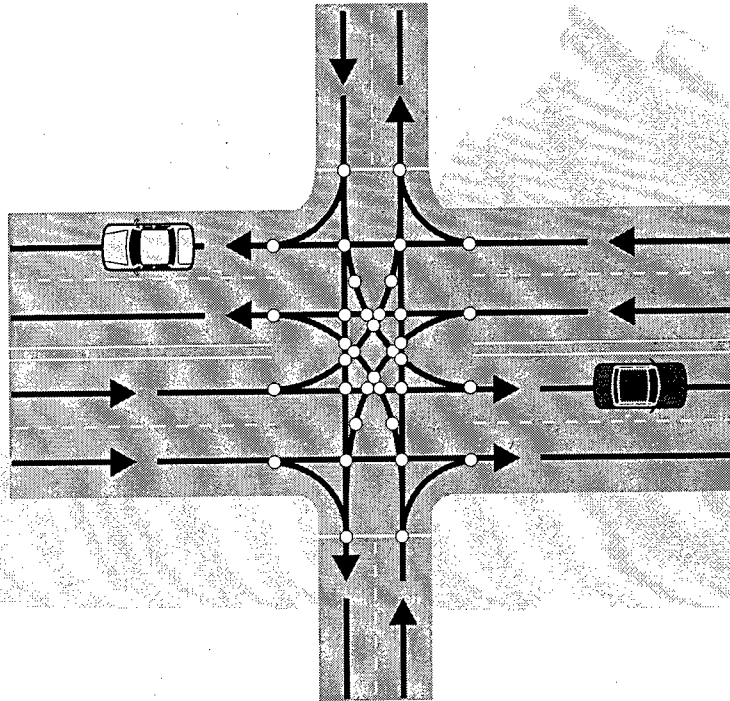


FINAL REPORT



PB99-123135

# ACCESS MANAGEMENT: TRANSPORTATION POLICY CONSIDERATIONS FOR A GROWING VIRGINIA



DONALD L. BOWMAN, P.E.  
Graduate Legal Assistant

C. COLIN RUSHING  
Graduate Legal Assistant

REPRODUCED BY: **NTIS**  
U.S. Department of Commerce  
National Technical Information Service  
Springfield, Virginia 22161



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VIRGINIA TRANSPORTATION RESEARCH COUNCIL





PB99-123135

**Standard Title Page - Report on State Project**

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| <b>Abstract</b><br><br>This report analyzes comprehensive highway access management programs and looks at the potential benefits and legal limits should Virginia adopt such a program to replace its rather limited site-specific permitting process. In 1942, Virginia passed legislation defining the right of private homeowners and commercial establishments to make connections to state highways. The statutes established a permit process for commercial and private entrances to state highways, administered by VDOT in accordance with the <i>Minimum Standards of Entrances to State Highways</i> . However, the <i>Minimum Standards</i> do not establish a comprehensive access management plan for Virginia's highway systems and have been criticized for being too permissive.<br><br>In 1980, Colorado became the first state to enact a comprehensive highway access management code, with strict safety and traffic criteria for private accesses to public highways. Since that time, Florida and New Jersey have also adopted comprehensive programs. However, Virginia's access management process continues to be a case-by-case permit review process.<br><br>This report considers the relative benefits of access management, analyzes the legal obstacles in Virginia for a comprehensive program, and discusses options Virginia might consider. The report also includes an analysis of Virginia's legal and regulatory framework within which an access management program would operate and two alternative models for access management regulation to assist policy makers in their decisions. |                              |                 |                                                         |                                              |



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(The opinions, findings, and conclusions expressed in this  
report are those of the authors and not necessarily those of  
the sponsoring agencies)

Virginia Transportation Research Council  
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## **VDOT ACCESS MANAGEMENT COMMITTEE**

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J. Lynwood Butner, Chair, State Traffic Engineer

James A. Cline, Maintenance Division

Steve D. Edwards, Traffic Engineering Division

Wayne S. Ferguson, Research Manager, Research Council

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Gerald A. Venable, Traffic Engineering Division

Eric A. Vogel, District Planner, Fredericksburg District





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## EXECUTIVE SUMMARY

Over the last 50 years, Virginia has experienced tremendous traffic growth and land development along its state highway system. In many areas, this growth has exceeded the system's capacity, even with the enormous federal and state investments to improve existing highways and construct new ones. As development along these highways has exploded, the conflict between traffic flow and adjoining access has intensified. As it becomes increasingly difficult to site and fund new highways and redevelop existing ones, Virginia must look to alternative solutions to preserve the functional capacity of its highway system and safely coordinate access points from private property onto its public highways. This report analyzes the concept of a comprehensive access management program such as those implemented by the Colorado, New Jersey, and Florida departments of transportation.

In 1980, Colorado became the first state to enact a comprehensive highway access management code that regulated direct access to its highways through a systemwide approach. Colorado's code was enacted after a series of federally sponsored demonstration projects showed substantial improvements in traffic flow and safety along access-managed portions of highways. The basic concept behind the comprehensive access management plan is to designate functional use categories for particular highway segments and then to develop access regulations and permitting programs that support and maintain the functional integrity of the segments. Florida and New Jersey followed similar methods in implementing their programs, with each abandoning site-by-site access permits in favor of a systemwide approach.

