trip were faster, it's the I-66 congestion that is the major backup. The slowest part of the Toll Road trip is the backup to get to the main toll plaza from the connector road.
W10417py	I would take the metro now but from home to a lot, to the train, to Ballston station, to a bus to work takes almost two hours (1:50). I can do the same trip in 1/4th the time. If the trip were less time, I would consider it.
W10572tz	Need to consider access points to allow overflow onto the 2 middle lanes traveling East from the airport when traffic is at a standstill. I wouldn't do West because the overflow may back up the 2 lanes traveling to the airport and cause missed flights. Also need to expand lanes. Forget the pretty grass on my trip to work, just get me there quicker!
W10588mu	I really don't care what it costs as long as it is fast, has no traffic lights, limited exits, etc. If charging will reduce the number of vehicles, I am for it.
W10594nk	Clearly, I'm looking for the quickest and cheapest way to get to work! If it were possible for a trip by train to take less time than driving, I would definitely go with that option--I think that the amount of money I spend on gas and tolls right now is probably about equal to the amount I would spend on train fare. Since plans for expanding Metro service are still unclear, I would love it if toll costs were either reduced or eliminated--it stinks having to pay \$1.50 just to go to work everyday!
W10634ce	Travel time for my last trip was non-representative. I normally leave home 6:10am to get to work at 7am, and normally do not run into I-495 construction. Normal trip is 50 minutes instead of 1 hr 5 min. My commute is "time maxed" so that I feel much more sensitive to time than price. Now that gas is going up, I plan to move to Reston and eliminate all highway travel.
W10712hy	I have more flexibility to change travel times in the evening to save time or toll charges.
W10861zh	Anything to speed trips and to provide preferences for HOV and clean fuel vehicles are the right thing to do. I am willing to pay fares for a faster commute.
W10932ff	The train option would be far more preferable than any driving option if the time difference between metro and driving were no more than 15 minutes. If taking the train increases commutes time by more than 50% it becomes unattractive.
W11187up	I leave late to miss traffic. I would much prefer to leave earlier, ride a train and get me to work earlier. I am chagrined to not see an alternative that is affordable and timelier. I do not relish the thought of the train ride taking so long. Why would it have to take so long? I would love to get to work at 7:30 to 8AM but I would be in traffic until 9AM if I did that. I want a train! Even to Leesburg! Please help. Not everyone in Loudoun is rich. We moved there because of affordability and that is now gone. I do not see how it is possible to say that the Greenway does not make money. With that many cars, how can they not be making money with the lower negotiated rate provided by the state of Virginia.



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W11283cb	I'd be much more likely to take the train, even if there would be no financial benefit to do so. However, it must be noted that based on the times estimated for total travel time on the train; more than 40 minutes of estimated time is too much in my mind.
W11581tt	Would love to see a metro option, but would only take it on a daily basis if it significantly cut off time from the commute since it is a hassle (parking, waiting, weather, etc.). Wouldn't use HOV unless there were special exit ramps for the HOV lane as it is currently dangerous and it ticks me off when they have to merge back in and screw up traffic.
x21509bd	I am all for a rail system, not only for "flow" reasons, but also for environmental reasons (less use of gas, less pollution etc.). My biggest issue and most valuable commodity is time. I don't like the fact that I have to commute 60 miles every day in the first place, but if I have to, then I want to minimize the time. I have taken public transportation for 15 years, when I lived in DC, but the way the system is presented, I'd still have to take the metro all the way into town (Herndon to Rosslyn) and then back out again to King Street (Alexandria). I'm more likely to continue driving and carpooling rather than ride the metro and add additional travel time. Also, the King Street metro is about a mile from my office, adding an additional 15-minute walking commute. Thanks for your efforts with this study. I look forward to other opportunities to provide feedback.
W10242uz	I would usually choose rail, unless the trip were an hour, or the car trip were a lot faster. Cost is less of a factor, but if rail costs four times the toll, I'd have to think about it. Feel free to contact me for more.
x21237nb	My time is limited and I would use rail only if the trip was significant enough (into DC). I never use it now, because there are never any parking places so it is significantly faster, and often cheaper, to drive downtown. I would never use it between Reston and Tysons since I do not go to Tysons for work...I usually need to get in and out and spend less than an hour total on the trip.

