Mode Share Comparisons for Northern Virginia's Major Transportation Corridors

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Tamara Ashby

Introduction

Establishing a choice of transportation modes for the efficient movement of persons and goods throughout the region is a paramount priority to public agencies and private groups in Northern Virginia. Historically, the best method for achieving this goal has been an informed mix of public transit facilities and additional highway capacity. This report consolidates mode share information for Northern Virginia's major corridors in which transportation mode choices are available as a result of previous investments. The motivation to analyze mode share information by corridor is to gain a better understanding of transit and ridesharing performance in those specific markets.

The National Capital Region Transportation Planning Board of the Metropolitan Washington Council of Governments conducts several data collection exercises. The *1998 Beltway Cordon Count,* the *1999 Draft Performance of Regional High-Occupancy Vehicle Facilities on Freeways in the Washington Region Report (Draft HOV Report)* and the *1999 Draft Metro Core Cordon Count* are three such monitoring projects. In addition, the Virginia Department of Transportation (VDOT) commissions traffic counts as part of its preliminary engineering process for various highway improvements. The information presented in the following pages is from the most recent of these regional travel-monitoring efforts.

This report is organized by major corridor, with tables in each section summarizing the available data. A list of mode share resources and the type of data they contain is included in **Appendix A**. A table showing HOV restriction periods for each facility can be found in **Appendix B** of this report.

The conclusion on pages 21 and 22 contains summary tables **7a** and **7b** that list transit, ridesharing and single occupant vehicle mode shares for each of the corridors for the *Draft Core Cordon Count* and the *Beltway Cordon Count,* respectively.

Survey Methods

In the *Draft Metro Core Cordon Count,* the metro core is defined as Washington D.C. and parts of Arlington including: Pentagon City, the Pentagon, Crystal City, and Rosslyn. Counts are taken of all traffic crossing this line into the metro core; the most recent count was taken in the spring of 1999.

In the *Capital Beltway Cordon Count,* the Beltway cordon is defined by the inner loop of the Capital Beltway. Traffic counts are taken immediately inside this cordon on major radial highways that cross or connect to the inner loop of the Capital Beltway. The most recent count occurred in Spring, 1998.

The *Draft HOV Report* collects vehicle data at several counting stations located along HOV facilities, including I-66, I-95/395 and VA 267. The count focuses on vehicle traffic; there is only one transit counting station per facility as opposed to the multiple vehicle counting stations. The most recent count took place in Fall, 1999.

The survey designs for the *Draft Metro Core Cordon Count,* the *Draft HOV Report* and the *Capital Beltway Cordon Count* **focus on the entire Washington Metropolitan region** (metropolitan area of Washington DC, suburban Maryland and Northern Virginia). Therefore, when the data are broken down by Northern Virginia corridor they are not statistically significant. Consequently, precise analysis of mode splits and their trends in each corridor would not be statistically valid. However, these traffic counts are valuable in providing an indication (or snapshot) of current transit performance in these important Northern Virginia commuting corridors, especially since there is no better corridor specific source of data.

All counts record vehicles and passengers that cross hypothetical cordon lines at specific counting stations. Traffic is counted once at each site for the inbound (5:00-10:00 AM) as well as for the outbound directions (3:00 – 8:00 PM). Traffic counts are conducted on single days at each site. Care is taken to collect data on typical days; data collection is performed on Tuesdays, Wednesdays, and Thursdays. If any of these days occur prior to or after a holiday, data collection is postponed to a day that would provide a more reasonable representation of true traffic conditions. When using the data and observations drawn from these travel-monitoring efforts, it should be recognized that travel characteristics vary from day to day so these counts offer only an estimate of regular traffic conditions, but one that is designed to be statistically valid for the metropolitan region as a whole.

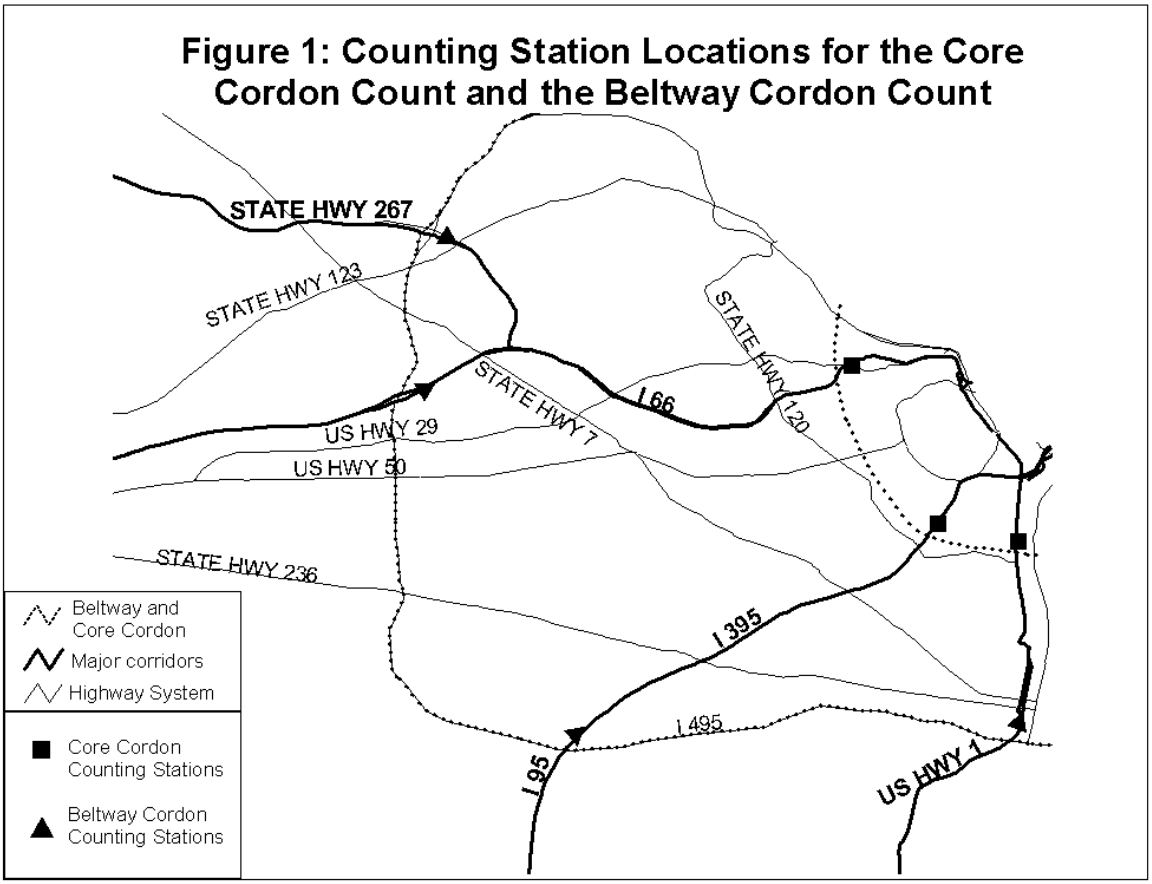
To offer an inclusive description of the travel patterns, the traffic counts are supplemented with transit information from WMATA as well as local transit providers. For the *Draft Metro Core Cordon Count* all Metrobus, Metrorail, Virginia Railway Express, and other transit services crossing the cordon line are included. Metrorail passenger volumes provided by WMATA are assigned to the traffic counting station closest to the location that the rail line crosses. VRE provides data, by time period, of passengers traveling to and from Union Station, in Washington, DC. Assignment of VRE passenger volumes is on a similar basis as Metrorail passenger volumes. Commuter bus data are obtained by telephone interviews with bus company operators. They are asked to describe routes, schedules, and average ridership by trip. From this data a commuter bus ridership load factor is developed and multiplied by the number of in service buses counted crossing the cordon line in order to get the bus passenger count. Vanpools are counted as vehicles with more than 8 passengers. A load factor of 12 (obtained through interviews with vanpool operators) is applied to all vehicles carrying more than 8 passengers. This same approach was applied to the *Beltway Cordon Count* and the *Draft HOV Report* to report transit data.