In contrast, Virginia's access management process, which began in 1946, is a site-by-site permit-based system for reviewing and approving individual permit requests. Virginia's system is based on 1940's legislation that defined the right of private homeowners and commercial establishments to make connections to state highways. While clearly establishing a landowner's right to access, the statutes established a permitting review process for those entrances. The permit process is administered by VDOT in accordance with its manual entitled *Minimum Standards of Entrances to State Highways*. The *Minimum Standards*, however, do not establish a comprehensive access management plan for Virginia's highway systems and often leaves VDOT with limited authority over access requests that comply with the manual. In addition, the manual provides no mechanism for addressing competing state and local interests for a given segment of highway. It has been criticized for being too focused on the right of access at the expense of efficient traffic movement.

This report discusses the fundamental concepts of access management and the basic elements of any such program. First, it presents the concept of conflict point analysis and its role in access management. Second, it describes the purpose and goal of highway access classification standards. Third, it provides an overview of highway design factors that support the classification structure, such as the spacing of access points, the geometric design of highways, and the geometric design of access points.

The report then discusses the benefits reportedly accruing from access management, including improved traffic flow, enhanced traffic safety, and preservation of traffic corridors. It then analyzes the legal limits on access management programs through a review of the

relationship between a state's "police powers" and access management techniques. It reviews specific Virginia case law addressing the management of traffic flow, the restriction of direct access, and the relationship between eminent domain and compensation.

In conclusion, the report develops and comments on access management options that Virginia might consider to address the rapid traffic growth that has occurred since the *Minimum Standards* concept was first developed.

An appendix contains a model access management code for consideration by Virginia transportation officials and policy makers.

## **FINAL REPORT**

### **ACCESS MANAGEMENT: TRANSPORTATION POLICY CONSIDERATIONS FOR A GROWING VIRGINIA**

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## **INTRODUCTION**

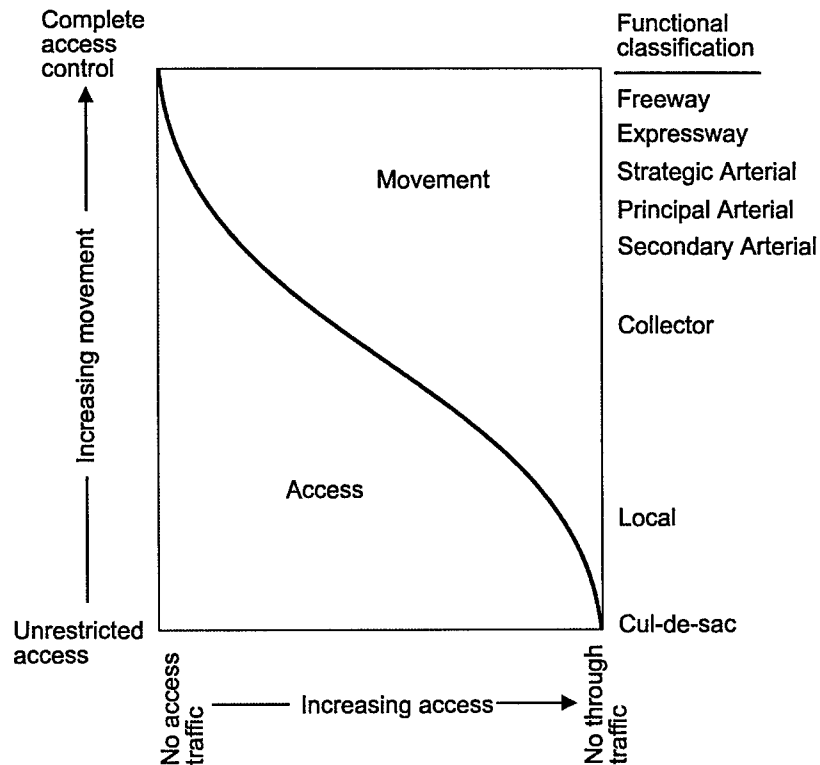
The Commonwealth Transportation Commissioner shall permit, at places where commercial establishment entrances are desired to intersect improved highways, suitable connection from such points . . . so as to provide for the uses of such entrances safe and convenient means of ingress and egress. *Code of Virginia*, Section 33.1-198.

The lack of adequate access management on the highway system and the proliferation of driveways and other access approaches is a major contributor to highway accidents and the greatest single factor behind the functional deterioration of highways in the state. As new access approaches are constructed and traffic signals erected, the speeds and capacity of the highway decrease, and congestion hazards to the traveling motorist increase. 2 *Code of Colorado Regulations*, Section 601-1.

As these two provisions concerning access to public highways demonstrate, there is tension between frequent and convenient highway access on the one hand and highway capacity and traffic safety on the other. Their relationship is depicted in Figure 1.