14. General Comments: Tolls

m1013	Tolling VA is not good public policy... increase user fees on fuel and index sales tax in include all transportation modes.
m1019	Please allow the EZPass to work in VA. Raising tolls during rush hour is dumb. It would dump cars on the side roads and cause congestion, and NOT raise money for the state.
x21582hp	I believe Virginia has misused and wasted the tolls collected on the current Toll Road and the Greenway. If tolls paid by Northern Virginia commuters had been reinvested in the Northern Virginia rail/road systems, the traffic congestion would be non-existent. The volume on the Toll Road alone should have paid for it multiple times over and have generated income to allow the completion of a light rail and express bus alternative to Leesburg via the Toll Road right of way.
m11046	Do not raise the cost of the toll road. The Greenway is much too expensive for people not traveling the full distance! Smart Tag would get much more use if a discount was offered, especially 20% or more.
m12021	I am violently opposed to increasing tolls on the Greenway and the Dulles Toll Road to underwrite building a rail line. I use both routes regularly, but I would be forced to stop using them if these preposterous tolls were introduced. I feel that \$2.65 (\$2.15+ \$.50) is more than enough for a 20 minute ride.
m12034	Not likely that you will get people to change their times commuting for small dollar increment changes in the tolls - would have to cost a lot to get me to change my behavior.
m12072	Make the Smart Pass compatible with EZPass. I am highly insensitive to price changes relative to travel time.
m13033	Increasing the toll will actually decrease my use of the toll road. I find the current toll too high, considering the road has been paid off for years. I would use rail, but only to the airport. If the tolls remained low, I would consider an electronic reader in the future.



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m14039	Please remove tolls from the toll road as promised instead of looking to increase them.
m9000	I oppose any toll increases on the toll road. There is little maintenance of the road as it is so I do not know where the daily millions in revenue are going. We are burdened enough with four daily trips at 22 days/month. Rail service sounds like a viable option but the reality is the parking lots fill up before 7 AM and bus routes are time consuming...rendering metro useless for most commuters. Thank you very much for the opportunity to take the survey.
m9055	I think the Dulles Toll road should only charge one way. This would be consistent with other bridges like The Peace Bridge. I think the current charge is way to high. It discourages purchases of real property in Loudon County.
m9060	Honestly I would rather not pay a toll at all.
W10033jc	The tolls on the toll road should be eliminated, not increased. As I indicated, I was able to drive from North Carolina to Herndon and paid no tolls until I hit the toll road. We have long ago paid for this road. No reason exists to single out people who live along the Dulles Toll Road. Virginia officials and politicians need to look for another funding source.
W10057nd	I live in Old Town Alexandria and commute to Reston Town Center five days per week. My commute to work usually uses the same route of GW Parkway north to 123 South to Toll Road west to Reston Town Center. My commute home varies based on time of day and anticipated congestion. When congestion is anticipated to be lightest I take the Toll Road east to 495 south to Route 1 north, if Beltway traffic is heavy I often take the Toll Road east to 66 east to GW Parkway south. When congestion is anticipated to be heaviest I take the Toll Road east to 123 north to GW Parkway south. I would certainly be interested in paying increased tolls for shorter commute times, however, the Toll Road portion of my commute is outbound in the morning and inbound in the evening, and so it is generally a "reverse" commute. I would be most interested in paying tolls for shorter drive times on the Beltway between Alexandria and the Dulles Toll Road. Hope this info is helpful.
W10142cd	If toll gets too high, I will use Rt. 7 and spend the extra 15-20 minutes to get home. If call-in to renew EZPass has "typical" cheap equipment and built in holds, waits, delays, I will not use EZPass.
W10374rj	The toll road provides the best route for me. However, once the tolls go over a \$1 one-way, I'm out of there. I'll likely take the back roads and spend more time, or find more opportunities to telecommute. By the way...weren't the tolls supposed to have ended way before now? Have you forgotten the original deal that went with approving the toll road in the first place?
W10383au	I am against any toll increases...I already pay too much to sit in traffic backups. Increasing tolls will not influence that amount of traffic on the toll road. People from the Dulles corridor have no choice but to use the Toll Road and Greenway. People will pay any amount to avoid Route 7, etc. It is NOT fair to suggest making the Toll Road drivers pay for a new rail line to Dulles.
W10682cu	Please don't raise the tolls! They should be eliminated to speed up traffic.
W10916cd	The morning trip on the toll road is to take my daughter to school, and then for me to drive to work. Since the schools hours are fixed, I have no ability to adjust my scheduled commute on the toll road, and thus I have to, and will, pay any reasonable toll as long as the toll road commute time remains substantially quicker than that of the non-toll road option.
W10926xy	Do not increase the toll road or Greenway amount. It is high enough already. Thanks.
W11154jx	When will the toll be eliminated? Once the road is paid for, then the toll should go away. I'm not interested in renting roadway for my and my children's and my grandchildren's and descendants' lifetimes. The toll was generated to build the road, only.
W11207az	Don't raise the tolls.
W11300rs	I would prefer using the rail once it is built, but the amount of time projected to walk once at ones destination (5 minutes for 2.5 miles!) was unrealistic. Also, the cost is too high for a trip that takes the same amount of time as a non-toll road alternative.