Mode Shares

The data for the Northern Virginia counting stations contained in the *1998 Beltway Cordon Count,* the *1999 Performance of Regional High-Occupancy Vehicle Facilities on Freeways in the Washington Region Report,* and the *1999 Draft Metro Core Cordon Count* were used to compile the following tables. All represent the most recent studies of their type available. The different studies reflect conditions at different sets of geographic locations and are not intended to provide trend information.

Regional Comparisons

Figure 1 shows the major corridors and counting stations for *the Draft Core Cordon Count* and the *Beltway Cordon Count*. As the figure shows, there are four counting locations on the beltway cordon and three on the core cordon in Virginia.



1999 Draft Metro Core Cordon Count

In **Table 1** (on the following page), the *1999 Draft Metro Core Cordon Count* shows that in the entire Washington region, 37 percent of persons crossing the core cordon inbound during the morning peak are transit users, while 15 percent use High Occupancy Vehicles with two passengers (HOV-2), and nine percent use High Occupancy Vehicles with three or more passengers (HOV-3) or vanpools.

In comparison, 30 percent of commuters in Northern Virginia use transit to cross the metro core into parts of Arlington County and the District of Columbia. This is seven percent less than the regional mode share for transit. However, in Northern Virginia 15 percent of persons traveling use HOV-2 to cross the core cordon, and 13 percent use HOV-3 and vanpools. While transit usage is somewhat lower in Northern Virginia, there is a slightly higher percentage of high occupancy vehicle traffic compared to the Washington region, so that single occupant vehicle usage in Northern Virginia is just three percent greater than in the entire metropolitan region. It should be noted that maximum transit percentages might be even greater inside the core cordon (e.g. at Rosslyn), although the survey data do not allow confirmation of this hypothesis since the counts are taken only at the core cordon line.

Table 1

1999 Draft Metro Core Cordon Count				
6:30-9:30 AM Inbound traffic				
	Northern Virginia Mode Share [1]		Washington D.C., Maryland and Virginia Mode Share	
	Passengers	**% of Total**	**Passengers**	**% of Total**
Transit Bus	7,937	4.3%	30,747	6.6%
Commuter Bus	7,220	3.9%	9,088	2.0%
Commuter Rail	2,830	1.5%	10,199	2.2%
Metrorail	37,413	20.4%	123,677	26.7%
Total Transit	**55,400**	**30.2%**	**173,711**	**37.4%**
Vanpools[2]	3,756	2.0%	9,180	2.0%
HOV 2	28,246	15.4%	70,518	15.2%
HOV 3+	19,750	10.8%	32,810	7.1%
Total Ridesharing	**51,752**	**28.2%**	**112,508**	**24.2%**
SOV	**76,557**	**41.7%**	**177,747**	**38.3%**
Total Passengers	**183,709**		**463,966**	

[1] In calculating the Northern Virginia mode share, all counting stations that are found within sectors 1, 2, and 3 were combined.

[2] Vanpools are vans with eight or more passengers. For the *Core and Beltway Counts* and the *Draft HOV Report*, a factor of 12 persons was used to calculate vanpool passengers. Vans with less than eight occupants were counted as automobiles.

1998 Beltway Cordon Count

According to the *1998 Beltway Cordon Count* (**Table 2**), 14 percent of the commuting population in Northern Virginia use transit to cross the Beltway, which is about half as many persons as use transit to cross the core cordon. This is expected since more transit options exist closer to the core. HOV-2 captures 16 percent, and 12 percent of all persons crossing the Beltway are comprised of HOV-3 and vanpools.

The transit mode share percentages for Northern Virginia contained in the *1998 Beltway Cordon Count* closely follow the regional mode share percentages. However, in contrast to the *1999 Draft Core Cordon Count*, a slightly lower percentage of persons in Northern Virginia use single occupancy vehicles compared to the entire Washington region.

Table 2

1998 Beltway Cordon Count				
6:30-9:30AM Inbound Passengers				
	Northern Virginia Mode Share[1]		**Washington D.C., Maryland and Virginia Mode Share**	
	Passengers	**% Total**	**Passengers**	**% Total**
Transit Bus	3,185	1.5%	9,384	1.8%
Commuter Bus	1,499	0.8%	3,454	0.7%
Commuter Rail	3,709	1.7%	10,474	2.0%
Metrorail	20,916	10.0%	39,598	7.7%
Total Transit	**29,309**	**14.0%**	**62,910**	**12.3%**
Vanpools[1]	4,416	2.1%	8,808	1.7%
HOV 2	32,642	15.7%	86,630	16.8%
HOV 3+	20,427	9.8%	34,434	6.7%
Total Ridesharing	**57,485**	**27.6%**	**129,872**	**25.2%**
SOV	**120,555**	**58.4%**	**321,341**	**62.5%**
Total Passengers	**207,349**		**514,123**	

[1] In calculating the Northern Virginia mode share, all counting stations that are found within sectors 7,8,9,10 were combined.

