

## TRANSPORTATION

### Intent

A well-functioning transportation system in Prince William County is essential, to ensure the efficient movement of people and goods, maintain the quality of life, and provide for economic growth and diversification. Prince William County has grown with the automobile—and the auto has provided the mobility to accommodate development within the County. The Transportation Plan is designed to promote the safe and efficient movement of goods and people throughout the County and surrounding jurisdictions. The plan will utilize a multi-modal approach to the transportation network—roadway, transit, bicycle, and pedestrian facilities.

The traffic congestion problems currently being experienced are a result—in part—of local and regional population and employment growth that have combined to stress the existing system beyond its capacity to handle traffic. The Transportation Plan presented herein proposes a multi-modal program to address traffic congestion.

The Transportation Plan will provide the basic framework to meet the existing and future needs of Prince William County, and serve as a useful guide to the Virginia Department of Transportation (VDOT) in its efforts to provide transportation improvements in accordance with the desires of the County.

The components of the Transportation Plan are:

- The Urban Transportation Roadway Composition Guidelines (Table 1).
- Intent, Goal, Policies, and Action Strategies.
- Map 1: Thoroughfare Plan Map (fold-out map) and Thoroughfare Plan Summary (Table 2).
- Recommended Right-of-Way Widths (Chart 1).
- The Transit Improvement Plan (Figure 1).
- The Non-motorized Transportation Plan (Tables 3 and 4).
- Level of Service Standards for Roadways (Appendix A).
- Overview of Traffic Demand Modeling (Appendix B).
- Overview of Congestion Management (Appendix C.)
- Highway Corridor Study Areas for Prince William County, 2003-2008 (Appendix D and Figure 2).

The key components of the Transportation Plan are the Thoroughfare Plan Map, the Urban Transportation Roadway Composition Guidelines, and the Transit Improvement Plan—the implementation of all of which will help meet the transportation needs of existing and future development. The roadway guidelines (Table 1) and recommended roadway widths (Chart 1) will be used to judge—in part—a project's conformance to this Transportation Plan. Any deviation from Table 1 or Chart 1 must be justified by a traffic impact analysis (TIA). The goal, policies, and action strategies of the Transportation

Plan shall be used for the planning and development of Prince William County's transportation system.

**GOAL:** To achieve and sustain a complete, safe, and efficient multi-modal circulation system and plan so that existing and future components of the transportation network will provide the capacity necessary to meet the demands placed upon the system.

**TR-POLICY 1:** Improve service levels of all transportation modes throughout the County.

### ROAD ACTION STRATEGIES:

- R1.1.** Plan roadways to operate at a level of service LOS "D"<sup>1</sup> or better (see Appendix A). Monitor rezonings, special use permits, and public facility reviews, in order to project when arterials, collectors, and intersections will reach LOS "D." Operation of County roadways at LOS "D" or better will be considered operation at targeted LOS. These standards represent desired level of service on a Countywide basis. Transportation management measures, public transit, the timing of intersection signals, and other measures—instead of building new roadways or adding lanes to existing roadways—shall be considered and used, with the appropriate measure, given the roadway location and adjacent existing and planned uses.
- R1.2.** During the rezoning and special use permit processes, require the applicant to set forth techniques to maintain LOS "D" for those intersections and roadway sections that would otherwise have their levels of service lowered below LOS "D" by the traffic impacts of the requested development. Background traffic shall also be considered.

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<sup>1</sup> LOS "D" borders on a range in which small increases in flow may cause substantial increases in delay and hence decreases in arterial speed. LOS "D" may be due to adverse signal progressions, inappropriate signal timing, high volumes, or some combination of these factors. Average travel speeds are about 40 percent of free-flow speed. LOS "D" is based upon volume-to-capacity ratios established by the Transportation Research Board's Highway Capacity Manual.

**Table I Roadway Functional Classification/Composition Guidelines/1**

Classification	Freeways/Interstate	Principal Arterials	Parkways	Minor Arterials	Major Collectors	Minor Collectors
<b>1. Function</b>	Thru-traffic only, interregional movement	Thru-traffic only, intercounty and city movement	Scenic Urban Linear Parks allowing major traffic movement	Intracounty circulation and neighborhood boundary designators	Distribute local traffic and some property access	Property access; intraneighborhood circulation
<b>2. Access:</b>	Interchanges 1 mile minimum in urban areas, 3-4 miles in rural areas	1100 feet, 900 feet minimum	1100 feet, 900 feet minimum	900 feet, 700 feet minimum	800 feet, 650 feet minimum	700 feet, 600 feet minimum
<b>Curb Cuts</b>	Prohibited if limited access	Discouraged	Prohibited	Discouraged	350 feet	350 feet
<b>3. Typical Lane Configuration</b>	N/A	Each direction - 3 thru-lanes, protected left, channelized right	Each direction - 3 thru lanes, protected left, right deceleration	Each direction - 2 thru lanes, protected left, right deceleration	Each direction - 2 thru lanes, protected left	Each direction - 1 thru lane, 1 parking lane
<b>4. Lane Average:</b>						
Urban	4 to 8 lanes	4 to 8 lanes	4 to 6 lanes	4 to 6 lanes	4 lanes	2 lanes
<b>5. Average Length</b>	No limit	No limit	No limit	5-10 miles	2-5 miles	1-2 miles
<b>6. R.O.W. Average<sup>2</sup></b>						
Urban	300 feet	148 feet	148 feet	118 feet	92 feet	60 feet
Rural	250 feet	160 feet	160 feet	102 feet	102 feet	60 feet
<b>7. Design Speed</b>	70 mph	60 mph	60 mph	50 mph	45 mph	40 mph
<b>8. Parallel Spacing</b>	N/A	2-4 miles average	If parallel arterial exists, trucks prohibited	1/2 - 1 mile average	1/2 - 1/4 mile average	1/4 mile average
<b>9. Transit</b>	Potential for HOV lanes or transit corridor	Potential for HOV lanes or transit corridor	Potential for transit corridor	Potential for transit corridor & bus turn-offs (15 x 60 feet plus 100 foot tapers at arterial intersections)	Potential for transit corridor & bus turn-offs (15 x 60 feet plus 100 foot tapers at arterial intersections)	Potential for local bus service
<b>10. Bike and Pedestrian Trails</b>	N/A	Class I	Class I	Class I and II	Class I and II	Class III, with sidewalks

**NOTES:**

- 1 Local street guidelines are not presented in this table. Please refer to Prince William County Design and Construction Standards Manual. Medians will be required when traffic volumes exceed 7,000 vpd.
  - o All guidelines set forth herein are intended to be equal to, or greater than, standards set forth by the Virginia Department of Transportation or the Design and Construction Standards Manual, whichever is greater. County and VDOT approved engineering plans, centerline studies, and functional plans detailing the ultimate typical section for specific roadway sections may supersede these guidelines if those plans are greater than these standards.
  - o Curb cuts on existing principal arterials are discouraged and will only be permitted when it can be clearly shown that safety and operational criteria can be achieved.
  - o Engineering will determine the exact amount of right-of-way needed for each roadway. Chart 1 indicates where engineering has occurred for each roadway segment. Additional right-of-way may be needed for slope, drainage, utility, and construction easements.

Source: PWC Dept. of Public Works; PWC DCSM.

- R1.3.** During the rezoning and special use permit processes, require that the applicant set forth techniques to maintain existing LOS for those intersections and roadway segments already operating below LOS "D" and which would be further reduced by the traffic impacts of the requested development. Background traffic shall also be considered.
- R1.4.** Where the traffic impacts of the requested development proposed in a rezoning or special use permit application would further lower the level of service that is already operating below LOS "D" for intersections and roadway sections serving the requested development and where the property is not located in a mass transit node, consider whether approval of the development at the lowest end of the recommended density range, denial of the application, or approval as submitted would be most consistent with the Comprehensive Plan. In making such a determination, background traffic shall also be considered.
- R1.5.** Ensure that road standards in the County's Design and Construction Standards Manual (DCSM) are consistent with the revised standards in Table 1, where appropriate.
- R1.6.** Promote the use of these revised DCSM standards—mentioned in AS R1.5., and shown in Table 1—for rezonings and special use permits.
- R1.7.** Obtain ultimate right-of-way as soon as possible for each road designated in the Thoroughfare Plan—and shown in Table 2—to minimize future right-of-way cost.
- R1.8.** Develop a model of the County transportation system that can produce an LOS map for all roads in this plan (see Appendix B). Update the map annually for inclusion in this plan.
- R1.9.** Improve existing substandard rural roads through the Capital Improvements Program (CIP) and/or development-financed road and access improvements. These improvements would be identified during rezoning, special use permits, and site/subdivision plan review and approval process.
- R1.10.** Review road accident data annually. Make road safety improvements a consideration in determining the priorities for upgrading existing roads. Consider changes in the DCSM where appropriate design changes could reduce accident rates.
- R1.11.** Continue to assist in developing a regional Transportation Congestion Management (TCM) Guide by developing a County TCM plan that is mutually compatible with other plans in effect throughout the region (see Appendix C).
- R1.12.** Prepare transportation corridor plans, using modeling, for roadways and intersections operating at LOS "E" or "F" to determine what improvements would be needed to bring the LOS to "D."

**NON-MOTORIZED ACTION STRATEGIES:**

- N1.1.** Encourage the development of a safe and continuous system of sidewalks, bike lanes, and/or trails within the rights-of-way of new and existing parkways, arterials, collector roads, and residential streets.
- N1.2.** Install pedestrian crosswalks and pedestrian-activated traffic signal controls—when warranted—at signalized intersections near and in commercial areas, schools, and other public facilities, where a sidewalk or trail is provided, and where appropriate.
- N1.3.** Encourage the development and operation of remote work centers (telecommuting) in both the I-95 and I-66 corridors.

**TRANSIT ACTION STRATEGIES:**

- T1.1.** Plan for greater emphasis on transit within the Development Area, as reflected by the Long-Range Land Use Plan Map. Encourage large developments—including but not limited to all town center developments—to include the provision of transit services, facilities, and commuter lots in their Transportation Demand Management (TDM) plans.
- T1.2.** Encourage land developments adjacent to future transit corridors—as reflected by the Transit Improvement Plan (Figure 1)—to develop in a transit-compatible manner.

**TR-POLICY 2:** Promote new methods of increasing the capacity of the existing transportation system in addition to expanding facilities.

**ROAD ACTION STRATEGIES:**

- R2.1.** Pursue increased federal and state funding for the construction of permanent high-occupancy vehicle (HOV) facilities on I-66 and to hasten the extension of VDOT's I-66 median HOV lane installation.
- R2.2.** Provide trip generation credits to major developments—residential or non-residential, including but not limited to town centers—for providing enforceable transit, flex time, or other travel demand reduction techniques in their TDM plans.
- R2.3.** Replace at-grade railroad crossings with grade-separated crossings at all arterial roadway crossings that operate at LOS “D” or worse, or at locations determined unsafe by the County or state.

- R2.4.** Promote the use of grade-separated interchanges at intersections planned to be six or more through lanes and which are forecast to operate below LOS "D."
- R2.5.** Encourage the coordination and optimization of traffic signal timing—including but not limited to protected turn lanes and the removal of obstacles to traffic flow—at all signalized intersections operating below the targeted LOS.
- R2.6.** Identify opportunities to create reversible lanes as a cost-effective alternative on roads serving heavy volumes of traffic in different directions at different times of the day.
- R2.7.** Promote good traffic progression, by avoiding the use of traffic signals wherever possible and by encouraging signal spacing in accordance with Table 1.

#### **NON-MOTORIZED ACTION STRATEGY:**

- N2.1.** Develop a detailed sidewalk/bicycle trail/lane plan that will demonstrate how to expand and improve—in an affordable manner—the use and safety of sidewalks and trails within the right-of-way adjacent to residential, employment, retail, and recreational areas.

#### **TRANSIT ACTION STRATEGIES:**

- T2.1.** Develop a Long-Range Transportation Plan, incorporating multi-modal transportation facilities consistent with the Long-Range Land Use Plan Map.
- T2.2.** Develop a Long-Range Mass Transit Plan consistent with the Long-Range Land Use Plan Map.
- T2.3.** Encourage neighborhood-based or employer-based shuttles or other means, to provide an efficiently designed feeder network to commuter rail stations and other transit centers.
- T2.4.** Develop commuter lots at or near entrances to HOV lanes.
- T2.5.** Analyze the possible extension of morning and evening hours of the HOV lane on I-95.