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W11421dz	There should be no ramp tolls during non-peak hours. This would encourage drivers to use the toll road without adding to congestion (actually staying off the inadequate local road system) while saving gas and thus reducing the US trade deficit, our dependency on foreign oil, and pollution.
W11518ex	I'd rather see you initiate a discount for Speed Pass than increase the tolls for everyone. Shifting travel time (+/- 15 minutes) doesn't seem like a realistic option, at least not for me. Since I use the Toll Road to get to work, the idea is to get from point A to point B in the least amount of time. Thanks.
W11545jf	Please don't increase the cost of tolls--they're so high as it is.
W11552jw	My comment is regarding the question about the reason why I would not choose the toll road. When you add the high cost of gas to the cost of the tolls, if the new metro rail costs less than the sum, it makes more sense to use the rail. However, between the toll road and an alternate non-toll route, the added travel time makes alternatives unreasonable.
W11554dc	Increasing the toll during congested or at rush hour times, simply punishes people who have to go to work at a specific time. A more reasonable scenario is to open up the airport lanes during peak or rush hour times to HOV traffic and give the toll road HOV lane back to commuters on the toll road.
W11672rf	Hopefully the increase in tolls that is coming will help resolve the back up that has become a daily event at the end of the road in Leesburg.
x20894fc	I would be willing to pay higher tolls if it saved me time but to pay a toll and then sit in bumper-to-bumper traffic just as bad or worse than the non-toll roads is ridiculous.
x21233wx	I would highly object and vote against any increase in tolls to pay for any rail (light or heavy service) along the Dulles corridor. Immediately convert from Smart Tag to EZ Pass for seamless toll paying on the eastern seaboard.
x21254mu	Lower your tolls! Why should Northern Virginians be the only ones with tolls? It is an outrage.
x21331wx	I'm concerned that you are raising tolls for people going against the major traffic flow. It would be interesting to see if the tolls are the same on both sides of the road for rush hour, or if there is a higher toll for the people going eastbound in the morning.
x21466uw	I'm angered that a primary artery is held hostage to tolls by the state.
x21922bj	I absolutely oppose any increases on the toll road. It is obscene that you are still collecting tolls when this toll road has already been paid for over many times. We will be looking to move away from the toll road and possibly Virginia.
x21981xh	The idea of raising the toll costs is infuriating to anyone who lives and uses this road. The toll was supposed to go away when the road was paid for, but just keeps going on and up. We end up paying for special access to the Access road. The impression is that this has turned into a cash cow that milked for everything they can get from those of us who need to use it. Metro costs are outrageous.

15. New Bridge: Support

W10989en	I think a better alternative would be to build a new bridge over the Potomac from the top of Route 28 (at Route 7) to join Route 118 south of Germantown.
m10060	What I would like to see the most is another bridge over the Potomac!
W10207sj	Build another bridge across the Potomac between Montgomery and Fairfax counties.
W10246xb	Build a bridge from Potomac across from Piney Branch Road to Reston through route 7100.
W10621tc	Do not change the Toll Road. Build another bridge!
W10625eb	Create a new Potomac river crossing; the American legion bridge is killing me!