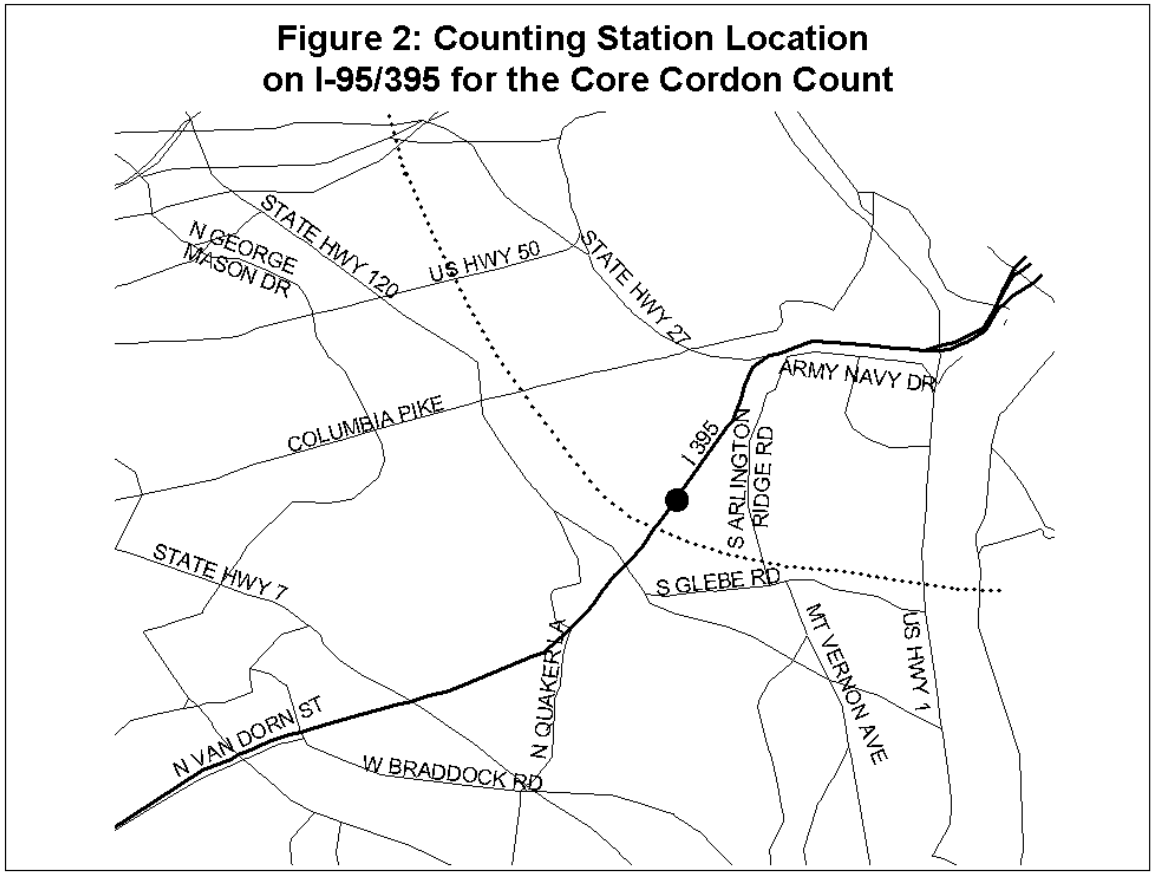
[2] Vanpools are vans with eight or more passengers. For both cordon counts and the *Draft HOV Report* a factor of 12 persons was used to calculate Vanpool passengers. Vans with less than eight occupants were counted as automobile occupancy.

I-395/I-95 Corridor

The HOV facility on the I-95/395 corridor is a barrier separated and reversible highway, extending from Dumfries Road in Prince William County to South Eads Street in Arlington County, near the Pentagon. There is an additional mile of barrier-separated roadway north of the Pentagon that does not have an HOV restriction. Several dedicated HOV on-ramps provide exclusive access to HOV lanes from Park-and-Ride facilities in Prince William County. VRE, Metrobus, Metrorail Blue line, DASH, Fairfax Connector, Omni Ride, and private coach companies operate public and private mass transit along this corridor.

The *Draft Core Cordon Count* counting station for this corridor is on I-395 just north of VA 120 (South Glebe Road), as shown in **Figure 2**.

Figure 2: Counting Station Location on I-95/395 for the Core Cordon Count



In the *1999 Draft Metro Core Cordon Count,* it is difficult to differentiate Metrorail passengers between US 1 and I-95/395, since the Blue line serves both corridors (e.g. Crystal City on US 1 and Pentagon on I-95/395) near the core cordon. Therefore, **Table 3a** gives the mode splits for US 1 and I-95/395 combined. According to the data, 33 percent of all commuters use transit to cross the core cordon in the morning peak period and 30 percent use ridesharing. The transit/HOV totals in these heavily congested corridors comprise nearly two-thirds of all commuters; this is a strong confirmation of the effectiveness of investments in transit.

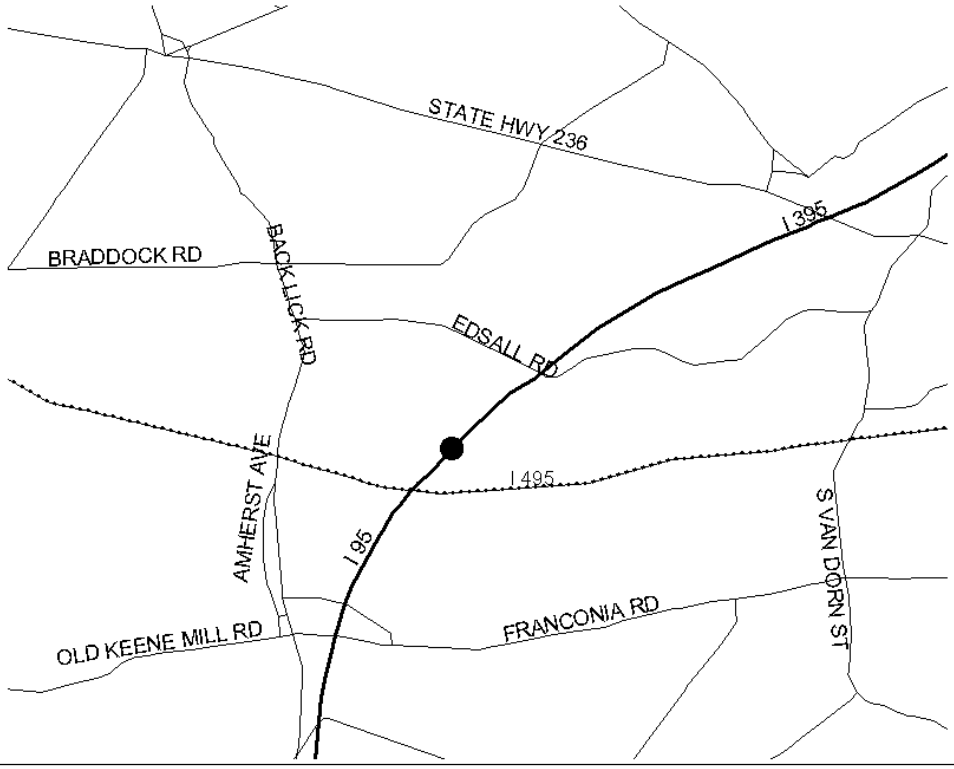
If all Metrorail at the core cordon in these two corridors had been assigned to only the I-395 corridor, the transit share would be 35 percent on I-395 at the core (versus 15 percent in that corridor alone with no Metrorail assigned). If Metrorail passengers were assigned based on the percentage split in the *1998 Beltway Cordon Count* (44 percent of Blue and Yellow Line passengers allocated to I-95/395) then the transit mode share would be 25 percent on I-395 at the core.