**TR-POLICY 3:** Minimize the adverse impacts of the transportation system on the County's environmental and cultural resources.

**ROAD ACTION STRATEGIES:**

- R3.1.** Review new roadway improvement proposals, to ensure that they consider historic, natural, and critical environmental features as set forth—in part—by the Environment and the Cultural Resources plans.
- R3.2.** To increase safety, make improvements to Route 28 (Nokesville Road) a priority in the next six-year road plan.

**TRANSIT ACTION STRATEGY:**

- T3.1.** Promote the utilization of transit vehicles that are designed to reduce impacts on air quality and noise pollution.

**NON-MOTORIZED ACTION STRATEGY:**

- N3.1.** Promote the creation and utilization of non-motorized transportation facilities—such as pedestrian and bicycle facilities—that reduce impacts on air quality.

**TR-POLICY 4:** Encourage compatible and appropriate transportation facilities to guide development into areas where public facilities exist and/or to areas where new urban and suburban development has been targeted, as reflected by the Long-Range Land Use Plan Map.

**ROAD ACTION STRATEGY:**

- R4.1.** Annually update the Six-Year Highway Primary and Interstate Road Improvement Plan and biannually update the Six-Year Secondary Road Improvement Plan for road construction. Seek state funding to implement these plans.

**TRANSIT ACTION STRATEGIES:**

- T4.1.** Encourage higher density development at appropriate locations within the Development Area—as reflected on the Long-Range Land Use Plan Map—along transit corridors.
- T4.2.** Plan for and develop transit and para-transit-related facilities, to accommodate and encourage the use of alternatives to the automobile—including commuter rail stations, the bus terminal facility, commuter parking lots, bicycle facilities, and bus stops.

- T4.3.** Encourage construction of a transportation center in the central part of the County. The design of such a facility shall meet the guidelines of the Community Design Plan.
- T4.4.** Encourage the provision of right shoulder lane bus pull-offs with shelters near appropriate major intersections along transit corridors on arterial roadways.

#### **NON-MOTORIZED ACTION STRATEGY:**

- N4.1.** Assure that pedestrian and bicycle facilities—including bicycle racks and lockers—are available at all transit facilities.

**TR-POLICY 5:** Encourage planned transportation networks that support designated targeted industries and major activity centers.

#### **ROAD ACTION STRATEGIES:**

- R5.1.** Plan and promote the construction of roads consistent with the intent of the Comprehensive Plan, when all other relevant Comprehensive Plan components have been met.
- R5.2.** Plan and promote the construction of a system of arterials—as reflected in the Thoroughfare Plan Map—that will function as community boundaries and connectors to major activity centers.
- R5.3.** Plan and promote shared parking and shuttle bus service for customers and employees of targeted industries and employment centers.
- R5.4.** Plan and promote access among major activity centers.
- R5.5.** Plan and promote access between/among major activity centers, I-66, I-95, and Dulles and Ronald Reagan National Airports.
- R5.6.** Plan and promote access between and among major activity centers and related industries and economic activity centers in Northern Virginia and the metropolitan area.
- R5.7.** Encourage the use of public easements to support appropriate utilities, where appropriate and consistent with other chapters of the Comprehensive Plan.



**TRANSIT ACTION STRATEGIES:**

- T5.1.** Aggressively plan, market, and implement multi-purpose transit centers that can integrate with private development and improve the marketability of higher density land use centers.
- T5.2.** Encourage the placement of commuter lots in commercial centers on the periphery of major residential developments located near major arterial roadways.

**NON-MOTORIZED ACTION STRATEGY:**

- N5.1.** Strongly encourage private commercial/employment-oriented development to provide bicyclists and pedestrians with necessary support systems—such as bicycle racks and lockers.

**TR-POLICY 6:** Explore and promote innovative mechanisms of funding transportation system improvements.

**ROAD ACTION STRATEGIES:**

- R6.1.** Explore the use of alternative financing methods using the County's CIP as a foundation for the timing, location, and construction of arterial and collector road projects. Private sector resources may be received to assist in the costs of construction prior to planned funding.
- R6.2.** Continue to monitor legislation pertaining to the use of impact fees and other alternative funding sources for road construction projects.

**TRANSIT ACTION STRATEGY:**

- T6.1.** Encourage transit and ridesharing as part of development along major arterial corridors shown on the Transit Improvement Plan (Figure 1).

**NON-MOTORIZED ACTION STRATEGIES:**

- N6.1.** Research and apply for all available state and federal assistance in developing a safe and effective bicycle and pedestrian transportation network.
- N6.2.** Encourage maintenance of neighborhood trails by homeowner associations.

**TR-POLICY 7:** Promote and coordinate with area local governments, regional and federal agencies, VDOT, and the private sector on transportation issues and the development of new facilities.

#### **ROAD ACTION STRATEGY:**

**R7.1.** Actively participate in all relevant local, state, and federal transportation planning organizations.

#### **TRANSIT ACTION STRATEGY:**

**T7.1.** Promote commuter facilities—such as sheltered community bus stops, shuttle service, ridesharing programs, pedestrian walkways. The commuter facility provided should be appropriate to the distance between the development and commuter parking lots and/or mass transit stations, including VRE and Metrorail stations.

**T7.2.** Encourage major developments—including but not limited to Town Centers—to promote protected access to public transit stops and employer-established and -funded ridesharing programs facilities through the preparation of enforceable transportation management plans.

#### **NON-MOTORIZED ACTION STRATEGY:**

**N7.1.** Encourage extension of the Prince William County Park Authority Trails Plan to effectively connect with Countywide trails. Expand upon this plan as reflected by TR-POLICY 4, Non-motorized Action Strategy N4.1.

**TR-POLICY 8:** Apply the following action strategies for those roadways identified in chart 1 as ("\*"), where conventional road widening is not possible.

**T8.1** Emphasize para-transit programs—such as ridesharing—as an alternative form of transportation, by encouraging major land developers to post ridesharing contact information and by encouraging major employers to offer ridesharing programs to employees.

**T8.2** Promote an efficiently designed bus feeder network to commuter rail stations and other transit centers.

**T8.3** Plan for and develop transit and para-transit-related facilities to accommodate and encourage the use of alternatives to the automobile—including commuter rail stations, multi-purpose transit centers, commuter parking lots, and bus stops.

- T8.4** Encourage the placement of commuter lots in commercial centers on the periphery of major residential developments located near major arterial highways.
- T8.5** Encourage the provision of transit and ridesharing as part of development along major arterial corridors shown on the Transit Improvement Plan (Figure 2).
- R8.1** Building upon existing County TCM Plans, TDM Plans, and TSM Plans, develop a County TCM plan which is mutually compatible with other plans in effect throughout the region (see Appendix C).
- R8.2** Provide trip generation credits to major developments (residential or non-residential) for providing enforceable transit, flex time, or other travel demand reduction techniques in their TDM plans.
- N8.1** Assure that pedestrian and bicycle facilities—including trails, bicycle racks, and lockers—are available to all transit facilities.

## THOROUGHFARE PLAN

The 2003-2008 Thoroughfare Plan for Prince William County is shown in Figure 1 and summarized on Table 2.

### **Chart 1: Recommended Right-of-Way Widths (Road numbers correspond to the Thoroughfare Plan Map/Legend and Thoroughfare Plan Summary)**

Chart 1<sup>3</sup> identifies specific rights-of-way for each roadway presented in the Thoroughfare Plan Map. The rights-of-way included in Chart 1 are intended to satisfy the ultimate design of each roadway, as specified in the Functional Classification/Roadway Composition Guidelines (Table 1) and the County's DCSM.

The action strategies identified in TR-Policy 8 should be required on the following roadways in order to address issues of inadequate roadway capacity:

- \*FI-1) I-66
- \*FI-2) I-95
- \*PA-2) Route 1 (Jefferson Davis Highway)
- \*MA-22) Old Bridge Road (Route 123 to Minnieville Road)
- \*MC-4) Blackburn Road
- \*MC-16) Longview Drive/Montgomery Avenue
- \*MC-20) Occoquan Road

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<sup>3</sup> Although Chart 1 identifies proposed right-of-way widths, the exact right-of-way requirements and roadway alignments may vary depending on the final design and (or) the number of lanes proposed for each roadway. In addition, and where County-approved functional plans, centerline studies, or engineering plans indicating the ultimate roadway designs and alignments exist, the typical sections presented on those plans should be used if they require greater right-of-way than what is identified below. Additionally, in some instances, existing or potential vehicular demand in certain roadway corridors is so great that conventional roadway widenings will not satisfy the demand. In those cases, the approach to addressing such issues is outlined in TR-Policy 8 which provides a consolidation of Action Strategies from other portions of this chapter to specifically address the issue of roadways operating below level of service (LOS) "D."

\* Roadways where conventional road widening is not possible (c.f. TR-POLICY 8).