Virginia's current approach to managing highway access relies on site-specific access permitting as opposed to a comprehensive, systemwide program that analyzes all access points along a given highway. Some experts have argued that adopting a comprehensive highway access management program offers the potential for greatly improving highway utilization, thus reducing the need for new highway construction, urban bypasses, and traffic signal proliferation. They further argue that such a program can restore lost traffic capacity on major highways and reduce trip times on major corridors. Moreover, by limiting traffic conflict points, access management offers the opportunity to improve safety and reduce fatalities and injuries on state highways. However, implementation of an access management program raises serious issues about private property rights and potential decreases in property values.

This report provides an overview of the theory of access management, a description of Virginia's current access management process, an analysis of the current legal limits to managing access in Virginia, and a discussion of Virginia's access management options.



**Figure 1. Relationship between highway access and mobility. Source: Koepke and Levinson, Transportation Research Board, *Access Management Guidelines for Activity Centers* (Report No. 348, 1992).**

## PURPOSE AND SCOPE

In 1995, the Virginia Department of Transportation (VDOT) formed an access management committee to review Virginia's highway access criteria and make recommendations for improving access management in Virginia. This report, developed to support the committee's efforts, evaluates the technical, legal, and policy considerations involved in developing a comprehensive, systemwide highway access management program in Virginia. It is designed to accomplish five objectives:

- Provide an overview of the concept of access management.
- Identify the benefits of access management to a highway system.
- Set out Virginia's existing access management system.
- Evaluate VDOT's existing authority to regulate highway access and discuss potential private property compensation requirements under Virginia law.



- Present access management options for Virginia and provide model legislative language for enabling legislation and draft regulatory standards for an access code.

The report is intended to provide a framework for further evaluation of access management issues in Virginia. The Access Management Committee served as the intended audience for this report and the model legislative language.

## METHOD

Three tasks were performed to develop this report: (1) a literature review of legal, traffic, and safety material on highway access management was conducted; (2) a review of highway access management statutes and cases in Virginia and other states was conducted; and (3) the major pertinent findings of interest to Virginia's transportation engineers and policy makers were distilled.

## RESULTS AND DISCUSSION

### An Overview of Access Management

*Access management* refers to a planning process whereby the connection points to a highway are systematically managed to maintain the highway's capacity to handle traffic at a desired speed while preserving or enhancing traffic safety.<sup>1</sup> Access management uses traditional traffic control methods and mechanisms, combined with road classification, to achieve these goals.<sup>2</sup> Its premise is that a highway system will function best if all elements attached to or within that system are designed and integrated in a manner that optimizes the performance of the entire system.

In 1980, Colorado became the first state to implement a comprehensive access management program for its state-maintained highways. Access design standards were developed, tested, and evaluated along several segments of highways in Denver under a Federal Highway Administration (FHWA) demonstration project.<sup>3</sup> This program went beyond simple access permitting and looked at the functional goals and purpose of a given highway in the state system. Based on the success of demonstration projects that showed significant improvements in highway capacity and traffic safety, Colorado adopted an integrated access management plan for all state highways.

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<sup>1</sup> F. J. Koepke & H. S. Levinson, Transportation Research Board, *Access Management Guidelines for Activity Centers* 9 (Report No. 348, 1992).

<sup>2</sup> *Id.*

<sup>3</sup> P. B. Demosthenes, *Access Management Lessons From Fourteen Years in Colorado* (1994) (unpublished conference paper).

## Basic Access Management Techniques

Access management is accomplished through a combination of design and operation controls tailored to the needs and goals of a particular highway segment. Figures 2 through 7 illustrate five basic traffic control and regulation techniques currently used in every highway system to manage access.

First, the number of access points can be managed by regulating vehicle turning movements into and out of a property, such as limiting exits to right turn only, as illustrated in Figure 2.

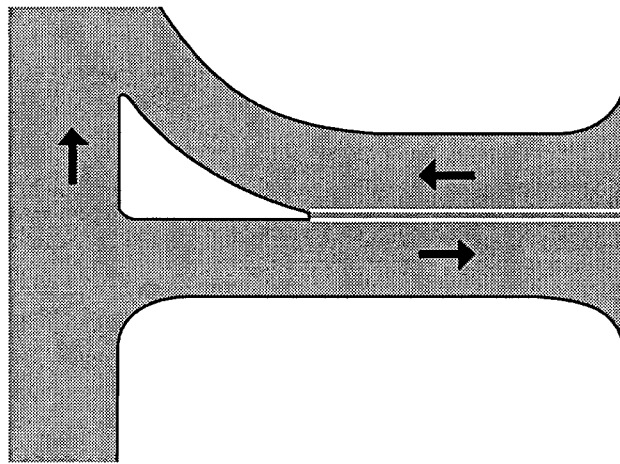


Figure 2. Right turn only access point

Second, traffic conflict points can be managed through the construction of medians to control crossover points and turning movements, as illustrated in Figure 3.