Table 3a

1999 Draft Core Cordon Count: US 1 and I-95/395 Combined Mode Share		
6:30-9:30AM Inbound Traffic		
	Passengers	**% of Total**
Transit Bus	4,725	6.5%
Commuter Bus	2,648	3.6%
Commuter Rail	2,830	3.9%
Metrorail	14,100	19.4%
Total Transit	**24,303**	**33.4%**
Vanpools	1,920	2.6%
HOV 2	5,796	8.0%
HOV 3+	14,634	20.1%
Total Ridesharing	**22,350**	**30.7%**
SOV	**26,067**	**35.8%**
Total Passengers	**72,720**	

The *Beltway Cordon Count* counting station for this corridor is located on I-395 between the ramp from I-95/495 and Edsall Rd, as shown in **Figure 3**.

Figure 3: Counting Station Location on I-95/395 for the Beltway Cordon Count



In **Table 3b**, *The 1998 Beltway Cordon Count* shows 21 percent of Northern Virginia persons traveling use transit to cross the Beltway inbound in the morning peak period. This report also shows 43 percent of persons crossing the Beltway are in HOV-2, HOV-3 or vanpools. Thus, even at this outlying counting station, almost two-thirds of commuters are using transit and HOV each workday.

Table 3b

1998 Beltway Cordon Count: I-95/395 Mode Share		
6:30-9:30AM Inbound Passengers		
	Passengers	**% of Total**
Transit Bus[1]	282	0.7%
Commuter Bus	1,259	2.9%
Commuter Rail[2]	3,709	8.7%
Metrorail[3]	3,791	9.0%
Total Transit	**9,041**	**21.4%**
Vanpools	1,356	3.2%
HOV 2	4,644	11.0%
HOV 3+	11,918	28.2%
Total Ridesharing	**17,918**	**42.5%**
SOV	**15,244**	**36.1%**
Total Passengers	**42,203**	

1 Shirley Highway all lanes combined
[2] Backlick Rd. and Van Dorn Street counting station
[3] Van Dorn Street Metrorail station

I-66 Corridor

The *1999 Draft Core Cordon Count* and the *1998 Beltway Cordon Count* also give mode share data for the I-66 corridor. The corridor is split into two HOV sections, making it a unique commuting corridor. Between the Capital Beltway and Rosslyn, I-66 is HOV-2 only during the peak period in the peak direction. The only exception is that vehicles traveling to or from Dulles Airport are not required to be HOV. West of the Beltway extending to VA 234, the facility has a single HOV-2 concurrent-flow lane during the peak period in the peak direction. Metrorail's Orange line, Metrobus, VRE's Manassas Line, OmniRide, Loudoun County Commuter service, and private bus services all serve I-66.

The counting station on I-66 for the *Draft Core Cordon Count* is located on I-66 at Spout Run Parkway, as shown in **Figure 4**.

Figure 4: Counting Station Location on I-66 for the Core Cordon Count

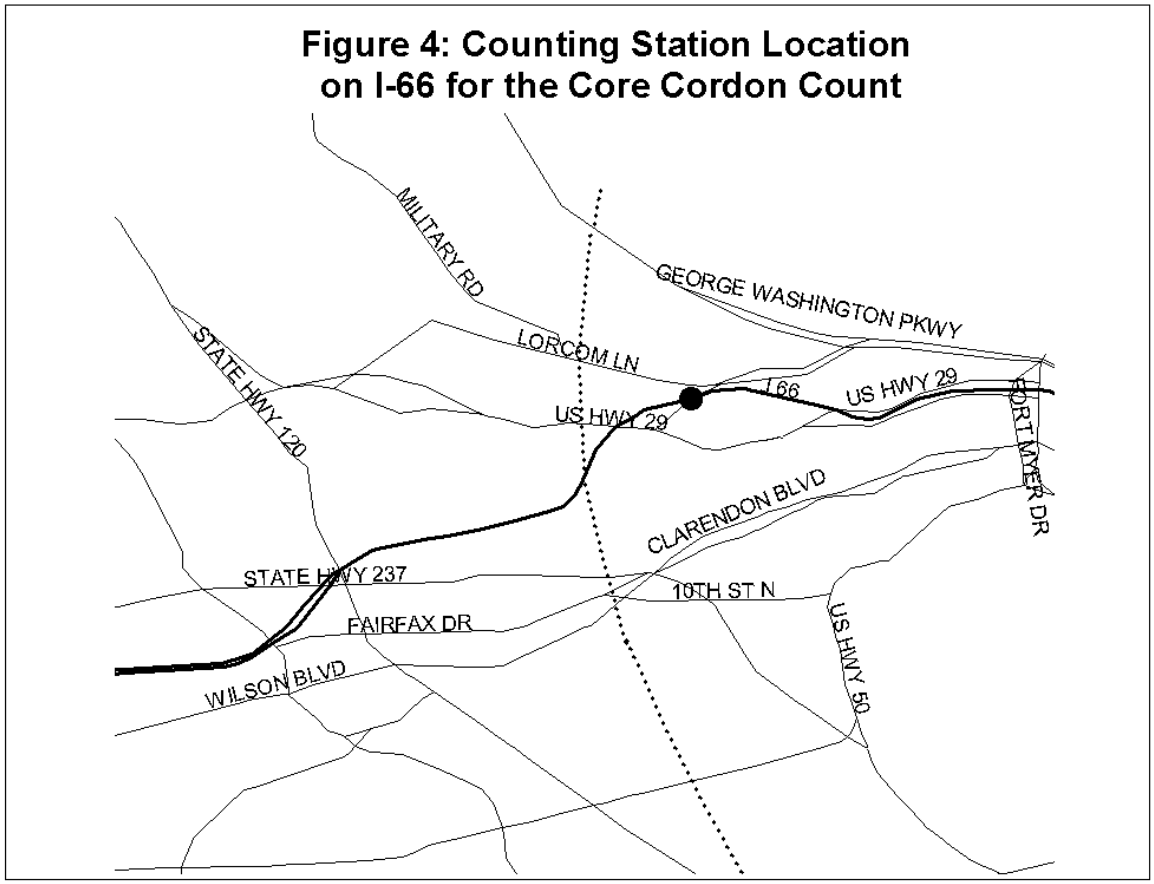


Table 4a shows the *1999 Draft Core Cordon Count* mode split for the I-66 corridor. The report shows that 61 percent of persons traveling in the corridor use transit. Ridesharing makes up 32 percent of all persons, leaving only seven percent for SOV. This SOV number reflects half an hour (9:00AM – 9:30AM) where there is no HOV restriction at this counting station.