**Table 2** THOROUGHFARE PLAN SUMMARY

FACILITY	THOROUGHFARE PLAN MAP NUMBER	TERMINI	FUNCTIONAL CLASS/TYPICAL SECTION	TYPICAL RIGHT OF-WAY	RECOMMENDED NUMBER OF LANES	ADJACENT TRAIL	TRAIL CLASS AND LOCATION
Aden Rd	MC-1	Rt-28 to Rt-234	Major Collector	102'	4 w/median	Yes	Class II
Artemus Rd	MA-1	Rt-15 to Rt-234 Bypass (North)	Minor Arterial	118'	4 w/median	Yes	Class I/South
Ashton Ave	MC-2	Balls Ford Rd to Godwin Dr	Major Collector	110'	4 w/median	No	N/A
Balls Ford Rd	MA-2	Wellington Rd to Rt-234 Business	Minor Arterial	118'	4 w/median	Yes	Class I/South
Balls Ford Rd	MC-3	Rt-234 Business to Coppermine Dr	Major Collector	92'	4 w/median	No	N/A
Belmont Bay Rd	MA-3	Rt-1 to end	Minor Arterial	118'	4 w/median	Yes	Class I/East
Benita Fitzgerald Blvd	MA-4	Dale Blvd to Cardinal Dr	Minor Arterial	118'	4 w/median	Yes	Class I/West
Blackburn Rd	MC-4	Featherstone Rd to Rt-1	Major Collector	existing/variable	2	No	N/A
Bristow Rd	MA-17	Rt-28 to Rt-234	Minor Arterial	102'	4 w/median	Yes	Class I/South
Cardinal Dr	MA-5	Rt-28 to Rt-234	Minor Arterial	92' - 118'/variable	4 w/median	Yes	Class I/South
Carver Rd	MC-5	Minnieville Rd to Rt-1	Major Collector	92'	4 w/median	Yes	Class I/South
Catharpin Rd	MC-6	Old Carolina Rd to Rt-29	Major Collector	102'	4 w/median	Yes	Class I/West
Catharpin Rd	MC-6	Rt-234 to Heathcote Dr	Major Collector	110'	4 w/median	Yes	Class I/West
Caton Hill Rd	MA-6	Heathcote Dr to Rt-55	Major Collector	120'	4 w/median	Yes	Class I/South
Cherry Hill Spine Rd	MA-7	Minnieville Rd to Prince William Pkwy	Minor Arterial	118'	4 w/median	Yes	Class I/West
Cloverhill Rd	MC-7	Congressional Way to end	Major Collector	110'	4 w/median	Yes	Class I/North
Cockpit Point Connector Rd	MC-8	Airport to Rt-234	Major Collector	92'	4 w/median	No	N/A
Coverstone Dr	MA-8	Congressional Way to Cockpit Point Rd	Major Collector	118'	4 w/median	Yes	Class I/North
Dale Blvd	MA-9	Ashton Ave to Rt-234 Business	Minor Arterial	110' - 160'/variable	4 w/median	Yes	Class I/South
Dale Blvd	MA-9	Headly Rd to Benita Fitzgerald Blvd	Minor Arterial	180'/variable	6 w/median	Yes	Class I/South
Dale Blvd	MA-9	Benita Fitzgerald Blvd to I-95	Minor Arterial	155' - 180'/variable	4 w/median	Yes	Class I/South
Devlin Rd	MA-10	I-95 to Rt-1	Minor Arterial	118'	4 w/median	Yes	Class I/South
Farm Creek Rd	MC-9	Linton Hall Rd to Wellington Rd	Major Collector	68'	4 w/median	Yes	Class I/North
Faugier Dr	MC-10	Featherstone Rd to Rippon Blvd	Major Collector	110'	4 w/median	Yes	Class I/South
Faugier Dr	MC-9	Faugier Co to Rt-28	Major Collector	60'	2	No	N/A
Featherstone Rd	MC-9	Rt-1 to Farm Creek Rd	Major Collector	68'	4 undivided	Yes	Class I/North
Fitzwater Dr	MC-11	Rt-28 to Aden Rd	Major Collector	60'	2	Yes	Class III
Fleetwood Dr	MA-11	Faugier Co to Aden Rd	Minor Arterial	60'	2	Yes	Class III
Freedom Center Blvd	MC-12	University Dr to Wellington Rd	Major Collector	92'	4 w/median	Yes	Class I/West
Gideon Dr	MA-12	Dale Blvd to Smoketown Rd	Minor Arterial	120'/variable	6 w/median	No	N/A
Graveton Rd	MC-23	Pagehand La to Balls Ford Rd	Major Collector	102'	4 w/median	No	N/A
Gum Springs Rd	MC-13	Loudoun Co to Rt-234	Major Collector	102'	4 w/median	Yes	Class I/East
Haymarket Bypass	MA-13	Rt-15 to Rt-29	Minor Arterial	118'	4 w/median	No	N/A
Haymarket Dr	MC-14	Thoroughfare Rd to Old Carolina Rd	Major Collector	92'	4 w/median	No	N/A
Heathcote Blvd	MA-14	Rt-15 to Rt-29	Minor Arterial	118'	4 w/median	No	N/A
Headly Rd	MA-15	Rt-234 to Prince William Pkwy	Minor Arterial	110'	4 w/median	Yes	Class II
Hornbaker Rd	MC-15	Wellington Rd to Rt-28	Major Collector	92'	4 w/median	No	N/A
Homer Rd	MA-16	Prince William Pkwy to Rt-123	Minor Arterial	120'	4 w/median	Yes	Class I/South
I-66	FI-1	Faugier Co to Rt-15	Freeway/Interstate	275'/variable	4 SOV	No	N/A
I-66	FI-1	Rt-15 to Rt-29	Freeway/Interstate	275'/variable	6 SOV/2 HOV	No	N/A
I-66	FI-1	Rt-29 to Fairfax Co	Freeway/Interstate	275'/variable	6 SOV/2 HOV	No	N/A
I-95	FI-2	Fairfax Co to Rt-234	Freeway/Interstate	450'/variable	8 SOV/2 HOV	No	N/A
I-95	FI-2	Rt-234 to Stafford Co	Freeway/Interstate	450'/variable	8 SOV/2 HOV	No	N/A
Linton Hall Rd	MA-17	Rt-29 to Glenkirk Rd	Minor Arterial	118'	6 w/median	No	N/A
Linton Hall Rd	MA-17	Glenkirk Rd to Rt-28	Minor Arterial	118'	4 w/median	Yes	Class I/South
Longview Dr/Montgomery Ave	MC-16	Prince William Pkwy to Opitz Blvd	Major Collector	60'	2	Yes	Class I/South
Lucasville Rd	MC-17	Manassas to Bristow Rd	Major Collector	102'	4 w/median	Yes	Class II

Table 2 THOROUGHFARE PLAN SUMMARY

THOROUGHFARE PLAN SUMMARY	THOROUGHFARE PLAN MAP NUMBER	TERMINI	FUNCTIONAL CLASS/TYPICAL SECTION	TYPICAL RIGHT OF WAY	RECOMMENDED NUMBER OF LANES	ADJACENT TRAIL	TRAIL CLASS AND LOCATION
McGraw's Corner Dr	MC-18	Rt-15 to Carver Rd	Major Collector	92'	4 w/median	Yes	Class I/North
McGraw's Corner Dr	MC-18	Carver Rd to Haymarket Bypass	Major Collector	110'	4 w/median	Yes	Class I/South
McGraw's Corner Dr	MC-18	Somerset Crossing Dr to Rt-55	Major Collector	92'	4 w/median	Yes	Class I/West
Minnieville Rd	MA-18	Rt-234 to Cardinal Dr	Minor Arterial	118'	4 w/median	Yes	Class I/West
Minnieville Rd	MA-18	Cardinal Dr to Caton Hill Rd	Minor Arterial	118'	6 w/median	Yes	Class I/West
Minnieville Rd	MA-18	Caton Hill Rd to Old Bridge Rd	Minor Arterial	118'	4 w/median	Yes	Class I/West
Neabsco Mills Rd	MA-19	Opitz Blvd to Rt-1	Minor Arterial	118'	4 w/median	Yes	Class I/West
Neabsco Rd	MC-19	Rt-1 to end	Major Collector	110'	4 w/median	Yes	Class I/South
New Cherry Hill Rd	MA-20	Rt-1 to Congressional Way	Minor Arterial	110'	4 w/median	Yes	Class I/South
North/South Connector Rd	MA-21	Wellington Rd to University Dr	Minor Arterial	118'	4 w/median	Yes	Class I/East
Ocoquan Rd	MC-20	Old Bridge Rd to Rt-1	Major Collector	existing/variable	4 undivided	No	N/A
Old Bridge Rd	MA-22	Rt-123 to Prince William Pkwy	Minor Arterial	120'	6 w/median	Yes	Class I/North
Old Carolina Rd	MA-23	Rt-15 to Heathcote Blvd	Minor Arterial	118'	4 w/median	Yes	Class I/East
Old Carolina Rd	MC-21	Heathcote Blvd to Rt-29	Major Collector	92'	4 w/median	No	N/A
Old Centreville Rd	MC-22	Fairfax Co to Rt-28	Major Collector	92'	4 w/median	No	N/A
Opitz Blvd	MA-32	Gideon Dr to Rt-1	Minor Arterial	110'	6 w/median	Yes	Class I/South
Pageland La	MC-23	Rt-234 to Groveton Rd	Major Collector	60'	2	No	N/A
Potomac Pkwy	PA-1	Rt-1 to Cherry Hill Spine Rd	Principal Arterial	160'	4 w/median	Yes	Class I/South
Powells Creek Blvd	MC-24	Rt-1 to River Ridge Blvd	Major Collector	90' - 110' variable	4 w/median	No	N/A
Prince William Pkwy	PW-1	Libertia Ave to Hoadly Rd	Parkway	160'	4 w/median	Yes	Class I/North
Prince William Pkwy	PW-1	Hoadly Rd to Caton Hill Rd	Parkway	120' minimum	6 w/median	Yes	Class I/North
Prince William Pkwy	PW-1	Caton Hill Rd to Rt-1	Parkway	120' minimum	4 w/median	Yes	Class I/North
Prince William Pkwy	MA-24	Rt-234 to Libertia Ave	Minor Arterial	118'	4 w/median	Yes	Class I/East
Prince William Pkwy	MA-25	Rt-234 to Hoadly Rd	Minor Arterial	118'	4 w/median	Yes	Class I/South
Purcell Rd (East)	MA-26	Purcell Rd to Prince William Pkwy	Minor Arterial	118'	4 w/median	No	Class I/South
Ridgefield Rd	MC-25	Prince William Pkwy to Dale Blvd	Major Collector	110'	4 w/median	Yes	Class I/East
Rippon Blvd	MC-9	Rt-1 to Farm Creek Rd	Major Collector	110'	4 w/median	Yes	Class I/South
River Ridge Blvd	MC-26	Rt-1 to Wayside Dr	Major Collector	90' - 110' variable	4 w/median & 2	No	N/A
Rixlaw La	MA-27	Wellington Rd to Rt-234 Business	Minor Arterial	118'	4 w/median	No	N/A
Rollins Ford Rd	MA-28	Rt-215 to University Blvd	Minor Arterial	118'	4 w/median	Yes	Class I/South
Rt-1 (Jefferson Davis Hwy)	PA-2	Fairfax Co to Stafford Co	Principal Arterial	125'	6 w/median	Yes	Class I/West
Rt-15 (James Madison Hwy)	PW-2	Loudoun Co to Rt-29	Principal Arterial	160' - 174' variable	4 w/median	Yes	Class I/East
Rt-123 (Gordon Blvd)	PA-6	Fairfax Co to Rt-1	Principal Arterial	120'	6 w/median	Yes	Class I/East
Rt-215 (Vint Hill Rd)	MA-30	Fauquier Co to Rt-28	Minor Arterial	102'	4 w/median	Yes	Class II
Rt-234 (Sudley Rd)	MA-31	Rt-15 to Manassas National Battlefield	Minor Arterial	120'	4 w/median	Yes	Class I/North
Rt-234 (Prince William Pkwy)	PA-7	Rt-29 to Rt-234 Business	Principal Arterial	180' - 220' variable	4 w/median	Yes	Class I/East
Rt-234 (Prince William Pkwy)	PA-7	Rt-234 Business to Prince William Pkwy	Principal Arterial	160	4 w/median	Yes	Class I/South
Rt-234 (Dumfries Rd)	PA-7	Prince William Pkwy to Country Club Dr	Principal Arterial	160	4 w/median	Yes	Class I/South
Rt-234 (Dumfries Rd)	PA-7	Country Club Dr to Rt-1	Principal Arterial	160'	6 w/median	Yes	Class I/South
Rt-234 Business (Sudley Rd)	PA-8	I-66 to Manassas	Principal Arterial	160'	6 w/median	Yes	Class I/North
Rt-234 Business (Dumfries Rd)	PA-9	Manassas to Rt-234	Principal Arterial	160	4 w/median	Yes	Class I/South
Rt-234 Bypass (North)	PA-10	Loudoun Co to Rt-29	Principal Arterial	220'	4 w/median	Yes	Class I/South
Rt-28 (Nokesville Rd)	PA-3	Fauquier Co to Rt-215	Principal Arterial	160'	4 w/median	Yes	Class I/South
Rt-28 (Nokesville Rd)	PA-3	Rt-215 to Manassas	Principal Arterial	148'	6 w/median	Yes	Class I/South
Rt-28 (Centreville Rd)	PA-4	Manassas to Fairfax Co	Principal Arterial	118'	6 w/median	Yes	Class I/North
Rt-28 (Lee Hwy)	PA-5	Fauquier Co to Rt-234 Bypass (North)	Principal Arterial	160'	4 w/median	Yes	Class I/South
Rt-55 (John Marshall Hwy)	MA-29	Thoroughfare Rd to Catharpin Rd	Minor Arterial	118'	4 w/median	Yes	Class I/North