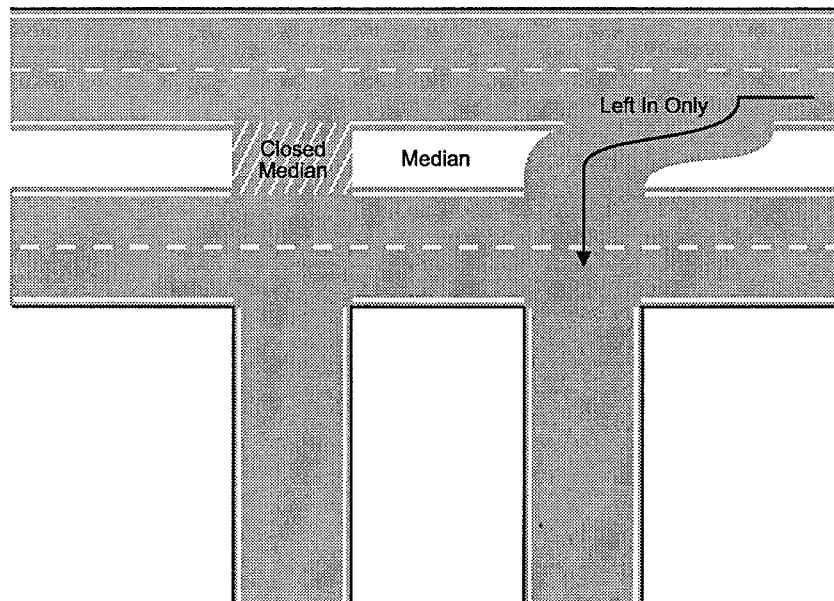
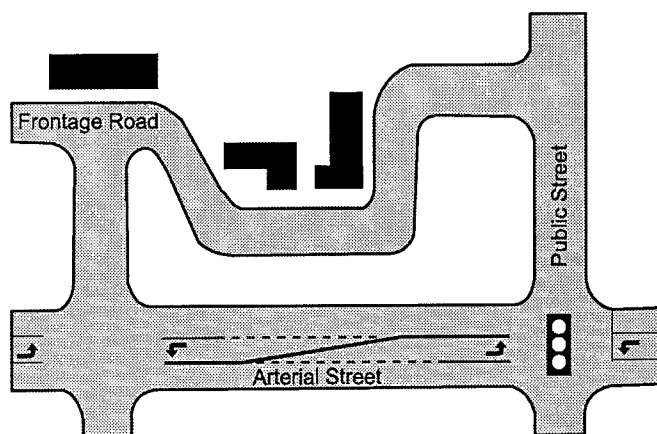


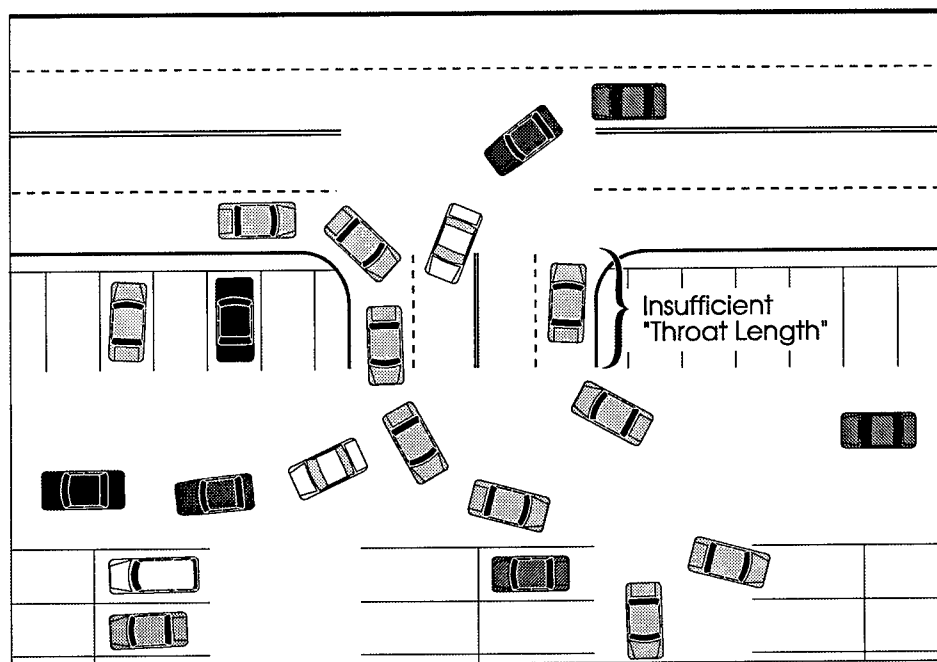
Figure 3. Median control techniques

Third, interference between through traffic and local traffic caused by turning into and out of access points can be managed by using frontage roads, as depicted in Figure 4.