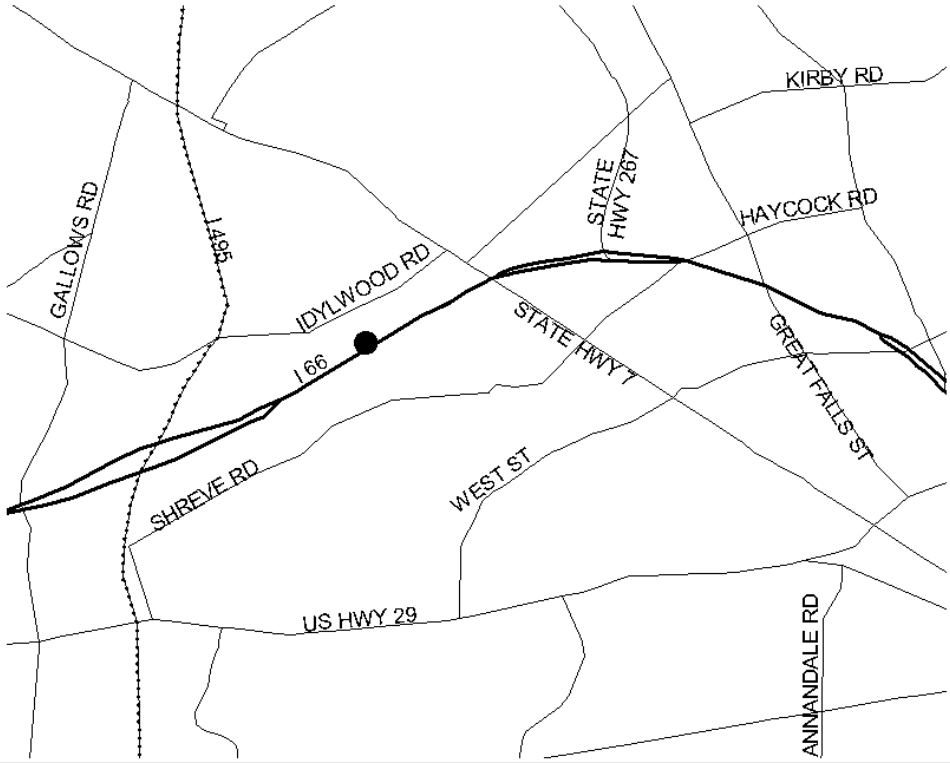
Table 4a

1999 Draft Core Cordon Count: I-66 Mode Share		
6:30-9:30AM Inbound Traffic		
	Passengers	**% of Total**
Transit Bus	159	0.4%
Commuter Bus	3,572	8.1%
Commuter Rail	0	0.0%
Metrorail[1]	23,306	52.6%
Total Transit	**27,037**	**61.1%**
Vanpools	828	1.9%
HOV 2	10,212	23.1%
HOV 3+	2,915	6.6%
Total Ridesharing	**13,955**	**31.5%**
SOV	**3,292**	**7.4%**
Total Passengers	**44,284**	

[1] Ridership at the Courthouse station on Metrorail's orange line.

Figure 5 shows the *Beltway Cordon Count* counting station for this corridor, located on I-66 between the ramp from Northbound I-495 and the exit to VA 7.

Figure 5: Counting Station on I-66 for the Beltway Cordon Count



In **Table 4b,** the *1998 Beltway Cordon Count* gives the percentage of persons that use transit as 56 percent. Thirty-seven percent of the persons crossing the Beltway on I-66 use HOV-2, HOV-3 and vanpool.

Table 4b

1999 Beltway Cordon Count: I-66 Mode Share		
6:30-9:30AM Inbound Traffic		
	Passengers	**% of Total**
Transit Bus	112	0.5%
Other Bus[1]	92	0.4%
Commuter Rail	0	0.0%
Metrorail[2]	12,393	55.1%
Total Transit	**12,597**	**56.0%**
Vanpools	396	1.8%
HOV 2	6,170	27.4%
HOV 3+	1,791	8.0%
Total Ridesharing	**8,357**	**37.1%**
SOV	**1,544**	**6.9%**
Total Passengers	**22,498**	

[1] 'Other buses' are defined as all buses that are not transit buses. This is comparable to the 'commuter bus' category used in the core cordon counts.
[2] Boardings for West Falls Church and Dunn Loring Metrorail stations.