**Table 2 THOROUGHFARE PLAN SUMMARY**

THOROUGHFARE PLAN SUMMARY	THOROUGHFARE PLAN MAP NUMBER	TERMINI	FUNCTIONAL CLASS/TYPICAL SECTION	TYPICAL RIGHT OF-WAY	RECOMMENDED NUMBER OF LANES	ADJACENT TRAIL	TRAIL CLASS AND LOCATION
Rt-55 (John Marshall Hwy)	MA-29	Catharpin Rd to Rt-29	Minor Arterial	118'	6 w/median	Yes	Class I/North
Rt-411 (Tri-County Pkwy)	PW-3	Rt-234 Business to Fairfax Co	Parkway	200'	8 w/median	Yes	Class I/North
Signal Hill Rd	MC-27	Liberia Ave to Signal View Dr	Major Collector	68'	4 undivided	Yes	Class III
Signal View Dr	MC-28	Manassas Park to Signal Hill Rd	Major Collector	100'	4 w/median	Yes	Class III
Smoketown Rd	MA-32	Minnieville Rd to Gideon Dr	Minor Arterial	110'	6 w/median	Yes	Class I/South
Smoketown Rd	MC-29	Griffith Ave to Old Bridge Rd	Major Collector	110'	4 w/median	No	N/A
Springe Rd	MA-33	Howdy Rd to Rt-234	Minor Arterial	110'	4 w/median	Yes	Class I/East
Springwoods Dr	MC-30	end to Old Bridge Rd	Major Collector	100'	4 w/median	Yes	Class II
Sudley Manor Dr	MA-34	Rt-215 to Ashton Ave	Minor Arterial	110'	4 w/median	Yes	Class I/North
Sudley Manor Dr	MA-34	Ashton Ave to Rt-234 Business	Minor Arterial	110'	6 w/median	Yes	Class I/North
Summit School Rd	MA-35	Minnieville Rd to Telegraph Rd	Minor Arterial	110'	6 w/median	Yes	Class I/East
Telegraph Rd	MA-35	Summit School Rd to Caon Hill Rd	Minor Arterial	110'	6 w/median	Yes	Class I/East
Telegraph Rd	MA-35	Caon Hill Rd to Prince William Pkwy	Minor Arterial	110'	4 w/median	Yes	Class I/East
Telegraph Rd	MA-35	Prince William Pkwy to Optiz Blvd	Minor Arterial	110'-118'/variable	4 w/median	Yes	Class I/North
Thoroughfare Rd	MC-31	Rt-15 to McGraws Corner Dr	Major Collector	92'	4 w/median	No	N/A
University Blvd	MA-36	Minnieville Rd to Summit School Rd	Minor Arterial	118'	4 w/median	Yes	Class I/South
Van Buren Rd (North)	MA-37	Rt-29 to Goodwin Dr	Minor Arterial	118'	4 w/median	Yes	Class I/West
Van Buren Rd (South)	MA-37	Cardinal Dr to Rt-234	Minor Arterial	118'	4 w/median	No	N/A
Waterfall Rd	MC-33	Rt-234 to Mine Rd	Major Collector	102'	4 w/median	Yes	Class III
Waterway Dr	MC-34	Mill Creek Rd to Rt-15	Major Collector	110'	4 w/median	Yes	Class I/East
Wayside Dr	MC-35	Rt-234 to Cardinal Dr	Major Collector	90'-110' variable	4 w/median	No	N/A
Wellington Rd	MA-38	Rt-1 to Congressional Way	Major Collector	118'	6 w/median	Yes	Class I/South
Williamson Blvd	MC-36	Rt-29 to Goodwin Dr	Minor Arterial	90'	4 w/median	Yes	Class III
Yates Ford Rd	MC-37	Rt-234 Business to Portsmouth Rd	Major Collector	100'	4 w/median	Yes	Class II
		Prince William Pkwy to Fairfax Co	Major Collector				

**NOTES:**  
 1. This list only includes major roadways. Lesser roadways, minor collectors and local streets, are addressed through the County's Design and Construction Standards Manual (DCSM).  
 2. To facilitate finding a specific roadway, this list is sorted alphabetically. For a list sorted by functional classification, please see the Thoroughfare Plan Map.

The following narratives discuss the Thoroughfare Plan roadways identified in Table 2. These narratives provide general information about each of these roadways. The information provided below is current as of the date of adoption of the Comprehensive Plan. The Prince William County Department of Public Works should be contacted for any more current information than is provided herein.

### Freeways/Interstates

(road number/name termini, right-of-way requirement, description)

**FI-1)\* I-66 (Fauquier County to Fairfax County) (275' minimum/variable) -** Construction of a concurrent peak-period median High Occupancy Vehicle (HOV) lane and a fourth general-purpose lane between Fairfax County and the I-66/ Route 234 Business interchange has been completed. The median lane is restricted to HOV-2 occupants eastbound during the morning peak period and westbound during the evening peak period. The extension of the median HOV lane, and additional multipurpose lane from the I-66/Route 234 Business interchange to Route 29, the reconfiguration of the Route 29 interchange, and the extension of the median HOV lane and a third general-purpose lane from Route 29 to Route 15 is also being proposed to handle the increasing level of commuter traffic from locations west of Prince William County.

**FI-2)\* I-95 (Fairfax County to Stafford County) (450' minimum/variable) -** First identified in the 1982 Comprehensive Plan, reversible HOV lanes have been completed from the Occoquan River to Quantico Creek, south of Route 234. The extension of the HOV lanes from Quantico Creek to Stafford County as well as the construction of a fourth general-purpose lane is recommended to handle the increasing level of commuter traffic from locations south of Prince William County.

### Parkways

(road number/name, termini, right-of-way requirement, description)

**PW-1) Prince William Parkway (Route 1 to Hoadly Road) (120' minimum); (Hoadly Road to Liberia Avenue) (160')** - This road is designed to help facilitate the large volumes of traffic going to and coming from I-95 and to serve cross-County trips. The alignment east of Summerland Drive to Route 1 will follow the alignment of Longview Drive. The recommended right-of-way corresponds with the standard typical section provided within the County's engineering plans for this road.

**PW-2) Route 15 (James Madison Highway) (160' - 174')** - This arterial supports major traffic flows to and through the Route 29/I-66 corridors. It is the only existing major road leading into Loudoun County and will continue to serve trips between Prince William County and Loudoun County. A grade separation is recommended for its intersection with Route 29 and the Norfolk-Southern rail line. The recommended

\* Roadways where conventional road widening is not possible (c.f. TR-POLICY 8).



right-of-way corresponds with the typical section provided within the VDOT functional plan for this road.

**PW-3) Route 411 (Tri-County Parkway) (200')** - This new road will be an extension of Godwin Drive from Route 234 Business (PA-8) to Fairfax County. It is planned as a limited access-type road with interchanges at Route 234 Business (PA-8) and Lomond Drive. It will provide substantial relief to Route 28 and I-66. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

### Principal Arterials

(road number/name, right-of-way requirement, description)

**PA-1) Potomac Parkway (Route 1 to Cherry Hill Spine Road) (160')** - This new road will extend existing Route 234 (PA-9) east of Route 1. This extension of Route 234 will improve access to the Possum Point, Cockpit Point, and Cherry Hill areas, including the proposed Cherry Hill Virginia Railway Express (VRE) station. The 1992 adopted Cherry Hill Sector Plan recommends this proposed roadway be a controlled access facility. The recommended right-of-way corresponds with the PA-2 standard typical section provided within the County's DCSM.

**PA-2) Route 1 (Jefferson Davis Highway) (Fairfax County to Stafford County - excluding the Town of Dumfries) (125')\*** - Route 1 functions as a principal arterial carrying local traffic and traffic bound for employment areas north of Prince William County. As I-95 gets more congested, traffic volumes will continue to increase on Route 1, and there will be a need for grade-separated interchanges at Route 234, Dale Boulevard, and Route 123. The recommended right-of-way corresponds to VDOT's adopted Route 1 Corridor Study typical section.

**PA-3) Route 28 (Nokesville Road) (City of Manassas to Vint Hill Road) (146'); (Vint Hill Road to Fauquier County) (160')** - Traffic volumes on this roadway are predicted to increase as development occurs in the cities of Manassas and Manassas Park and along the Route 234 corridors. The recommended right-of-way corresponds with the MA-1, PA-1, and PA-2 standard typical sections provided within the County's Design and Construction Standards Manual (DCSM).

**PA-4) Route 28 (Centreville Road) (Fairfax County to City of Manassas) (118')** - This road is a traditional commercial corridor linking the City of Manassas with Fairfax County and eventually I-66. A standard principal arterial typical section is not recommended between Fairfax County and the City of Manassas because of the extent and nature of existing development. A functional plan has been developed for this road.

**PA-5) Route 29 (Lee Highway) (Fauquier County to Route 234 Bypass North) (160')** - This portion of Route 29 is located between Fauquier County and the Route 234 Bypass North (PA-10) and is designated as one of the National Highway System high-priority corridors for federal funding. The recommended right-of-way corresponds

to existing right-of-way acquired for this road. A crossover study has been prepared to ensure adherence to appropriate access guidelines between Route 15 and I-66. The reconfiguration of the Route 29/I-66 interchange and grade separation of the Norfolk-Southern railroad, as it crosses Route 29, is recommended, as well as a grade-separated interchange at the Route 29/Gallerher Road/Linton Hall Road intersection. The 2002 adopted I-66/ Route 29 Sector Plan also calls for a grade-separated interchange at the intersection of Route 29 and Route 15.

**PA-6) Route 123 (Gordon Boulevard) (Route 1 to Fairfax County) (120')** - This road leading into Fairfax County will continue to carry increased vehicular traffic. It provides an important connection of Old Bridge Road and Route 1 to I-95 and is a route for eastern Prince William County residents to get to the employment areas in central Fairfax County and Fairfax City. The recommended right-of-way corresponds with the standard typical section provided within the VDOT engineering plans for Route 123.

**PA-7) Route 234 (Prince William Parkway/Dumfries Road) (I-66 to Route 1) (160' to 220'/variable)** - Route 234 is expected to carry heavy volumes of traffic from the residential developments in eastern Prince William County to the major employment centers located in the Manassas area and the Route 234 corridors. The recommended right-of-way corresponds with the standard typical section provided within the VDOT engineering plans for Route 234.

**PA-8) Route 234 Business (Sudley Road) (City of Manassas to I-66) (160')** - This road is located between the City of Manassas and I-66. It is a main commuter route for residents using I-66. Additionally, this road serves a large retail area of the County. With completion of the Route 234 Bypass, this traditional corridor has been redesignated as Route 234 Business. The recommended right-of-way corresponds to existing right-of-way acquired for this road.

**PA-9) Route 234 Business (Dumfries Road) (City of Manassas to I-66) (variable)** - This road is located between Route 234 and the City of Manassas. This road serves as the southern link of the business route into the City of Manassas. Since this is the remnant of what was Route 234 before it was upgraded and realigned, the recommended right-of-way corresponds to the existing right-of-way of this road.

**PA-10) Route 234 Bypass North (I-66 to Loudoun County) (220')** - This planned roadway will be a continuation of Route 234 (PA-7) from I-66 to Loudoun County. This extension of Route 234 is planned to relieve Route 15, Route 29, and Route 234. Its main function will be to serve traffic between Prince William County and the Dulles Airport corridor in Loudoun County, and related areas in Fairfax County. However, further study should be performed in order to set an exact alignment that satisfies both Prince William County and Loudoun County. The recommended right-of-way corresponds with the typical section provided within the VDOT functional plan.

**Minor Arterials**

(road number/name, right-of-way requirement, description)

**MA-1) Artemus Road (Route 15 to Route 234 Bypass North) (118')** - This minor arterial is planned to connect Route 15 (James Madison Highway) and Route 234 Bypass North (PA-10) . Its primary function will be to provide relief to I-66. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-2) Balls Ford Road (Route 234 Business [PA-8] to Wellington Road) (118')** - This road is planned to ultimately have an interchange with Route 234 . A major realignment of Balls Ford Road around the interchange area is proposed to connect this road to realigned Devlin Road. This interchange will provide access to the nearby existing and planned industrial areas. The recommended right- of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. A functional plan has been developed for this road.

**MA-3) Belmont Bay Road (Route 1 to End) (118')** - This road was conceived in the 2000 adopted Route 1/Route 123 Sector Plan to connect the Belmont Bay town center and associated development with Route 1 and the Woodbridge VRE station thereby facilitating access to the marina, retail center, and science museum included in the plans for Belmont Bay. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-4) Benita Fitzgerald Drive (Dale Boulevard to Cardinal Drive) (110')** - Formerly named Willowdale Road and Benita Brown Boulevard, this proposed road was conceived in the Dale City Residential Planned Community (RPC) Plan. Its major function will be to distribute traffic generated in southeastern Dale City and the north sections of Montclair to Dale Boulevard, where traffic can proceed to I-95. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MA-5) Cardinal Drive (Minnieville Road to Route 1) (92' - 118')** - This road connects Minnieville Road and Route 1, thereby providing access to both of these major highways from the Montclair and Cardinal Drive residential areas. The recommended right-of-way and alignment correspond with the MC-1 and MA-1 standard typical section provided within the County's engineering plans for this road.

**MA-6) Caton Hill Road (Minnieville Road to Prince William Parkway) (120')** This road connects Minnieville Road and the Prince William Parkway thereby providing improved access to the commercial centers along Minnieville Road from I-95 and improved access to the major commuter parking lot at I-95. The recommended right-of-way corresponds with the standard typical section provided within the County's engineering plans for the Prince William Parkway.