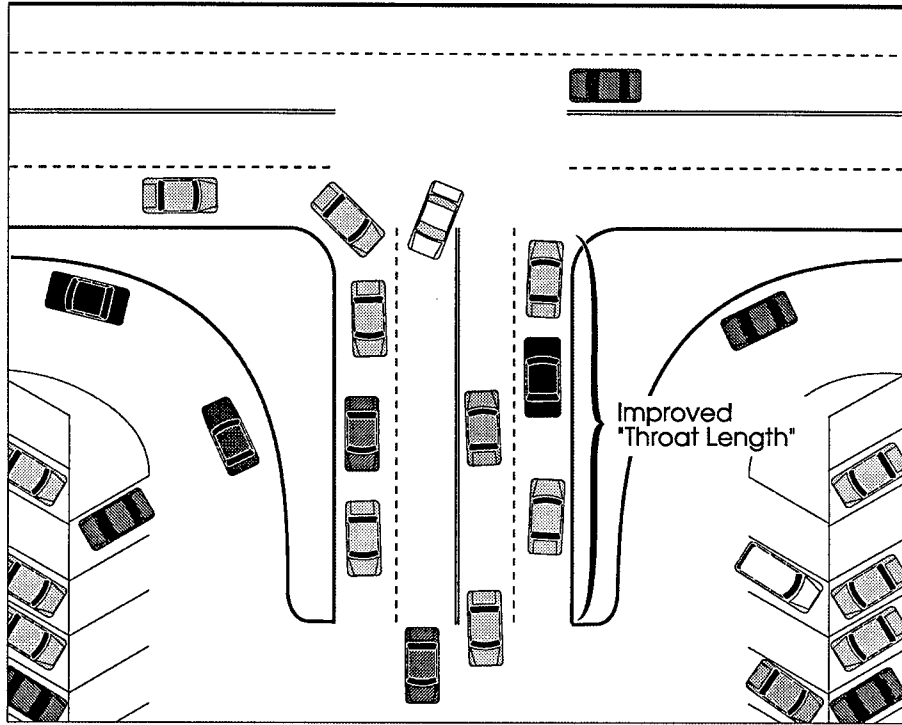


**Figure 4. Frontage road.** Source: Michigan Department of Transportation.

Fourth, on-site traffic areas can be managed through proper facility design so that vehicles are able to enter and exit private property safely. Figure 5 shows a commercial entrance that creates problems for vehicles entering and exiting, and Figure 6 illustrates how this entrance can be reconfigured to move traffic more smoothly onto and off of the main road.

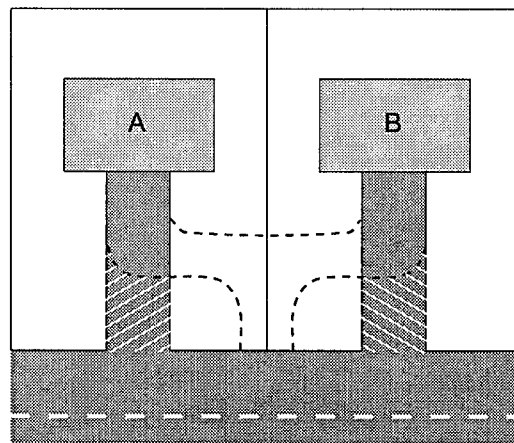


**Figure 5. Inadequate commercial facility site design.** Source: Florida Department of Transportation.



**Figure 6. Improved commercial facility site design**

Fifth, the total number of access points can be minimized through consolidating or sharing driveway entrances, as seen in Figure 7.



**Figure 7. Combined driveways**

These are just a few of the many techniques used to manage access onto public highways. For a more comprehensive review, see *Access Management Guidelines for Activity Centers*.<sup>4</sup>

<sup>4</sup> Koepke & Levinson, *supra* note 1.

## The Three Components of Access Management

There are many elements to an access management program, ranging from planning to enforcement. However, the access management plan itself has three basic components: conflict point analysis, highway classification, and highway design factors for access points. The integration of these three components establishes a systemwide comprehensive access management program.

### *Conflict Point Analysis*

Conflict points are those areas of the road in which the design of a highway permits drivers to choose between two or more speed and turning actions.<sup>5</sup> Conflict point analysis is the attempt to understand the basic traffic interaction between two highways or between an access point and a highway. Basic access management concepts focus on identifying conflict points and applying traffic control principles to eliminate or minimize the risk of the conflict, thereby reducing the number of decisions a driver must make.

For example, assume Car B is following behind Car A at the same speed in the right-hand lane on a multilane highway, without adequate deceleration lanes. If Car A decides to exit the highway into a commercial entrance, Car B must either slow down with Car A, change lanes, or collide with Car A. The point at which Car A forces the driver of Car B to make his or her decision represents a conflict point. No matter what choice the driver of Car B makes, his or her forced choice disrupts traffic flow. If Car B slows down, other traffic in that lane must slow; if it changes lanes, it potentially disrupts traffic flow in the new lane; and if Car B collides with Car A, all traffic will be altered as vehicles abandon the lane to avoid a crash.

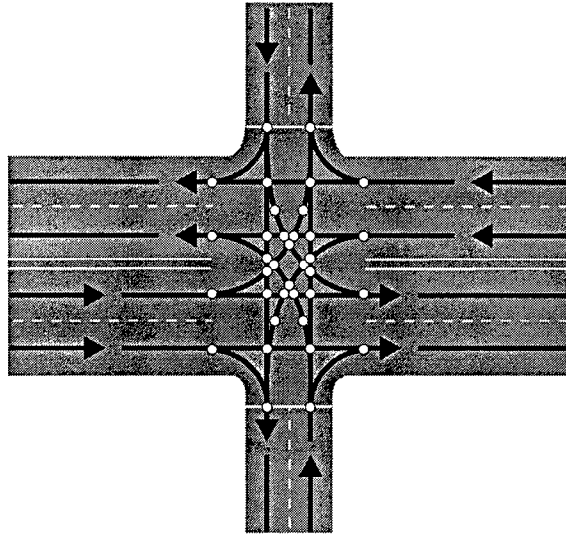
Figures 8 through 10 provide a basic introduction to the analysis of conflict points. As turning movements are restricted, the number of conflict points is reduced. For example, at a four-way, at-grade, full-movement intersection, there are 36 conflict points (see Figure 8).