16. Hybrid Vehicles



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x20002be	The survey ignored the option of using a "Clean Fuel" vehicle, i.e. Hybrid, CNG, or electric to use the HOV lanes/Route 66 with driver only. This required me to "cheat" in order to complete this survey (Prius Hybrid driver).
W10740ft	I have a hybrid and was not given the option to note this. Instead, I had to mark that there were 2 people in the car. I use my hybrid to drive HOV on the toll road and HOV on I-66. But if a rail line were built on the toll road, I would use it instead. The stress of driving in traffic everyday is just not worth it to me, even with the use of the HOV lanes. I think that the rail line is a great idea that is long overdue. Not only would I use it to get to work everyday (b/c there is a metro stop 2 blocks from my office) but we would use it all the time on weekends, too. Instead of raising the toll, please give us some other options. Traffic is just going to get worse.
W11477ak	I currently drive a hybrid and can therefore use the HOV lanes, which save me considerable time. Otherwise, my trip on the Dulles Toll Road would probably be more in the neighborhood of 45-60 minutes and that's if traffic isn't backed up to the Greenway as it is on some mornings. I would like to use the future metro rail, however, I fear that the fee for using the rail out to Loudoun could be very expensive if it is done with private money, as is the case with the Dulles Greenway. Being a native Northern Virginian I have always wondered why VDOT and elected officials did not have the metro rail extended to Dulles airport when it was originally brought out to Vienna and when it was much cheaper to extend the rail line. DUH!

17. Miscellaneous

W10873rw	On my way to work in the morning, I choose to drive an alternate route (Herndon Pkwy to Elden St to Baron Cameron to Rt 7 to Colvin Run Rd to Walker Rd to Georgetown Pike to Beltway). It may be faster in the mornings than taking the Dulles Toll Road. Even if it's not, it's better than sitting in Toll Road traffic but paying \$0.75 for that privilege. And it's a prettier drive.
x20853wk	My last driving trip on the toll road was by myself and took 45 minutes. I usually carpool using I-66 HOV, and total trip time is about 35 minutes.
W11406fd	Just some more information that could be useful for data collection. I currently take the metro and then the Fairfax Connector bus service at least once a week (usually Fridays b/c of traffic) to and from work in Tysons Corner, when I would otherwise use the toll road. The entry station that I use is Rosslyn in the morning. I exit the system at Court House in the afternoons.
m10031	The answer is less development and fewer cars. Not more roads!
m10107	Will you be building an extension of the metro? And maintaining exemptions for hybrid cars? And including pedestrian friendly access like sidewalks to the metro stops?
m1015	Put automatic credit card machine at toll plazas.
m13039	Where would the funds from the increase go? All would stay in Northern VA or get dispersed to Southern VA as well?
m14047	Would like underground connector between Borders/Best Buy/Fairfax Square and Tysons Corner Center (moving sidewalk/tunnel).
m14069	Don't believe in toll roads - one of the reasons I moved out of Loudoun county. I still pay and pay more than enough taxes.
m14084	My distance and travel time to work is too short to use the metro.
m2009	I think people that should not pay a lot of money that just don't have it at all time.
m2087	I wanted to know if there were some sort of incentive for residents who live within the Dulles corridor? And if not are you considering a tax break?
m3013	Contact me at www.polytrade.net to find out how to reduce emissions.