**MA-7) Cherry Hill Spine Road (Congressional Way to End) (118')** - This road was conceived in the 1992 adopted Cherry Hill Sector Plan. It will provide access to both the residential and employment areas planned for the Cherry Hill peninsula. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-8) Coverstone Drive (Ashton Avenue to Route 234 Business) (118')** - This road connects the residential developments along Ashton Avenue with the shopping and employment centers along Route 234 Business. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-9) Dale Boulevard (Route 1 to I-95) (155' - 180') (I-95 to Benita Fitzgerald Drive) (180'/variable); (Benita Fitzgerald Drive to Hoadly Road) (110' - 160'/variable)** - This arterial, located through the heart of Dale City, extends from I-95 to Hoadly Road. Dale Boulevard provides residents of Dale City a direct route to I-95 and was constructed as a controlled-access facility. The recommended right-of-way corresponds with the existing right-of-way acquired for this road.

**MA-10) Devlin Road (Linton Hall Road to Wellington Road) (118')** - This road connects the residential developments along Linton Hall Road with Wellington Road. Originally planned as a major collector, Devlin Road has been reclassified as a major arterial, since residential development along this road has occurred more rapidly than was originally anticipated in the Long-Range Land Use Plan. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-11) Fleetwood Drive (Aden Road to Fauquier County) (60')** - Connecting eastern Fauquier and northern Stafford counties with Aden Road, Fleetwood Drive will handle residential trips that will otherwise use Route 28 or I-95. Because of right-of-way constraints, it is planned to remain a two-lane road. The recommended right-of-way corresponds with the RM-1 standard typical section provided within the County's DCSM.

**MA-12) Gideon Drive (Smoketown Road to Dale Boulevard) (120'/variable)** - This road serves as the major access for primarily local traffic to such attractions as Potomac Mills and the Hylton Chapel. The recommended right-of-way corresponds to the existing right-of-way acquired for this roadway.

**MA-13) Town of Haymarket Bypass (Route 15 to Route 29) (118')** - This new road will relieve traffic congestion on Route 55 (John Marshall Highway) that results from residential trips generated in the area. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. A centerline study has been developed for this road.

**MA-14) Heathcote Boulevard (Route 15 to Route 29) (118')** - Another new road proposed to parallel I-66 and Route 55 (John Marshall Highway), Heathcote Boulevard is planned to carry local residential traffic north of I-66 to the employment and commer-

cial areas along Route 29 in Gainesville. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-15) Hoadly Road (Route 234 to Prince William Parkway) (110')** - Hoadly Road is a four-lane, divided facility with paved shoulders connecting Dumfries Road and the Prince William Parkway. The recommended right-of-way corresponds with the standard typical section provided within the VDOT engineering plans for this road.

**MA-16) Horner Road (Prince William Parkway to Route 123) (120')** - This is the part of Horner Road that is east of I-95. The recommended right-of-way corresponds with the standard typical section provided within the County's engineering plans for the Prince William Parkway.

**MA-17) Linton Hall Road (Route 29 to Route 28) (118')/Bristow Road (Route 28 to Route 234) (102')** - Traffic volumes could dramatically increase on this cross-County route, especially when approved development is constructed along Linton Hall Road. The recommended right-of-way for Linton Hall Road corresponds with the MA-1 standard typical section provided within the County's DCSM. The recommended right-of-way for Bristow Road corresponds with the MC-2/MA-2 standard typical section provided within the County's DCSM. A functional plan has been developed for Bristow Road.

**MA-18) Minnieville Road (Old Bridge Road to Route 234) (118')** - Minnieville Road feeds traffic into the Prince William Parkway and other east-west arterials. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-19) Neabsco Mills Road (Opitz Boulevard to Route 1) (118')** - This road handles local traffic generated by proposed employment centers along Route 1 and in nearby areas. This road, which parallels I-95 and Route 1, relieves these two roads of local traffic and provides improved emergency access to Potomac Hospital. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-20) New Cherry Hill Road (Route 1 to Congressional Way) (110')** - This road is located on the Cherry Hill Peninsula and will provide access for the Wayside residential development. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MA-21) North/South Connector (Wellington Road to University Drive) (118')** - This road was conceived in the 2000 adopted George Mason University (GMU) – Prince William Campus Sector Plan. It provides access to the campus from Wellington Road and University Drive. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-22) Old Bridge Road (Route 123 to Minnieville Road)\* (Minnieville Road to Prince William Parkway) (120')** - This road feeds traffic generated in Lake Ridge and the central sections of the County to I-95 and Route 123. This road will continue to handle increased traffic volumes as the residential and retail components of Lake Ridge build out. The recommended right-of-way corresponds with the existing right-of-way acquired for this road.

**MA-23) Old Carolina Road (Route 15 to Heathcote Boulevard) (118')** - This road connects the Town of Haymarket and the residential developments along Route 15 to the north. Originally planned as a major collector to relieve congestion at the I-66/Route 15 interchange, residential development along this road has occurred more rapidly than was originally anticipated in the Long-Range Land Use Plan causing the need to upgrade this road to a minor arterial. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-24) Prince William Parkway (Route 234 to Liberia Avenue) (118')** - This extension of Liberia Avenue from Hastings Drive to Route 234 at Brentsville Road has now been named part of the Prince William Parkway, although this portion of the parkway has been designed as, and functions as, a minor arterial. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-25) Purcell Road (Dale Boulevard to Route 234 [PA-9]) (118')** - This proposed improvement provides an extension of Dale Boulevard and will help facilitate traffic coming from Route 234. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. A functional plan has been developed for this road. The plan indicates that the west end of Purcell Road will be realigned to the south to improve the design of the roadway and its intersection with Route 234.

**MA-26) Purcell Road East (Purcell Road to Prince William Parkway) (102')** - This proposed mid-County connection between Route 234 and the Prince William Parkway will provide access and from planned residential areas north of Hoadly Road. Originally planned as a major collector, residential development within this area has occurred more rapidly than was originally anticipated in the Long-Range Land Use Plan, causing the need to upgrade this road to a minor arterial. The recommended right-of-way corresponds with the MC-2/MA-2 standard typical section provided within the County's DCSM.

**MA-27) Rixlew Lane (Wellington Road to Route 234 Business) (110')** - This road provides a connection between Wellington Road and Route 234 Business near the Manassas Mall. Originally planned as a major collector, development along this corridor as well as the planned location of an additional school has caused the need to upgrade this road from a major collector to a minor arterial. Because of right-of-way constraints, the recommended right-of-way corresponds to the existing right-of-way for this roadway.

**MA-28) Rollins Ford Road (Vint Hill Road to Linton Hall Road) (118')** - This proposed road will alleviate the need to significantly widen Glenkirk Road and will provide an alternative access to Vint Hill Road and Linton Hall Road for the significant new residential development in this area. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. A centerline study has been performed for this road.

**MA-29) Route 55 (John Marshall Highway) (Route 29 to Thoroughfare Road - excluding the Town of Haymarket) (118')** - This road is proposed for improvement in order to serve traffic generated in and attracted to the Gainesville/Town of Haymarket area. Route 55 is planned to be realigned to Gallerher Road, to intersect Route 29 at the planned realignment of Linton Hall Road (Route 619). Additionally, proposed employment developments in western Prince William County are expected to attract significant new volumes of traffic on this road, including trips from central and northern Fauquier County. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. While this typical section suggests a right-of-way of 118' for the entire section of Route 55, the section of Route 55 leading into the eastern boundary of the Town of Haymarket will be transitioned down to a 92' right-of-way (MC-1 typical section) in order to provide a reasonable connection to the town's two-lane section of Route 55. The right-of-way transition most likely will begin at Tyler Elementary School and proceed westward to the town boundary. However, final engineering will determine the appropriate right-of-way transition lengths. Development of sites along Route 55 between the Town of Haymarket and Route 29 should provide landscaping and streetscaping in keeping with the urban design plan established by the Town of Haymarket.

**MA-30) Route 215 (Vint Hill Road) (Fauquier County to Route 28) (102')** - This road, paralleling Linton Hall Road and connecting Fauquier County with Route 28, will provide an alternative to Linton Hall Road for traffic destined for the Route 28 employment areas. The recommended right-of-way corresponds with the MC-2/MA-2 standard typical section provided within the County's DCSM.

**MA-31) Route 234 (Sudley Road) (Route 15 to Manassas National Battlefield Park) (120')** - This road is located between the Manassas National Battlefield Park and Route 15. The recommended right-of-way corresponds to existing right-of-way acquired for this road.

**MA-32) Smoketown Road/Opitz Boulevard (Minnieville Road to Route 1) (110')** - This road offers access to the densely developed commercial areas at and near Potomac Mills. Smoketown Road is a six-lane, divided roadway between Minnieville Road and Gideon Drive. Opitz Boulevard extends from Gideon Drive to Route 1. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MA-33) Spriggs Road (Route 234 to Hoadly Road) (110')** - This road provides an important connection between Dumfries Road and Hoadly Road. Additionally, it provides direct access to two mid-County high schools and a middle school. A major

realignment of Spriggs Road is proposed, including a relocation of its intersection with Route 234 to the west of its current alignment. The recommended right-of-way corresponds with the standard typical section provided within the functional plan for this road.

**MA-34) Sudley Manor Drive (Route 215 to Route 234 Business) (110')** - This road is planned to extend from Sudley Manor Drive near Route 234 Business to Route 215 (Vint Hill Road). It will ultimately have a grade-separated interchange with Route 234 and, therefore, will help to relieve Route 28. The recommended right-of-way corresponds with existing right-of-way acquired for this road and the standard typical section provided within the VDOT engineering plans for Route 234 .

**MA-35) Summit School Road (Minnieville Road to Telegraph Road)/ Telegraph Road (Summit School Road to Opitz Boulevard) (110')** - A major realignment of the section of this road, located between Lake Manor Drive at Minnieville Road and Caton Hill Road, is planned, based on proffered right-of-way and roadway construction. It will carry traffic generated in the adjoining employment areas. The 1996 adopted Parkway Employment Center Sector Plan defines the relationship of the proposed land uses and the roadway design and connections between Caton Hill Road and Minnieville Road. The recommended right-of-way corresponds with the standard typical section provided within the VDOT functional plan.

**MA-36) University Boulevard (Route 29 to Godwin Drive) (118')** - This new road is a modified version of a road suggested in the 1989 Linton Hall Road/Route 28 Area Plan. It extends from Route 29 east of Gainesville to Godwin Drive. It will carry residential traffic from the Linton Hall/Sudley Manor areas to the planned employment areas at INNOVATION @ Prince William and Route 29. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. A centerline study has been developed for the section of this road between Route 234 and Devlin Road.

**MA-37) Van Buren Road (Cardinal Drive to Mine Road) (118')** – Paralleling I-95 and connecting with Benita Fitzgerald Drive, this road will take local traffic off I-95. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM.

**MA-38) Wellington Road (Route 29 to Godwin Drive) (118')** - This road is located between the City of Manassas and Route 29. With a grade-separated interchange at Route 234 ultimately planned, this road will provide access to the existing and planned development along this industrial corridor. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. The Virginia Gateway rezoning (REZ #95-54), at the Route 29 end of the corridor, proposes to realign and construct Wellington Road to intersect with realigned Linton Hall Road near Lakeview Drive. A functional plan has been developed for this road.



**Major Collectors**

(road number/name, right-of-way requirement, description)

**MC-1) Aden Road (Route 234 to Route 28) (102')** - Running mainly through areas planned as Agricultural or Estate (AE), this road will help feed traffic from northern Stafford and eastern Fauquier counties to the Route 28 and eastern Prince William County employment centers. The recommended right-of-way corresponds with the MC-2/MA-2 standard typical section provided within the County's DCSM.

**MC-2) Ashton Avenue (Godwin Drive to Balls Ford Road) (110')** - Providing an alternative route for traffic otherwise using Sudley Road, this parallel road extends from Godwin Drive to Balls Ford Road. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-3) Balls Ford Road (Route 234 Business to Coppermine Drive) (92')** - This road provides access to a variety of commercial, retail, industrial, and residential uses. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-4) Blackburn Road (Featherstone Road to Route 1) (existing/ variable)\*** - This is another road expected to continue distributing residential traffic to Route 1. The recommended right-of-way corresponds to the existing right-of-way acquired for this road.