If only right-in/right-out/left-in turning movements are allowed, the conflict points are reduced to 6, as depicted in Figure 9, but convenient access to the adjoining highway is reduced.

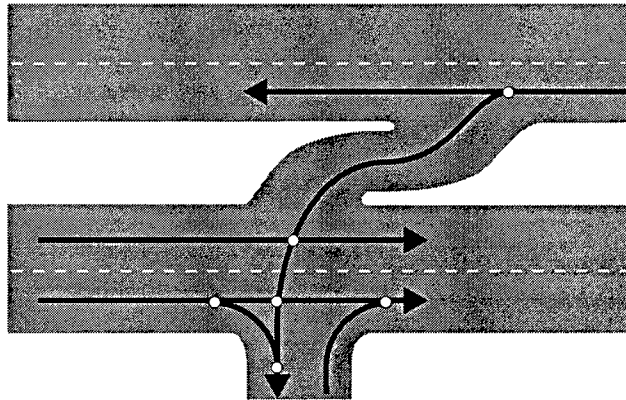
Finally, if turns are restricted to right-in/right-out (through a closed median), the conflict points are reduced to 2 and traffic on the dominant highway undergoes little disruption (see Figure 10).

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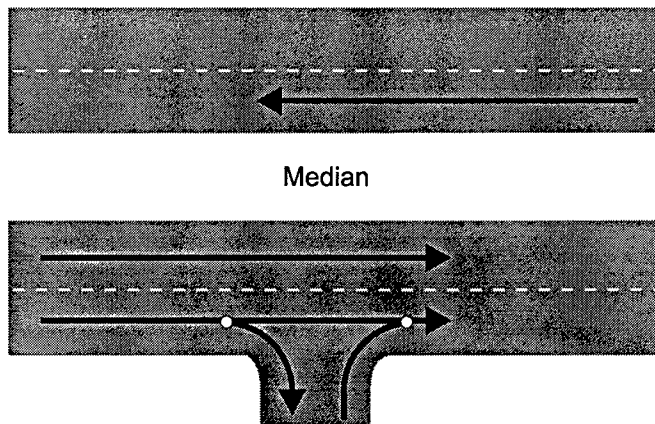
<sup>5</sup> Federal Highway Administration. *Access, Location and Design Participant Notebook*. Publication No. FHWA-HI-93-055, 4-1 (1993).



**Figure 8. Four-way intersection conflict points. Source: Michigan Department of Transportation.**



**Figure 9. Reducing conflict points through intersection modification. Source: Michigan Department of Transportation.**



**Figure 10. Reducing conflict points through median closure. Source: Michigan Department of Transportation.**

Since every access point along a corridor has the potential to disrupt traffic, access management seeks to balance the need for access with the desire for efficient traffic flow. Conflict points multiply with each additional access, and drivers must, in turn, respond to that conflict. A series of driveways spaced very close together could confront a driver with a rapid-fire number of conflict points. Such a combination of conflict points makes maneuvering through a heavily developed corridor a confusing and sometimes dangerous experience for drivers, cyclists, and pedestrians.

The severity of the conflict is also important to the analysis. The greater the difference in speed between two vehicles in conflict, the greater the potential conflict. For example, a car stopped in the through lane waiting to turn onto a side street becomes an obstruction for through traffic; if the prevailing traffic speed is 40 mph, then any collision could potentially be at 40 mph. Moreover, if oncoming traffic is heavy, the turning car remains a potential crash point for a greater time period while it waits for an opportunity to turn.

### *Highway Access Classification*

From the foundation of an individual conflict point analysis, access management proceeds to develop a systemwide approach to balance the competing needs of highway function and adjoining property access. Each roadway is assigned an access classification that relates through traffic movement to adjoining property access based on the roadway's intended function.<sup>6</sup> The classification standard defines where access can be allowed between proposed developments and public highways.<sup>7</sup>

Highway access classification is essential to preserve the functional capacity of a highway. The classification categories establish the big picture: Is a particular highway meant to be a moderately high-speed transportation corridor between two economic centers or is its role to provide transportation facilities for local traffic? A highway's access management classification ensures that its functional preservation remains a priority in future land planning and development decisions along a corridor as access permit requests are reviewed.<sup>8</sup>

Access classification should rank highways according to their "purpose, functional characteristics, and design features" to maximize their capacity and optimize the type of access control appropriate for the facility.<sup>9</sup> Koepke and Levinson stated that highway classification should be based on analysis of three factors: functional classification, design elements, and level of urbanization.<sup>10</sup> There are different approaches to the development of access categories, but

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<sup>6</sup> *Id.* at 50.