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m9038	I believe this information helps the traffic especially on rush hour time to facilitate each one to get to his or her destination at time preferred. Thank you.
m9041	Why are speed limits so restrictive on an 8-lane highway (plus 4 express lanes)? In most other states, this would be a 65 or 70 MPH highway. Why is there only a two-lane exit at the 495 beltway? The exit lanes should be restricted to exit traffic. There are far, far too many people in the other lanes lurking to cut into the 495 exit traffic. That is the biggest bottleneck along with the lack of express Smart Tag toll lanes at the end of the road in rush hour periods. Why isn't the outrageously priced Greenway purchased and made part of the Dulles Toll Road?
W10055ns	I would use rail for weekend and other social travel, but not for work, due to reasons stated in my survey.
W10155mt	Why is there such a glorious waste of space on the corridor of DTR? The center lanes could house a railway to Dulles and beyond. The center traffic lanes to the airport should be used for express times. Why couldn't the overflow pay to get on the airport center lanes at rush hour? A premium for toll payers would be to jump onto the center airport only lanes and pay a toll on exiting--a much higher toll, but worth the \$ if congestion is so bad. What about using the whole center roadway all the time? Charging big dollars to go on and off the airport roadway. I have walked near the tall sound walls the line the freeway. The noise isn't any better on either side of the wall. Is there a better way to deaden the noise of a freeway?
W10211ee	I take metro when I go into DC, and I would take it if I worked in Falls Church. But it's not worth the inconvenience when there's no saving of time.
W10460js	There is no way for me to use rapid transit because of living in Ashburn and working in Alexandria at a school in the middle of a subdivision off Columbia Pike.
W10548mp	I have answered this survey in relation to my current commute. However, I am moving from Tysons to Clarendon in 3 weeks, while keeping my job in Herndon. At that point, my commute on 66 West and 267 West will be longer and more expensive. I will, then, live much closer to the Clarendon metro station. At that point, I would seriously consider taking the metro as my main form of transportation to and from work (all things considered...time & expense).
W10685fk	Sometimes the tollbooth machines don't work and when I put the exact amount it says that I need more change so please pay attention to the machines it is cheating me out of money. I don't have money to waste because the toll machine is not calculating correctly.
W10729cn	I am on a short work project - which may be at the maximum 3 months. This can really shape my perceptions - like if I had living here then maybe I would have even considered the train alternative as well. Added to that I am not concerned about paying tolls for now, because I am going to get it reimbursed from my company. Thanks.
W10830jt	I'm not going to make a 10-minute walk in the rain and snow. I work in Tysons II next to the Ritz. So if the train station were close to that, then I would consider taking the train.
W10913bb	There are no cross county commute routes. Tysons to Rockville for example -- Metro requires me to go through DC, costing hours in time. A metro line that circles the beltway might alleviate traffic. For any new metro station, you need to provide covered bicycle storage. It could be paid but not more than \$1 per day. A changing facility might be nice too. The county needs to provide more bike paths or space on roads for bikes. I would consider biking to Tysons but (1) I don't have shower facilities at work and (2) would probably get killed on the roads around Tysons. There seems a mindset that cars and adding pavement are the only alternatives. Walking paths and sidewalks are only an afterthought. Make it easier to walk around and I will. Make it easier to bike around and I will. Make it cost more to drive around and I'll look for alternatives. I would also urge a crackdown on aggressive drivers on the Toll road. Those Loudon county drivers -- the ones who bought cheap out in Leesburg seem to speed excessively on the Toll road.
W10927jp	When you have more than one passenger in your car the metro option is too expensive.



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W10973jm	\$3.75 to park at the train station is too high. I can get transportation costs reimbursed up to a certain level by my job and so can my husband; but that is the rail ride, not the parking.
W11212jt	I understand that people will need to travel in order to reach their destination at certain times during the day. The majority I encounter for example during my return may very well choose to utilize some form of public transportation if reliable and with sufficient frequency. Coming from The Netherlands and having experienced the great public transportation system, we can learn quite a bit from it to help implement the most optimal ideas here. The one thing one would need to do in my opinion is streamline the process regarding who has influence over the decision-making.
W11279pm	I have been using the Toll Road since it was completed. I have noticed time and again that large trucks (especially semis, construction/dump trucks) have a difficult time keeping up with the flow of traffic in medium, slow or stop and go traffic situations. Their slow acceleration causes cars behind the trucks to move slower or change lanes, which causes the traffic in that lane to slow down. This gets even worse in the Vienna/Wolftrap area where the road has a more pronounced grade. Survey the road from an overpass on a crowded day and the issue will be very evident. The slinky effect can be seen behind the trucks as everyone either sits in their lane or cuts off into another lane with moving traffic and then that lane must slow down. The answer is to ban all 3-axle and above trucks from the Toll Road from 7-9AM and 4-6PM. Let the commuters get to work and clear the road. The trucks can take up their space after the rush hour clears. Thanks.
W11280uw	The big problem in trip comparison is the unknown of how long the trip will actually take. Accurate information of traffic conditions at the time of departure seems not to be available. Radio reports are not constant and traffic cameras require too much scrutiny to be helpful. The radio reports also don't cover all incidents and conditions, so if you are trying to use a less heavily traveled road you may encounter problems that have not been reported. If I could log onto a website that highlighted the traffic flow in different colors and noted the locations of traffic incidents or activities along my various alternate routes, I could better plan for the most efficient and cost effective method to go home, before committing to a route that is inhibited. The next step would be to have it available to me in my vehicle, but I don't want to ask for too much.
W11342yk	My closest Metro station is East Falls Church. I live near Lake Barcroft -- don't know the distance to the station. My work office is in Herndon -- don't know zip.
W11424pj	There need to be better signs at the toll plazas as far as what lanes are for what usage. The New Jersey Turnpike and Garden State Expressway have lights and signs that let you know well in advance what lanes are for what purpose. That would eliminate, or at least curtail, a lot of late lane changes as you approach the plazas.
W11460tu	Important: wide range of hours, express from outliers to Arlington/DC, easy access to terminal by car and very local, quick shuttle, security of vehicles.
W11501dn	This particular trip included a five-minute stop before I got on the DTR. (I didn't notice a question about a stop.)
W11530cu	The creation of rail stations in Reston along with the high-density housing planned around these stations will greatly increase the traffic congestion in Reston. It is false thinking that all these people will ride metro.
W11588xr	Car needed to make trips to clients' offices. Westbound toll road at Rt 28-the far left lane (3rd lane) that merges at the Rt 26 bridge needs to be ended at the exit to the Dulles Access exit. Too many traffic problems with drivers using that lane until it ends.
x20882br	I am never interested in saving money or time by traveling at a time that is inconvenient to me. I might choose to drive about twice a month rather than take rail due to after work commitments. Then, I would pay the higher toll in the morning and use another route at night.