**MC-5) Carver Road (Old Carolina Road to Route 29) (92')** - The upgrading of this road from a minor collector to a major collector was included in the 2002 adopted I-66/Route 29 Sector Plan to accommodate local traffic movement and to improve connectivity between existing and proposed thoroughfares in the sector plan area. The recommended right-of-way corresponds with a MC-1 standard typical section provided within the County's DCSM.

**MC-6) Catharpin Road (Route 55 to Route 234) (110'/variable)** - This road distributes residential traffic to the employment areas on Route 55 and Route 29. Originally planned as a minor collector north of Heathcote Boulevard, residential development and the construction of a new school have caused the classification of this road to be upgraded to a major collector. The recommended right-of-way corresponds with the centerline study performed for this road.

**MC-7) Cloverhill Road (Manassas Regional Airport to Route 234) (110')** - This road will provide access to existing and proposed residential development and the Manassas Regional Airport, and distribute traffic from these areas to Route 234. The recommended right-of-way corresponds with a modified MC-1 standard typical section provided within the County's DCSM.

**MC-8) Cockpit Point Connector Road (Congressional Way to Cockpit Point Road) (92')** - This road is recommended to provide access to proposed commercial and

residential uses within the Cherry Hill Sector Plan area. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-9) Farm Creek Road (Featherstone Road to Rippon Boulevard) (110')/ Featherstone Road (Route 1 to Farm Creek Road) (68')/Rippon Boulevard (Route 1 to Farm Creek Road) (110')** - Formerly called the "Woodbridge Loop," these roads will distribute residential and industrial traffic to Route 1 and provide access to the Rippon VRE commuter rail station. With the introduction of commuter rail and the possibility of high-speed rail along the Norfolk-Southern rail line, a grade-separated overpass/underpass and/or a connection of Veterans Drive to Dawson Beach Road may be necessary. The recommended rights-of-way correspond with existing rights-of-way acquired or the MC-1 or CI-1 standard typical sections provided within the County's DCSM.

**MC-10) Fauquier Drive (Fauquier County to Route 28) (60')** - This road, known as Dumfries Road in Fauquier County, connects Route 29 with Route 28. Upgrading this road to a standard two-lane road is recommended. The recommended right-of-way corresponds with the RM-2 standard typical section provided within the County's DCSM.

**MC-11) Fitzwater Drive (Route 28 to Aden Road) (60')** - This road provides access to and circulates traffic to the Nokesville Village Center/core area. Once upgraded, the western section of this road will provide an improved connection to Fauquier County. The recommended right-of-way corresponds with the RM-2 standard typical section provided within the County's DCSM. A standard major collector typical section is not recommended because of the extent and nature of existing development.

**MC-12) Freedom Center Boulevard (Wellington Road to University Boulevard) (92')** - This road connects Wellington Road with University Boulevard and provides access to the George Mason University - Prince William Campus. It was conceived in the 2002 adopted George Mason University (GMU) – Prince William Campus Sector Plan. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-13) Gum Springs Road (102')** - This road, leading into Loudoun County, is becoming more important in distributing trips into the Gainesville and Fairfax County employment areas as Route 29 and I-66 become more congested. This two-lane road is located off Sudley Road, northwest of the Manassas National Battlefield Park. The recommended right-of-way corresponds with the MA-2/MC-2 standard typical section provided within the County's DCSM.

**MC-14) Haymarket Drive (Thoroughfare Road to Old Carolina Road) (92')** - This road was identified in the 2002 adopted I-66/Route 29 Sector Plan to be upgraded and its intersection with Route 15 relocated to Thoroughfare Road. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-15) Hornbaker Road (Route 28 to Wellington Road) (92')** - This road provides access to Route 234 for industrial uses north of Route 28. The recommended right-of-way corresponds with the MA-1 standard typical section provided within the County's DCSM. A functional plan has been developed for this road.

**MC-16) Longview Drive/Montgomery Avenue (Opitz Boulevard to Prince William Parkway) (60')\*** - This road is expected to continue to distribute residential trips out to Route 1. The recommended right-of-way corresponds to existing right-of-way acquired for this road.

**MC-17) Lucasville Road (City of Manassas to Bristow Road) (102')** - This road distributes local trips from the surrounding residential areas. The recommended right-of-way corresponds with the MC-2/MA-2 standard typical section provided within the County's DCSM. A functional plan has been developed for this road.

**MC-18) McGraws Corner Drive (Route 15 to Catharpin Road) (110')** - This planned road is identified in the 2002 adopted I-66/Route 29 Sector Plan to facilitate east-west traffic flows within the Sector Plan area between Route 29 and Route 15 and to relieve congestion on Route 29. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-19) Neabsco Road (Route 1 to End) (110')** - This road circulates local traffic from the Newport residential area and recreational trips bound for Leesylvania State Park and adjacent marinas on Neabsco Creek. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-20) Occoquan Road (Old Bridge to Route 1)\* (Existing/variable)** - This road is an important feeder road to the Woodbridge VRE commuter rail station. Occoquan Road is planned to remain a four-lane, undivided facility. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-21) Old Carolina Road (Heathcote Boulevard to Route 29) (92')** - This road, extending from north of the Town of Haymarket to Route 29, provides improved access and mobility to residential areas planned in this corridor. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-22) Old Centreville Road (Fairfax County to Route 28) (92')** - This road is used as an alternative to Route 28 since it crosses Bull Run. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-23) Groveton Road (Balls Ford Road to Pageland Lane) (102')/ Pageland Lane (Groveton Road to Route 234) (60')** - These roads connect the Balls Ford Road industrial corridor with Route 29 and the Route 234 Bypass North. They also provide one of only three road overpasses of I-66 between Route 234 and Route 234 Business.

The recommended right-of-way for Groveton Road corresponds with the MC-2/MA-2 standard typical section provided within the County's DCSM. Pageland Road will also take local traffic off the Route 234 Bypass North. An upgraded two-lane road is recommended. The recommended right-of-way, therefore, corresponds with the RM-2 standard typical section provided within the County's DCSM.

**MC-24) Powells Creek Boulevard (Route 1 to River Ridge Boulevard) (90'-110'/variable)** - This road provides additional access for the River Oaks community to and from Route 1. The recommended right-of-way corresponds with the existing right-of-way acquired for this road.

**MC-25) Ridgefield Road (Dale Boulevard to Prince William Parkway) (110')** - This road offers the residents of western Dale City an alternative to Hillendale Drive for access to the Prince William Parkway, and provides substantial traffic relief to Hillendale Drive. Therefore, following the opening of Ridgefield Road in 2002, the Prince William Board of County Supervisors requested that VDOT downgrade Hillendale Drive accordingly. The recommended right-of-way corresponds to existing dedications and accommodates the MC-2/MA-2 standard typical section provided in the County's DCSM.

**MC-26) River Ridge Boulevard (Route 1 to Wayside Drive) (90'-110'/ existing)** - This road provides access to the River Oaks community from Route 1. The recommended right-of-way corresponds with the existing right-of-way acquired for this road.

**MC-27) Signal Hill Road (Liberia Avenue to Signal View Drive) (68')** - This road provides access to and from the residential and retail developments that surround it. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-28) Signal View Drive (City of Manassas Park to Signal Hill Road) (100')** - This road serves local traffic generated in residential areas north of the Prince William Parkway, including the existing and planned development within the area annexed from the City of Manassas Park. The recommended right-of-way corresponds with the existing right-of-way acquired for this road.

**MC-29) Smoketown Road (Old Bridge Road to Griffith Avenue) (110')** - Located north of Old Bridge Road, this road feeds local traffic generated in Lake Ridge onto Old Bridge Road. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-30) Springwoods Drive (Old Bridge Road to End) (100')** - This road collects residential traffic originating in the adjoining subdivisions and distributes it to Old Bridge Road. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-31) Telegraph Road (Minnieville Road to Summit School Road) (92')** - This road provides access to the planned regional employment centers west of I-95 and shown on the Long-Range Land Use Plan. A parallel minor arterial (Summit School Road) is also recommended as part of this plan (see MA-35). The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-32) Thoroughfare Road (Route 15 to McGraws Corner Drive) (92')** - This road was identified in the 2002 adopted I-66/Route 29 Sector Plan to provide improved access to residential uses along this corridor. The recommended right-of-way corresponds with the MC-1 standard typical section provided within the County's DCSM.

**MC-33) Waterfall Road (Route 15 to Mill Creek Road) (102')** - This road provides access and distributes residential traffic to and from Route 15. A realignment is recommended, so that this road will intersect Route 15 at the Route 15/Route 234 (Sudley Road [MA-31]) intersection. The recommended right-of-way corresponds with the MC-2/ MA-2 standard typical section provided within the County's DCSM.

**MC-34) Waterway Drive (Route 234 to Cardinal Drive) (110')** - This four-lane road serves local traffic generated within Montclair. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-35) Wayside Drive (Route 1 to Congressional Way) (90' - 110')** - This road serves as the major road for the Wayside Village community. It is planned to cross the Potomac Parkway as a grade-separated road without accessing the Parkway and to continue south, ultimately intersecting with proposed Congressional Way. The recommended right-of-way corresponds with existing right-of-way acquired for this road.

**MC-36) Williamson Boulevard (Route 234 Business to Portsmouth Road) (90')** - This road is planned to relieve Route 234 Business of local traffic. The recommended right-of-way corresponds with existing right-of-way acquired for this road and the standard typical section within the functional plan.

**MC-37) Yates Ford Road (Prince William Parkway to Fairfax County) (100')** - Yates Ford Road distributes traffic from Fairfax County to the Prince William Parkway. The recommended right-of-way corresponds with the standard typical section within the Prince William Parkway engineering plans.

## The Transit Improvement Plan

The Transit Improvement Plan of Prince William County is reflected in Figure 1. This Plan is the foundation for the implementation of transit improvements within transit corridors.

The current transit network and proposed improvements for the County are shown in Figure 1. This figure designates bus routes (both commuter and intra-County), com-

muter rail stations, park-and-ride lots, and transit centers. It reflects current services and infrastructure, and those designed to address unmet existing and anticipated future demand as identified by the Potomac and Rappahannock Transportation Commission (PRTC).