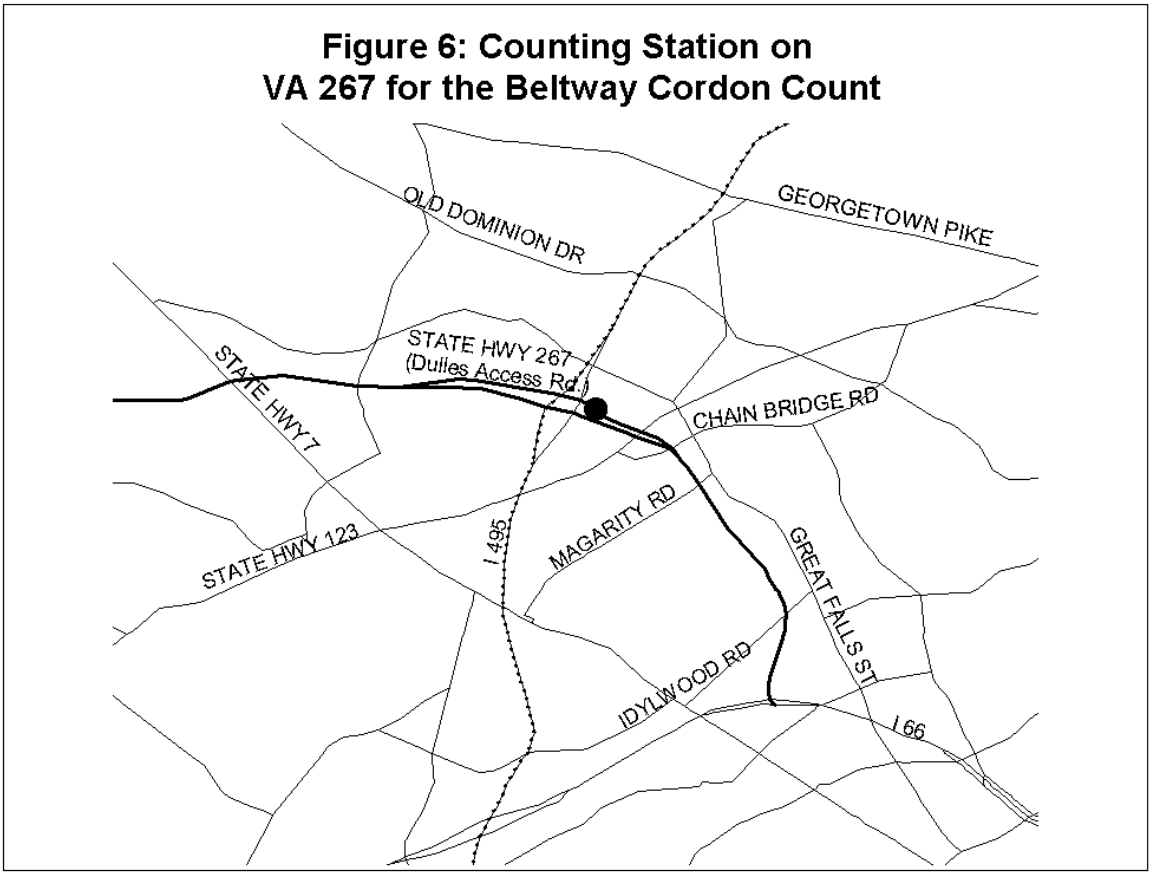
VA 267 (Dulles Toll Road) Corridor

VA 267 stretches from I-66 in Fairfax County to Dulles Airport. Concurrent-flow single HOV lanes on the Dulles Toll Road opened in December 1998. The lanes begin between VA 28 and VA 657 and continue to just west of VA 7. There are no HOV lanes through the interchanges at VA 7, VA 684, and VA 123. All lanes of the Dulles Connector from east of VA 123 to I-66 have an HOV restriction. The only exception is traffic traveling to or from Dulles Airport. Fairfax Connector and Loudoun County Commuter Bus provide service in the corridor. New Fairfax Connector service was added on VA 267 in July 1999.

No data were collected for this corridor in the *Draft Core Cordon Count*, as VA 267 does not cross into the core.

In the *Beltway Cordon Count*, the counting station for this corridor is located on VA 267 between the ramp from southbound I-495 and the exit to VA-123, shown in **Figure 6**.

Figure 6: Counting Station on VA 267 for the Beltway Cordon Count



Data for the *1998 Beltway Cordon Count* were collected in Spring, 1998, before the HOV lane opened and the new Fairfax Connector service began. The *Beltway Cordon Count* shows the transit mode share for VA 267 (14 percent) to be similar to Northern Virginia's overall mode distribution and slightly higher than the entire metropolitan region's transit mode share of 12 percent (as shown in Table 2 above). Ridesharing made up 29 percent of the total persons crossing the Beltway on VA 267, for a combined transit/ridesharing total of 43 percent.

Table 5a

1998 Beltway Cordon Count: Mode Share on VA 267		
6:30-9:30AM Inbound Passengers		
	Passengers	**% of Total**
Bus	1,254	12.7%
Commuter Bus	148	1.5%
Commuter Rail	0	0.0%
Metrorail	0	0.0%
Total Transit	**1,402**	**14.2%**
Vanpools	360	3.6%
HOV 2	1,828	18.3%
HOV 3+	724	7.3%
Total Vehicle	**2,912**	**29.2%**
SOV	**5,640**	**56.6%**
Total Passengers	**9,954**	

Table 5b shows data from the *1999 Draft HOV Report*. The counting station for this report is in the same location as the counting station for the *Beltway Cordon Count*. This data collection effort took place **after** the HOV lane opened in 1998 and new Fairfax Connector service began. *The Draft HOV Report* shows that transit and ridesharing capture over 60 percent of the mode share in the morning peak period. Twenty-two percent of total persons traveling use transit, which is especially encouraging since there is currently no rail in the corridor. Thus, indications are that the new HOV lane boosted transit and ridesharing use, perhaps by as much as half (to 60 from 43 percent).

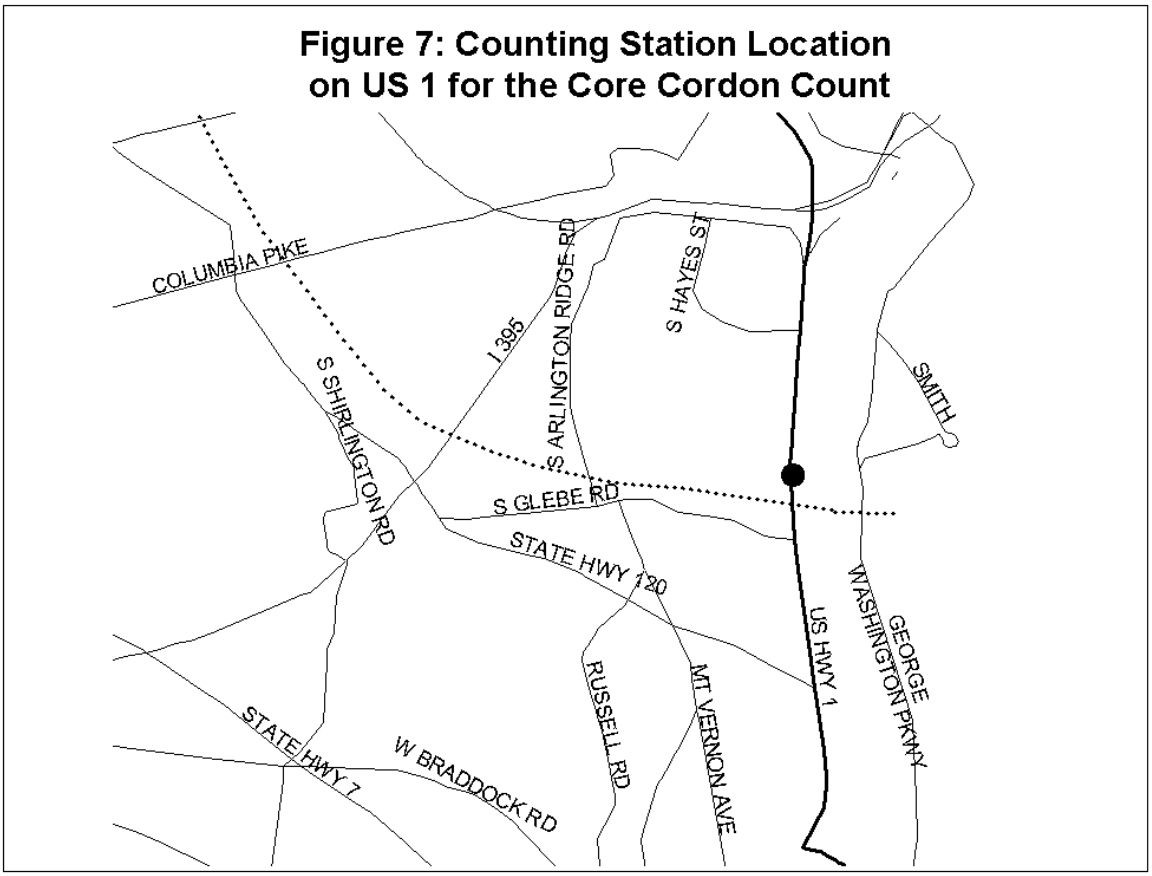
Table 5b

1999 Draft HOV Report: VA 267 Mode Share		
6:30-9:30AM Inbound Traffic		
	Passengers	**% of Total**
Transit Bus	1,387	16.1%
Commuter Bus	548	6.4%
Commuter Rail	0	0.0%
Metrorail	0	0.0%
Total Transit	**1,935**	**22.5%**
Vanpools	288	3.4%
HOV 2	2,602	30.3%
HOV 3+	398	4.6%
Total Ridesharing	**3,288**	**38.2%**
SOV	**3,374**	**39.2%**
Total Passengers	**8,597**	