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x21418br	I live in Clarke County and regularly take Route 7, then the Greenway and then the Dulles Toll road to get to Reston. Would be interested in improvements in this trip, i.e. very bad slowdown at the West-bound Greenway toll plaza and also on Route 7 West from Leesburg to Route 9.
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18. Survey Comments

m10038	Get input from people in different parts of the area on economic policy and crime, because people use the roads to get to businesses, and the crime has an impact on where people live. The further people are from their work and businesses that they patronize, the more they use the roads.
m1040	Keep up the good work!
m14066	Thank you for your interest.
m14086	Good Stuff.
m2036	This was taken on Saturday. The answers would change during the week. An extension of the metro rail service would cause me to possibly change the way I get to work. I would abandon the bus and use Metro Rail as my primary commuting option.
W10110pj	<p>This survey is more worrisome than our roads -- I hope you are not considering most of what you put before us here. This survey shows how little you understand or care to understand about the problems we face here. Build a damn rail out to Dulles and widen 66! How hard is that to figure out? Your problem will be solved instantaneously. I would ride that Metro everyday -- and so would half the people I work with. The answer is so easy ... unfortunately, our Department of Transportation is so unwilling to change. Dulles airport has been in existence for 40 years -- how could you not have built a train in that time? Honestly, this situation is so bad ... that I would like to find another job in another area; and frankly, if I had to start a business -- it would not be in this area. The city planners and politicians from the 70s, 80s, 90s and today should refund their salaries to the State to pay for some of these upgrades.</p>
W10221aj	Thanks for the survey. I'm glad you're checking with the users of the road. Keep up the good work. Obviously, I wish we had a rail to Dulles, and we should not get punished west of Tysons Corner because some people could "opt-out."
W10860pk	Thank you for the opportunity to take the survey. Please feel free to contact me in the future.
W11086cs	Based upon the eight questions and my preferences, it would appear that I would pay more and receive negligible benefit. I hope you don't decide that this is the solution. I look forward to seeing the results of the survey.
W11509uj	You should provide a toll credit for those that complete the survey.
W11597eh	One significant omission from your scenarios in the second part of the survey was consideration of parking. If I go to the Metro Station nearest my home (Ballston), about the best deal for parking is \$7/day.
x20829rn	<p>Wow! I'm a retired traffic engineer and I think about such things as the cost of alternate mode choices. While I think you're right about the relative costs of fixed rail, many people might suggest you're biasing the response because of the comparative costs and times that are given. Besides, a lot of people won't want to be bothered with the detail. Then, of course, you're getting responses only from those willing to take the time. The rest of the population is all too likely to say, "We want rail transit because somebody, not me, will ride it." In short - how will the results add anything to the debate? Personally I think rail transit will be a colossal boondoggle from an engineering benefit cost viewpoint. Thanks for the opportunity to comment.</p>
W10071cp	Thank you for soliciting feedback - especially in such an elegant, streamlined and quantifiable manner. I'm fully confident that my taxes and my toll money are well spent in this area.