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> Kristine M. Williams & J. Richards Forester, *Land Development Regulations That Promote Access Management: A Synthesis of Highway Practice* 15 (NCHRP Synthesis 233, 1996).

<sup>10</sup> Koepke & Levinson, *supra* note 1 at 52.

the theory is the same for all. A good basis for understanding the concept is the five categories of highway access developed by FHWA<sup>11</sup>:

1. a freeway with access permitted at determined interchanges
2. a divided parkway or expressway with well-spaced intersections and usually frontage roads where necessary to limit direct access
3. a medium-to-high speed primary or other major arterial and includes most major two-lane and multilane roadways in rural and urban areas
4. a slower speed arterial or secondary highway in a developed area where the amount of existing adjacent development, existing cross streets and driveways would make it very difficult to impose the higher standards of category 3
5. major and minor collector streets and others not suitable for the higher control categories.

The distinction between each category is the type and amount of access permitted and its location interval. Category 1, for instance, allows access only at grade-separated interchanges, whereas category 3 allows direct access although “a strong effort [would] be made to direct all private access to local streets and roads rather than major highways.”<sup>12</sup> Categories 4 and 5 allow direct access from each piece of property, subject to only minimal regulation.

Each access classification category requires regulations defining highway function, the type of access permitted, the spacing between access points, and the volume of access. These standards are applied uniformly for the highway (or designated section), subject to change only through a detailed variance process.<sup>13</sup> In addition, regulations for changing the category of a highway must be developed.

So far, three states have adopted comprehensive access classification systems. Colorado created five functional classifications and then assigned a level of allowable access to each highway or highway segment.<sup>14</sup> Florida followed the same approach, but created seven categories instead of five.<sup>15</sup> Under both programs, all highways were assigned a functional classification that determined its access standards. New Jersey, however, reversed the process. It established seven allowable highway access levels, ranging from full control of access to basic

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<sup>11</sup> John W. Flora & Kenneth M. Keitt, *Federal Highway Administration Access Management for Streets and Highways* 20, 22 (1982).

<sup>12</sup> *Id.* at 22.

<sup>13</sup> The existing codes, however, establish a presumption that variances from the classification standards should be relatively rare.

<sup>14</sup> Colorado State Highway Access Code, 2 Colo. Code Regs. §601-1 (1985).

<sup>15</sup> Florida State Highway System Access Management Classification, Rules of the Department of Transportation, Chapter 14-9.



safety access limits. It then assigned the levels to the highway system based on road function and design features.<sup>16</sup>

### *Highway Design Factors in Access Management*

Although the highway access classification sets the goals and basic access regulations for a particular highway, design factors are used to ensure that each approved access point along a highway supports the access classification. The design factors cover the actual planning and development of access points to the highway. Once an access point is approved for a particular location, it must be constructed in accordance with placement and geometric design standards appropriate for the classification level of the highway.

Design factors can help eliminate or mitigate conflict points, separate conflict points, increase driver reaction time, and generally make traffic flow more predictable.<sup>17</sup> Access design factors fall into three basic categories: spacing requirements for driveways and intersections, geometric design of highways, and geometric design of driveway access points.

**Spacing of Access Points.** Access spacing is the most controversial of the design factors because it is the most likely to affect existing or future land use decisions. Access spacing must go beyond the simple measurement of distances between driveways. Garber and White described the optimum spacing analysis as follows:

The access spacing standards should pertain not only to driveways, but also to traffic signals, median openings, and interchanges. The guidelines established to meet the spacing criteria should address the following questions: What is the optimum spacing for signalized intersections? What should be the minimum spacing at unsignalized intersections? What should be the limit on the number of driveways per property? When should grade-separations be considered? These standards should be related to the particular access classification, operating environment, and possibly the operating speeds. They should be applicable to new developments and to significant changes in the size and use of existing developments. They should reduce the need for variances and exceptions, while simultaneously protecting traffic flow.<sup>18</sup>

For improving travel speed, the spacing and timing of signalized intersections are critical because there is an inverse relationship between travel speed on the one hand and signal cycle (i.e., how long it takes to shift from red to green) and the distance between signals on the other. If signalized intersections are 0.4 km (0.25 mi) apart, each with a cycle length of 90 seconds, travel speed is only about 32 km/h (20 mph); however, if the spacing is increased to 0.8 km (0.5 mi), travel speed doubles.<sup>19</sup>

Unsignalized intersections and driveways present a different set of spacing problems. Driveways introduce “side friction” to a highway, slowing down the adjacent lane (often the right

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<sup>16</sup> Koepke & Levinson, *supra* note 1 at 51.

<sup>17</sup> *Id.* at 48.

<sup>18</sup> Nicholas J. Garber & Timothy E. White, *Guidelines for Commercial Driveway Spacing on Urban and Suburban Arterial Roads 7* (Mid-Atl. Univs. Transp. Ctr. Report No. UVA/529978/CE95/102, 1995).

<sup>19</sup> Koepke & Levinson, *supra* note 1, at 57.

lane) and also discouraging through traffic from using that lane.<sup>20</sup> Every driveway creates just as many conflict points as an intersecting road and, thus, should be analyzed as such.<sup>21</sup> However, since different types of developments will produce different traffic impacts, it is difficult to establish meaningful uniform standards.<sup>22</sup> A shopping center or fast food restaurant will have different access requirements and generate more traffic than a similar sized non-retail complex.