US 1 Corridor

The US 1 Corridor stretches from Prince William County to Alexandria. In Alexandria, there are single concurrent-flow HOV-2 lanes on the facility in the peak direction, during the peak period. Metrorail, VRE, Metrobus, OmniRide, and Fairfax Connector serve the corridor.

Figure 7 shows the *Draft Core Cordon Count* counting station for this corridor, located on US 1 south of 27th Road and on Eads Street south of 32nd Street.



As explained on page seven, in the *1999 Draft Metro Core Cordon Count* it is difficult to allocate Metrorail passengers between US 1 and I-95/395. Therefore, **Table 6a**, which is identical to **Table 3a** on page seven, gives the mode splits for the combined corridor.

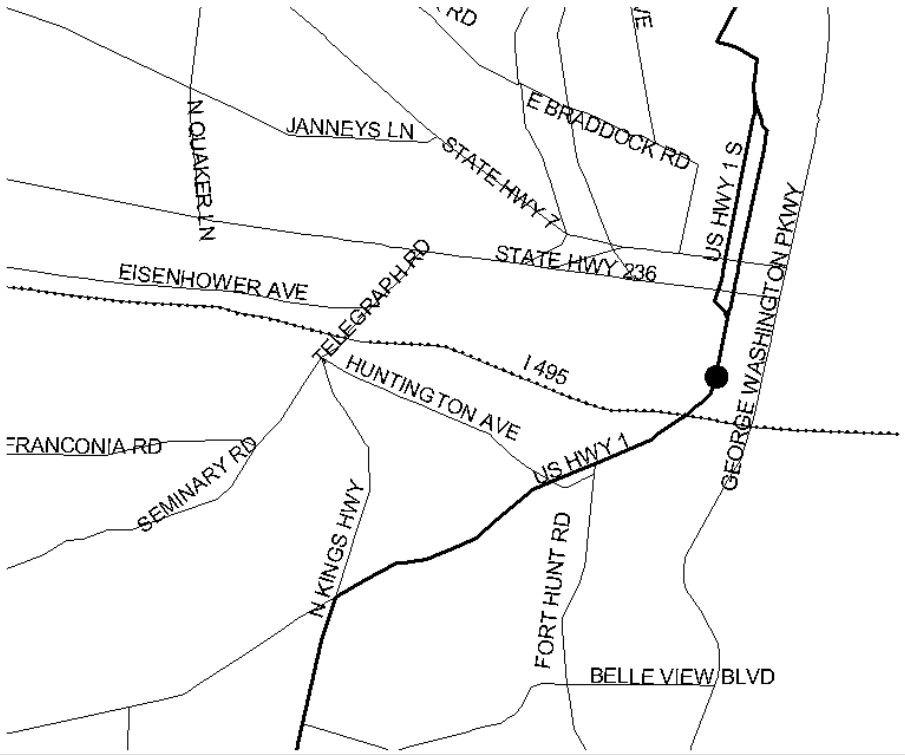
If all Metrorail at the core cordon in these two corridors had been assigned to the US 1 corridor, the transit mode share would be 63 percent (versus 23 percent in that corridor alone with no Metrorail assigned). If Metrorail passengers were assigned based on the percentage split in the *1998 Beltway Cordon Count* (56 percent of Blue and Yellow line passengers allocated to US 1) then the transit mode share would be 52 percent on US 1.

Table 6a

1999 Draft Core Cordon Count: US 1 and I-95/395 Combined Mode Share		
6:30-9:30AM Inbound Traffic		
	Passengers	**% of Total**
Transit Bus	4,725	6.5%
Commuter Bus	2,648	3.6%
Commuter Rail	2,830	3.9%
Metrorail	14,100	19.4%
Total Transit	**24,303**	**33.4%**
Vanpools	1,920	2.6%
HOV 2	5,796	8.0%
HOV 3+	14,634	20.1%
Total Ridesharing	**22,350**	**30.7%**
SOV	**26,067**	**35.8%**
Total Passengers	**72,720**	

The *Beltway Cordon Count* counting station for this corridor is located on US 1 between the ramp from southbound I-95 and Franklin Street, as shown in **Figure 8**.

Figure 8: Counting Station on US 1 for the Beltway Cordon Count



The *1998 Beltway Cordon Count* mode share for US 1 is shown in **Table 6b.** This shows 22 percent of the vehicle traffic crossing the Beltway on US 1 is HOV-2, HOV-3 and vanpool. Thirty-two percent of total persons traveling use transit to cross the Beltway. Unlike the *Draft Metro Core Cordon Count* this report allocates Metrorail ridership to stations in the I-95/395 corridor (Blue line at Van Dorn St. station) and stations in the US 1 corridor (Yellow line at Eisenhower and Huntington stations), although it does not include any commuter rail, since VRE ridership at the Beltway cordon is assigned to the I-95/395 corridor.

Table 6b

1998 Beltway Cordon Count: Mode Share on US 1		
6:30-9:30AM Inbound Passengers		
	Passengers	**% of Total**
Transit Bus	250	1.6%
Commuter Bus	0	0.0%
Commuter Rail[1]	0	0.0%
Metrorail[2]	4,732	30.5%
Total Transit	**4,982**	**32.2%**
Vanpools	60	0.3%
HOV 2	2,592	16.7%
HOV 3+	746	4.8%
Total Ridesharing	**3,398**	**21.8%**
SOV	**7,120**	**46.0%**
Total Passengers	**15,500**	

[1] VRE was not counted on this corridor as it was counted in the I-95/I-395 corridor **Table 3b** on page 9.
[2] Eisenhower and Huntington Metrorail stations

Conclusion

The intent of the summary tables in this report is to show corridor specific mode share distributions in Northern Virginia. The numbers from the MWCOG counts are not statistically significant when broken out by corridor and depict only an 'instance' of the current peak period traffic patterns since they are only one day counts. Despite these limitations, the data do provide some insight into commuting choices. Based on these observations, transit and ridesharing are capturing a solid share both in the Metropolitan Washington region and in major Northern Virginia commuting corridors. In Northern Virginia combined transit and ridesharing mode shares range from 43 percent to 93 percent in individual corridors.