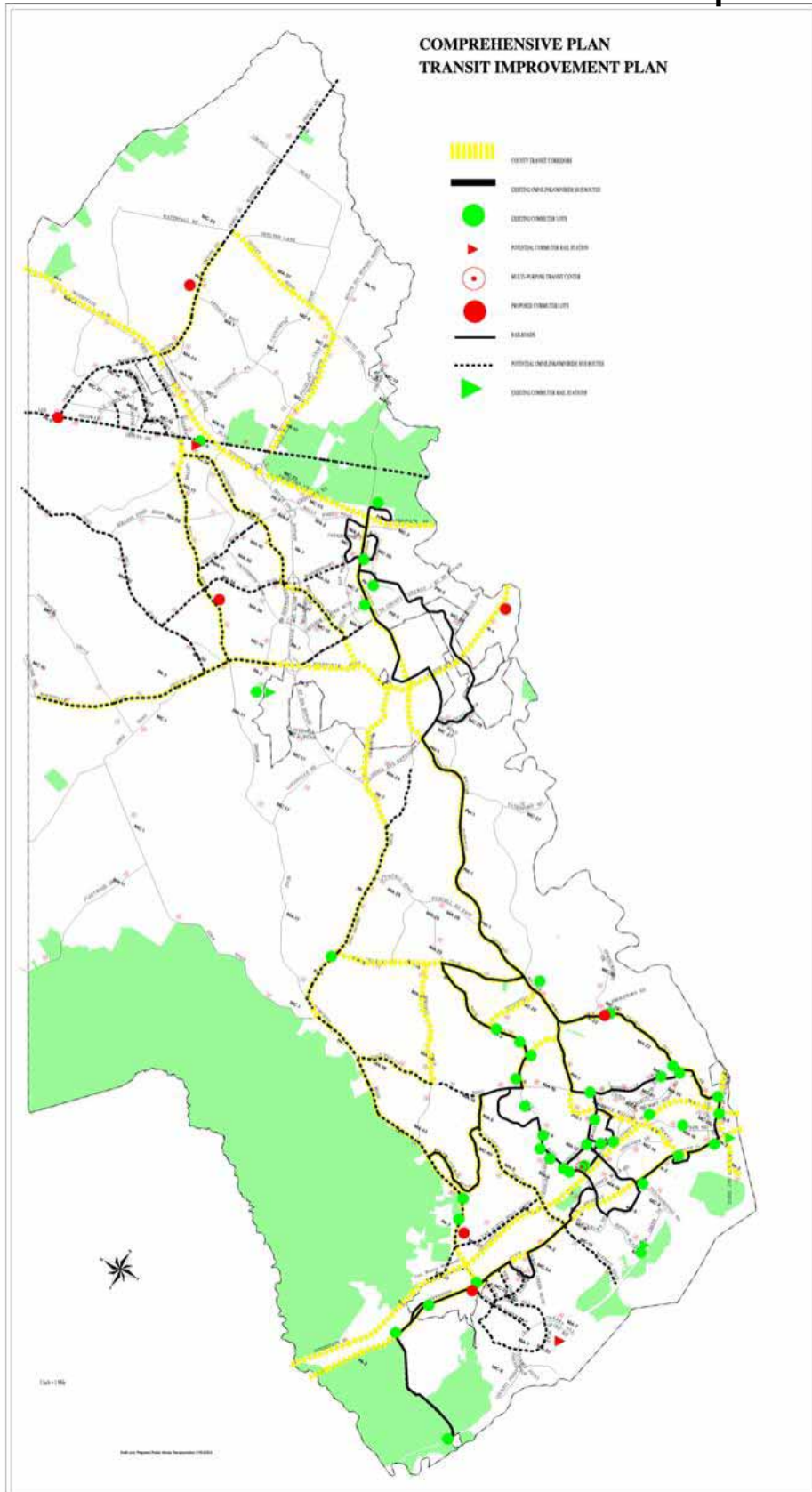
## The Non-motorized Transportation Plan

The Non-motorized Transportation Plan is comprised of guidelines for the construction of bike trails (Table 3) and locations for their construction (Table 4) within Prince William County.

<b>Table 3</b>	
<b>Biking Trail Composition</b>	
<b>Classification</b>	<b>Description</b>
<b>Class I (Bike Trail)**</b>	An independent trail, typically 8' to 10' wide, physically separated from motorized vehicular traffic by open space within the right-of-way or on a separate easement. This trail is appropriate for biking use.
<b>Class II (Bike Lane)</b>	A restricted right-of-way, typically 5' wide, designated for bicycle use by striped pavement marking and signing.
<b>Class III (Bike Route)</b>	A roadway, signed for bicycle use, shared by motor vehicles and bicycles.

Figure 1

# Transit Improvement Plan



**Table 4****Bike Trail Locations**

Classification/Side of Road To Be Located (E=East, W=West, N=North, S=South)

## Class I (Bike Trails)

- I/S Artemus Road (Rt. 15 to Rt. 234 Bypass North)
- I/S Balls Ford Road (Wellington Road to Sudley Road)
- I/W Benita Fitzgerald Drive (Dale Boulevard to Cardinal Drive)
- I/S Bristow Road (Nokesville Road to Dumfries Road)
- I/S Cardinal Drive (Minnieville Road to Route 1)
- I/W Catharpin Road (Sudley Road to Route 55)
- I/S Caton Hill Road (Davis Ford Road to Gordon Boulevard)
- I/N Centreville Road (Fairfax County Line to City of Manassas)
- I/N Cloverhill Road (City of Manassas to west of the Route 234 Bypass)
- I/S Dale Boulevard (Route 1 to Hoadly Road)
- I/N Dawson Beach Road (Route 1 to east of Express Drive)
- I/S Dumfries Road (City of Manassas City Limits to Route 1)
- I/N Featherstone Road (Route 1 to Veterans' Park)
- I/S Glenkirk Road Realigned (Linton Hall Road to Vint Hill Road)
- I/E Gordon Boulevard (Fairfax County Line to Route 1)
- I/E Gum Springs Road (Sudley Road to Loudoun County Line)
- I/E James Madison Highway (Route 15) (Loudoun County Line to Route 29)
- I/E Liberia Avenue Extended (Prince William Parkway to Route 234)
- I/S Linton Hall Road (Route 29/211 to Nokesville Road)
- I/W Minnieville Road (Old Bridge Road to Dumfries Road)
- I/S Neabsco Road (Route 1 to Leesylvania Park)
- I/W Neabsco Mills Road (Opitz Boulevard to Route 1)
- I/S New Cherry Hill Road (Route 1 to Congressional Way)
- I/S Nokesville Road (Fauquier County Line to Manassas City Line)
- I/E North/South Connector (Wellington Road to University Boulevard)
- I/N Old Bridge Road (Prince William Parkway to Gordon Boulevard)
- I/S Opitz Boulevard (Telegraph Road to Route 1)
- I/N Prince William Parkway (City of Manassas to Route 1)
- I/S Purcell Road (Dumfries Road to Hoadly Road)
- I/E Ridgefield Road (Prince William Parkway to Dale Boulevard)
- I/S Rippon Boulevard/Farm Creek Drive (Route 1 to Featherstone Drive)
- I/W Route 1 (Fairfax County Line to Stafford County Line)
- I/N Route 28 Bypass (Sudley Road to Fairfax County Line)
- I/S Route 29/211 (Fauquier County Line to Manassas National Battlefield Park)
  
- I/S Route 29 Parallel Road (Town of Haymarket Bypass to Carver Road)



- I/N Route 55 (James Madison Highway) (Route 29 to Fauquier County Line)
- I/E Route 234 Bypass (Dumfries Road to Route 29)
- I/E Route 234 Bypass North (Route 29 to Loudoun County Line)
- I/E Spriggs Road (Hoadly Road to Dumfries Road)
- I/S Smoketown Road (Griffith Avenue to Telegraph Road)
- I/N Sudley Road (James Madison Highway to Godwin Drive)
- I/N Sudley Manor Drive (Vint Hill Road to the Route 234)
- I/E Summit School Road/New Telegraph Road  
(Minnieville Road to Opitz Boulevard)
- I/S University Boulevard (Godwin Drive/Route 234 Bypass)
- I/W Van Buren Road North (Cardinal Drive to Dumfries Road)
- I/E Waterway Drive (Cardinal Drive to Dumfries Road)
- I/W Wellington Station Road (Wellington Road to University Boulevard)

#### Class II (Bike Lanes)

- II Aden Road (Route 28 to Dumfries Road)
- II Brentsville Road (Prince William Parkway to Lucasville Road)
- II Carriage Ford Road (Fauquier County Line to Aden Road)
- II Cottonmill Drive (Mohican Drive to Lane Ridge Park)
- II Davis Ford Road (Prince William Parkway to Yates Ford Road)
- II Hedges Run Drive (Old Bridge Road to Cottonmill Drive)
- II Hoadly Road (Dumfries Road to Prince William Parkway)
- II Lake Jackson Drive (City of Manassas to Dumfries Road)
- II Lucasville Road (City of Manassas to Bristow Road)
- II Old Church Road (Bristow Road to Parkgate Drive)
- II Parkgate Drive (Old Church Road to Aden Road)
- II Signal View Road/Signal Hill Drive/Moore Drive  
(City of Manassas Park Line to Prince William Parkway)
- II Springwoods Drive (Old Bridge Road to Prince William Parkway)
- II Vint Hill Road (Route 28 to Fauquier County Line)
- II Yates Ford Road (Prince William Parkway to Fairfax County Line)

#### Class III (Bike Routes)

- III Antioch Road (Waterfall Road to Artemus Road)
- III Fitzwater Drive (Burwell Road to Aden Road)
- III Signal Hill Road (Liberia Avenue to Signal View Road)
- III Waterfall Road (Antioch Road to Route 15)
- III Valley View/Fleetwood (Fauquier County to Bristow Road)
- III Williamson Boulevard (Portsmouth Road to Sudley Road)

(Note: For locations, refer to Thoroughfare Plan Map)

## APPENDIX A

### LEVEL OF SERVICE STANDARDS FOR ROADWAYS

New development presents demands on Countywide roadways that affect the ability of facilities to meet established level of service (LOS) standards. It is important, therefore, that Prince William County provide upgraded and improved roadways that address that demand. The demand for Countywide roadways must be measured, and means must be identified for maintaining the established Countywide LOS for roadways after new development occurs.

Any application for a rezoning or special use permit shall contain the following information:

- Number and type of dwelling units proposed.
- Name(s) and location(s) of roadways serving the project area.
- Traffic Impact Analysis (TIA), if required by the County.

Rezoning or special use permits for residential and nonresidential use shall meet the established LOS standards for roadways. Applications that fail to meet the LOS standards shall be considered inconsistent with the Transportation Plan.

There is one LOS measurement technique for roadways:

- LOS "A" - "F" based upon volume-to-capacity ratios established by the Transportation Research Board's Highway Capacity Manual.
- The minimum LOS for roadways in Prince William County shall be LOS "D."<sup>2</sup>

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<sup>2</sup> *LOS A* describes primarily free-flow operations at average travel speeds, usually about 90 percent of free-flow speed for the arterial classification. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.

*LOS B* represents reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the arterial classification. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.

*LOS C* represents stable operations; however, ability to maneuver and change lanes in mid-block locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the average free-flow speed for the arterial classification. Motorists will experience appreciable tension while driving.

*LOS D* borders on a range in which small increases in flow may cause substantial increases in delay and hence decreases in arterial speed. LOS D may be due to adverse signal progressions, inappropriate signal timing, high volumes, or some combination of these factors. Average travel speeds are about 40 percent of free-flow speed.

*LOS E* is characterized by significant delays and average travel speeds of one-third the free-flow speed or less. Such operations are caused by some combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.

*LOS F* characterizes arterial flow at extremely low speeds below one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized locations, with high delays and extensive queuing. Adverse progression is frequently a contributor to this condition.

It shall be determined that LOS standards have been met if the following condition is met:

- The applicant has provided the necessary right(s)-of-way, construction and/or a monetary contribution for improvements to existing or planned roads that will meet the LOS "D" standard with development of the proposed residential or nonresidential uses.

The methodology for determining equitable monetary contributions for new development is outlined in the *Policy Guide for Monetary Contributions, Prince William County Planning Office*.

## APPENDIX B

### OVERVIEW OF TRAVEL DEMAND MODELING

Travel demand modeling underway throughout metropolitan regions is based upon the model developed by the federally mandated Metropolitan Planning Organization (MPO). In the case of the Washington, DC region, the MPO is the Transportation Planning Board (TPB) of the Metropolitan Washington Council of Governments (MWCOCG). The travel demand model used by Prince William County is derived from the Virginia Department of Transportation's (VDOT) Northern Virginia District model, which is derived from the MWCOCG model. All are based upon average, 24-hour, weekday traffic (AWDT) flows. In fact, the basis of the MWCOCG model is home-based work trips. Specifically not included in the MWCOCG model is truck traffic or weekend (i.e. tourism) traffic volumes. Further, none of the models include a transit assignment module. Rather, transit and high-occupancy-vehicle (HOV) trips are dealt with at the trip-table stage of the modeling process (more on this below).

The essential difference between these models is the level of detail included within each, both in terms of the roadway network being simulated and the demographic data being used to generate the number of trips being simulated. The MWCOCG model is a multijurisdictional model which simulates future travel demand across the entire Washington, DC region. The VDOT model simulates traffic across northern Virginia and its network and demographic data are more detailed than the MWCOCG model. The County's model, developed to support the County's Comprehensive Plan, is even more detailed. While all of the Interstate and Primary System roadways are included in the County's model, generally only selected Secondary System roadways are included to represent the local road system.

The primary purpose of using a travel demand model is to simulate the effect of placing future traffic, as generated by land-uses identified elsewhere in the Comprehensive Plan, on a future highway system. The primary goal is to identify what improvements may be required for which roadway segments so they will likely operate satisfactorily, given these future land-uses. There are four main steps in the travel demand modeling process; trip generation, trip distribution, mode choice, and traffic assignment. A very generalized discussion of each of these steps follows.

#### Trip Generation

The first step in the modeling process is to determine how many trips will take place in the future. To do this, future land-uses as forecast by Prince William County and submitted to MWCOCG are converted into average daily person-trips. This is accomplished by applying standard trip-making rates to the variables which make up future land use. These variables include the number of dwelling units, jobs, and people. Dwelling units and jobs represent the end of trips, or, places where trips begin, or are *produced*, and places where trips end, or are *attracted*. To facilitate this conversion, the area being

modeled is divided into small geographic areas called traffic analysis zones (TAZs). The result of this first step in the modeling process is a table of person-trips produced and attracted for each of the TAZs.

### **Trip Distribution**

The second step in the modeling process takes the table of person-trips produced and attracted by each TAZ developed during the Trip Generation step and balances those trips between the TAZs. This is accomplished by matching each trip produced in each TAZ to a trip attracted in each TAZ. The results of this step is a more complex table which shows how many person-trips will take place between each of the TAZs. This table is referred to as a zone-to-zone person-trip table.

### **Mode Choice**

The third step in the modeling process predicts how each trip in the zone-to-zone person-trip table will take place. A trip can take place by car, by bus, or by some other means or mode of travel. As noted earlier, the model being used in Prince William County uses primarily two modes, automobile and transit/HOV. The results of this step in the modeling process are a series of tables which identify zone-to-zone person-trips by mode of travel.

## Traffic Assignment

The traffic assignment step in the modeling process places the zone-to-zone person-trips by automobile mode onto the highway system which has been identified to be in place in the same year in the future as the demographic data used in the Trip Generation step. Trips made by transit and HOV are not assigned to this highway system. The highway system is developed in three phases: the highway system that currently exists is identified, this highway system is then expanded to include any improvements which have actually been committed to or funded, finally, this highway system is then expanded to include any additional improvements required to satisfactorily handle projected traffic which has not been previously identified. Typically, this step in the process involves assigning the trips identified in the previous three steps to the highway system which will exist once all identified improvements have been made. The entire highway system is then evaluated and roadway segments not operating adequately are identified and improvements are envisioned to improve performance. This can be a very time consuming step because several model runs are required to achieve desired levels of service. In the case of the 1998 Comprehensive Plan, eleven separate model runs were required.

The final results of the four-step modeling process include a map which shows how each of the roadway segments included in the highway system will operate in the future and a list of improvements to the existing highway system which are required in order for the highway system to operate as shown on the map. As noted at the beginning of this section, the travel demand model evaluates the average number of automobile trips which will likely occur on an envisioned highway

system on an average weekday (Tuesday through Thursday) in the future. The operating characteristics of the highway system are referred to as levels-of-service (see Appendix A). The travel demand model is a planning tool. It does not evaluate how well intersections will operate during periods of peak volume. This type of analysis is conducted using engineering tools which examine trip-making at a much final level of detail than an area-wide travel demand simulation model and this analysis typically takes place during the review of site and subdivision plans.

## APPENDIX C

### OVERVIEW OF CONGESTION MANAGEMENT

Managing congestion is a complex process of balancing the demand to use the highway system with the capacity of the highway system to handle that demand. As such, management can take place on the demand side of the issue (demand management), on the supply side of the issue (system management), or both (congestion management). What follows is an overview of the available tools currently in use throughout the metropolitan Washington, D.C. region.

#### Transportation Demand Management

Managing demand on the highway system is authorized by Title 23 of the United States Code. Section 101(a)(18)(i) defines transportation demand management (TDM) as an operational improvement which can also include capital improvements for the installation of traffic surveillance and control equipment, motorist information systems, and other demand management facilities, strategies, and programs. TDM does not include resurfacing, restoring, or rehabilitating improvements, construction of additional lanes, interchanges, and grade separations, nor construction of new facilities on new locations.

TDM is most often provided in the form of employer-based incentives such as ridesharing and telecommuting (which reduce demand), and/or flexible work schedules (which shift demand to nonpeak times of the day). TDM can also be provided in the form of neighborhood-based incentives such as shuttle bus and neighborhood day-care/pre-school child care services which also reduce demand on the highway system. When these TDM strategies are organized into a plan, they can be quantified and value can be established. Therefore, when developers of major residential subdivisions submit a TDM plan which includes provisions for ensuring implementation, incentives in the form of trip generation credits have been provided in accordance with the County Design and Construction Standards Manual (DCSM). These credits are typically in the range of a 20% reduction in expected site-generated traffic. By assembling TDM plans from across the County, trends can be identified to further reduce demand such as either providing public shuttle buses or even regular bus service from major employer/neighborhood collection points to transit centers.

#### Transportation System Management

Managing the capacity, or supply, of the highway system is also authorized by Title 23 of the United States Code. Section 134(f)(1)(f) includes transportation system management (TSM) within the scope of the planning process undertaken by Metropolitan Planning Organizations (MPOs). In the Washington, D.C. region, the MPO is the Transportation Planning Board (TPB) of the Metropolitan Washington Council of Governments (MWCOG). Furthermore, Section 1135(c)(1)(f) includes TSM within the scope of statewide transportation planning, such as that conducted by the Virginia

Department of Transportation (VDOT). One of the primary mechanisms for implementing TSM strategies is a provision of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) which deals with Intelligent Transportation Systems (ITS). Under Section 5204(f), funding is available to support adequate consideration of TSM, including ITS, within metropolitan and statewide transportation planning processes. TSM activities are operational improvements and can include computerized signal systems, integrated traffic control systems, and incident management programs.

Although the preceding discusses TSM from the perspective of the MPO and VDOT, there is also a role for the County in maintaining the highway system. Major developers are required to mitigate the impacts of their projects on the highway system. These mitigation measures often include providing or upgrading traffic signals and installing left and right turn lanes. This is an implementation mechanism unavailable to either the MPO or VDOT, and as such, its proper coordination by the County can add to the region's ability to manage highway system capacity and improve the flow of traffic on the County's roadways.

### **Transportation Congestion Management**

Strategies and programs which address management of both the demand and the capacity of the highway system fall into the broad category of transportation congestion management (TCM). TCM plans using travel demand reduction and operational management strategies are required under Section 134(i)(3) of Title 23 USC for Transportation Management Areas (urban areas with populations over 200,000). Furthermore, for Transportation Management Areas classified as nonattainment for ozone or carbon monoxide pursuant to the Clean Air Act, Section 134(1)(1) restricts federal funding for any highway project that will result in a significant increase in carrying capacity for single-occupant vehicles unless the project is part of an approved congestion management system.

While the MPO is responsible for developing the TCM plan for the region, the County is a participant. By assembling major TDM and TSM plans from across the country into a single County-wide TCM plan, the Board of County Supervisors could provide better guidance to the MPO.



## APPENDIX D

### Highway Corridor Study Areas for Prince William County, 2003-2008

The attached map (Figure 2) shows the location of all highway corridor study areas currently proposed for the period 2003-2008. This information will be updated as necessary. The purpose of providing the map is to fully inform current and potential County residents and other interested citizens of the potential location of major new County and regional highways within Prince William County. The following projects (excluding the Western Transportation Corridor Study) will be shown on the map:

**RS-1) Route 234 Bypass (North)** - This roadway is a continuation of Route 234 Bypass from I-66 to Loudoun County. The north extension of the Route 234 Bypass is planned to relieve Route 15, Route 29, and existing Route 234. Its main function will be to service traffic between Prince William County and the Dulles Airport corridor in Loudoun County, and related areas in Fairfax County. However, further study should be performed in order to set an exact alignment that satisfies both Prince William County and Loudoun County. This VDOT study has been put on hold due to other studies examining the same alignment.

**RS-2) Tri-County Parkway/Route 411** - This new road will improve transportation mobility and capacity. It will serve Fairfax, Loudon and Prince William Counties hence the name Tri-County Parkway. It is planned as a limited access-type road with interchanges. It will provide substantial relief to Route 28 and I-66. The recommended right-of-way corresponds with existing right-of-way acquired for this road. Currently, this proposed route is the subject of a VDOT Location / Environmental Study, which will determine the number of lanes and grade separated interchanges, the alignment, and the environmental impacts. This VDOT study was initiated in the winter 2001/2002 and is scheduled for completion by Fall 2004.

**RS-3) I-66 Corridor Study** - The purpose of this VDOT/DRPT study is to examine possible multi-modal improvements to I-66. This study will include examining highway, HOV, Metrorail, Virginia Railway Express (VRE), and express/feeder bus service improvements in the corridor. Multi-modal transportation improvements to this corridor are necessary to enhance safety and to provide increased capacity for current and projected future travel demands. This study encompasses the Counties of Fairfax and Prince William, the City of Fairfax, and the Town of Vienna. This VDOT/DRPT study was initiated in the Fall 2001 and is scheduled for completion by Spring/Summer 2004.

**RS-4) Route 1 Location Study** – The purpose of this VDOT study is to examine the possible improvements and realignments of Route 1. Transportation improvements to Route 1 are necessary to enhance safety and provide increased capacity for current and projected future travel demands. The study also includes multi purpose trail, sidewalks and landscaping throughout the corridor. This plan will encourage economic development in the area through the beautification and widening (6 lanes with median)

of Route 1. This VDOT study was mandated by the Virginia General Assembly in 1998 and is scheduled to end in 2003.

**RS-5) NOVA Park & Ride Study** – The purpose of this VDOT study is to determine the demand for park and ride spaces in the HOV corridors and recommend feasible sites for construction of future commuter lots to meet the demand. The main tasks include inventory of existing park and ride lots, reviewing information regarding new lots being planned by WMATA, VRE and Counties in northern Virginia, estimate the future short, intermediate and long term demand, identify the future needs in terms of parking spaces, identify feasible sites to meet the demand and develop an implementation plan. This VDOT study is scheduled for completion in 2003.

**RS-6) NOVA Bike Study** - The purpose of this VDOT study is to develop a regional plan for a bicycle and trail network in Northern Virginia based on the existing jurisdictional plans, including Fairfax County, Loudoun County, Prince William County, Arlington County, and the cities of Alexandria, Falls Church and Fairfax. This regional network will include both on-road bicycle facilities such as paved shoulders and bike lanes, as well as off-road multiuse trails. The network plan will be developed primarily to serve the transportation needs of recreational/long-distance bicyclists and other trail users, with recreation and healthier lifestyles as ancillary benefits. This plan will connect the County's existing/planned bike trails with adjacent jurisdictions to provide a continuous regional bike network. This VDOT study is scheduled for completion in 2003.

**RS-7) Manassas National Battlefield Bypass Study** – The purpose of this study is to develop alternatives that allow for the closure of the portions of both Route 29 and 234, which currently transect the Manassas National Battlefield Park, and to provide alternatives for the traffic currently traveling through the Park. This study was mandated by the Manassas National Battlefield Amendments of 1988 (Federal Public Law 100-647) and is being conducted by the Federal Highway Administration (FHWA) and the National Park Service (NPS). This study was re-initiated in the Fall of 2001 and is scheduled for completion by Fall 2004.

**RS-8) Route 29 / I-66 Connector** – This is a proposed road that will connect Route 29 from the New Baltimore area in Fauquier County to I-66, west of the Town of Haymarket. The connector will relieve traffic congestion on Route 29 through the Gainesville Area and Manassas Battlefield. Currently, this is being studied under the preliminary alternatives of the Manassas National Battlefield Bypass Study.

**Western Transportation Corridor** (not shown on the map) – This VDOT study will evaluate the need for and effects (benefits, impacts, and costs) of transportation improvements in the western Washington, D.C. metropolitan region, which include portions of Fairfax, Fauquier, Loudoun, Prince William, and Stafford Counties. This corridor will help reduce congestion in the Northern Virginia region by improving access to the Washington Dulles International Airport corridor from the west and south, improving north-south linkages within the study area; as well as fostering economic growth within the region. This VDOT study was initiated in 2000 and was set for

completion in late 2003. VDOT is currently looking at further alignment/study area options, which will delay the completion of this study to an undetermined date.

**Figure 2 Highway Corridor Study Areas 2003-2008**