By itself, transit captures a sizeable mode share, ranging from 14 percent to over 60 percent of the total persons traveling in each corridor. Metrorail alone makes up from nine to 55 percent of the mode share in the corridors it serves. HOV usage is also strong, capturing about 25 percent or more of the peak-commuting mode share both in Northern Virginia and the Washington Metropolitan Region. In the I-95/395, VA 267, and I-66 corridors, HOV usage is a very impressive 30-42 percent of all persons traveling in the morning peak period and a respectable 22 percent in the US 1 corridor at the Beltway. In the entire Northern Virginia region almost 60 percent of the total persons traveling in all available corridors use transit or ridesharing to cross the core cordon and over 40 percent use transit or ridesharing to cross the Beltway cordon in the morning peak period.

These percentages suggest that transit has a very important role in this region's transportation system, far in excess of the usual five percent or less of all regional trips frequently attributed to Northern Virginia's transit systems. As of FY 2000, about 264,000 daily trips are provided by public transit in Northern Virginia and this total is growing. This in itself is a stunning total, but as shown in Tables **7a** and **7b** below, substantial shares of transit and ridesharing are vital to moving people in every commuting corridor in which investments in good transit service have been made.

Table 7a

1999 Draft Core Cordon Count Mode Shares		
6:30-9:30AM Inbound Traffic		
	I-95/395 and US 1	**I-66**
Total Transit	33.4%	61.1%
Total Ridesharing	30.7%	31.5%
SOV	35.8%	7.4%
Total Passengers	72,720	44,284

Table 7b

1998 Beltway Cordon Count Mode Shares				
6:30-9:30AM Inbound Traffic				
	I-95/395	**I-66**	**VA 267**	**US 1**
Total Transit	21.4%	56.2%	14.2%	32.2%
Total Ridesharing	42.5%	36.9%	29.2%	21.8%
SOV	36.1%	6.8%	56.6%	46.0%
Total Passengers	42,203	22,587	9,954	15,500

Appendix A: Mode Share and Access Resource List

1. **1994 MWCOG Household Survey -** This is an origin-destination survey containing total person trips in the Washington region (auto, walking, transit, school bus, bike, taxi, other), trip purpose distribution, average trip length, travel time, transit use percentages, and average vehicle occupancies.
2. **1999 DRAFT MWCOG Metro Core Cordon Count and 1996 MWCOG Metro Core Cordon Count** - This is a traffic count that is done by MWCOG on a three-year cycle. It contains one-day, peak period/direction counts of total persons crossing the Core Cordon line, total vehicles (transit bus, commuter bus, Metrorail, Metrobus, commuter rail, vanpools, cars, trucks, motorcycles) crossing the Core Cordon line, and vehicle occupancy.
3. **1997 Board of Trade Reports** - This is a series of reports published in 1997 detailing the results of the Board of Trade's Regional Transportation Study. They contain general mode split for the Washington region (SOV, transit, carpool), population and employment growth, vehicle miles traveled by jurisdiction, and other regional transportation data.
4. **1997 VDOT I-66 Inside the Capital Beltway HOV-2 Report -** As one of the stipulations of I-66 remaining HOV-2, VDOT must monitor the performance of the facility inside the Beltway. This report documents these data, providing peak period volume, average speed, occupancy and violation rates (auto, vanpool, bus, truck motorcycle), and peak period Metrorail boardings. This information is provided for both directions at several counting stations.
5. **1997 VDOT Route 1 Corridor Study -** This report summarizes the findings of a one-time study intended to help guide project development and implementation efforts in the corridor. This report has traffic volumes, through movements, peak hour mode share, travel time and travel speeds, level of service information, and estimated hours of congestion for 1995 and 2020.
6. **1998 MWCOG Beltway Cordon Count** - The Council of Governments performs this traffic count every three years. It contains one-day, peak period/direction counts of total persons crossing the Beltway, total vehicles (transit bus, commuter bus, metro, commuter rail, vanpools, cars, trucks, motorcycles) crossing the Beltway, vehicle occupancy.
7. **1999 Performance of Regional HOV Facilities on Interstate Highways in the Washington Region** - MWCOG performs this traffic count on the HOV facilities in the Washington Metropolitan Region every year. It contains one-day, peak period/direction counts of vehicles (autos, vanpools, motorcycles, transit buses, "other" buses, trucks, metro, commuter rail) on I-66, I-95/395, VA 267 and I-270, as well as vehicle occupancy and passenger counts.
8. **Capital Beltway MIS (1997) -** This major investment study, commissioned by VDOT provides supporting information to identify the most appropriate types of transportation improvements to the Capital Beltway through 2020. It includes 1990 auto traffic counts and 2020 projected volumes, vehicle trips using the Capital Beltway, O-D info on these trips, and peak hour LOS information.

9. **Dulles Corridor Transportation Study (1997)** - This VDRPT report provides information developed during the course of the Dulles Corridor Transportation Study. It contains MWCOG's round 5.2 employment, household and population forecasts, as well as distribution of daily trips to the airport. The study also includes projected changes in overall traffic volumes in the Dulles Corridor between 1990 and 2020.
10. **I-66 MIS Final Report (1998) -** This document summarizes the results of VDOT's I-66 corridor MIS. It describes the locally preferred Transportation Investment Strategy and the supporting reasons for it, including average daily auto traffic volumes and traffic growth on I-66, Rt. 29, Rt. 50, Rt. 15, Rt. 234, Rt. 28, Rt. 7100, Rt. 123, Rt. 243, and I-495 for 1985, 1990 and 1996.
11. **I-95/I-395 HOV Restriction Study (1999)** - A one-time study performed by VDOT to assess the utilization of HOV lanes in the I-95/395 corridor and any alternatives to the current situation. It provides HOV versus non-HOV average auto occupancy, person movements, persons per lane per hour, mean restricted period speeds, and travel time for I-95/I-395. It also includes the number of scheduled transit trips and estimated ridership in the corridor, and mode share information for the corridor (1998 and forecast for 2010). (This report used the same numbers as MWCOG's 1998 HOV count)
12. **Mixing Bowl Marketing Research (1998)**- This report focuses on eliminating trips through the Springfield Interchange during the Mixing Bowl construction. It contains origin-destination information and preferred, rather than actual, mode split.
13. **Northern Virginia 2020 Plan (1999)** - This TCC report gives general information on the planned Northern Virginia transportation projects through 2020 and supporting data. It includes total trips generated in and through the Washington region in 1990 by purpose, mode and vehicle type, origin-destination data, household and employment density, and demographic data.

Appendix B: HOV Facilities and Restriction Periods