To address this problem, Koepke and Levinson developed a set of spacing guidelines based on “speed, access level, and size of generator (or access center).”<sup>23</sup> Different state highway departments have taken different approaches to this problem. Colorado established its spacing standards based on the speed of traffic and the “AASHTO safe stopping sight distances.”<sup>24</sup> New Jersey used spacing distances designed to “minimize right turn overlap.”<sup>25</sup> Florida used operating speed and access level to determine spacing requirements, and Illinois, North Carolina, and Oregon based their standards on the amount of traffic generated by a property seeking access.<sup>26</sup> Virginia uses minimum standards based on a combination of operating speed and driver sight distance.<sup>27</sup>

Other access management tools associated with the spacing elements include requiring adjoining properties to share an access point, routing access to a particular highway by way of collector or service roads, and in some cases actually denying access altogether.<sup>28</sup> Spacing standards can also be applied to median breaks and alternating access points on opposite sides of the road.

**Geometric Design of Highways.** The proper geometric design of highways can be a powerful access management tool. Proper geometric features can remove turning traffic from the through lanes, narrow traffic speed differentials, increase driver certainty and predictability, and generally keep traffic flowing at its intended pace. Some basic highway design factors include separate turning lanes, restricted medians, and deceleration and acceleration lanes.

For example, one of the biggest problems for through traffic is negotiating around cars trying to turn left into a driveway or side street. Several geometric highway design factors can mitigate this problem. First, isolated left-turn lanes protected by medians provide a safe storage place for vehicles that are turning without disrupting through traffic. Second, a two-way center turn lane provides a storage outlet for cars wishing to turn left along a highway, although they have a drawback in that they create the new problem of cars occupying the same space but traveling in opposite directions. Finally, if traffic crossing becomes a safety hazard, full medians can be constructed with median breaks (crossovers) in only safe locations or the turning

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<sup>20</sup> *Id.* at 62.

<sup>21</sup> *Id.* at 58.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.* at 59.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> Traffic Engineering Division, Virginia Department of Transportation. *Minimum Standards of Entrances to State Highways* (1997).

<sup>28</sup> Flora & Keitt, *supra* note 11 at 49.

movement can be signalized.<sup>29</sup> Likewise, right-turning traffic can also be controlled. Right-turn lanes, protected and unprotected, can provide quick and easy exit from the flow of traffic for those cars wishing to turn right. In addition, moving turning traffic onto frontage roads can provide right-turn access without interfering with through traffic.<sup>30</sup>

**Geometric Design of Driveways.** Driveway design is the final major component of highway design factors. A poorly designed driveway can make it difficult for drivers to exit the highway into the parking lot or vice versa. An access management program should provide regulations on the construction of new driveways, the modification of existing access, and the closure or denial of access if necessary for safety or operational reasons.<sup>31</sup> There are two basic types of geometric driveway design factors: location standards and design standards.

Location issues (aside from the spacing question discussed previously) are primarily focused on sight and stopping distance for cars traveling on the highway, either to see vehicles exiting the driveway or to afford drivers time to slow down to move into the driveway. There also might be location restrictions based on the concentration of conflict points in a given area. For example, placing an access entrance across a taper lane might be barred because it creates several new conflict points near an existing set of conflict points.<sup>32</sup>

The design characteristics of width (the distance between the two curbs or pavement edgelines) and radius (dictating how tight a turn is needed to go into a driveway) are a function of both traffic volume and the “need to provide for rapid movement of vehicles off of major thoroughfares.”<sup>33</sup> Design must achieve a balance; the neck of a driveway should be wide enough with a radius sufficiently spacious so that traffic can move easily off of the road and into the entrance but not so wide that cars can move into the entrance at speeds inappropriate for a driveway.<sup>34</sup>

Beyond design, other methods can control traffic behavior at driveways. First, highway medians can be constructed to restrict left-turn movements into or from a given access point. Second, channeling islands outside the driveway can also restrict certain turning maneuvers into or out of the entrance. Finally, signalizing intersections can reduce the number of conflict points at a four-way intersection and regulate flow through an intersection. All of these techniques reduce the number of conflict points at any given intersection and, therefore, reduce the number of potential accidents and the number of times that vehicles must slow down.<sup>35</sup>

Medians and channeling islands can be constructed inside driveways to control conflict points and keep traffic moving properly. A channeling island separating the right-turn lane from the straight and left turns out of a driveway can reduce lane encroachment. Channeling islands can be installed in driveways that eliminate left-turn ingress or egress or both. Deceleration and

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<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at 15.

<sup>32</sup> Williams & Forester, *supra* note 89 at 15.

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> Flora & Keitt, *supra* note 11 at 49.

acceleration lanes with channeling medians can be installed at the driveway to enhance the traffic movement.

Another significant component of driveway design is the traffic circulation and storage on the site itself. Parking lots should be designed to avoid backup both leaving and entering the parking lot, thus improving traffic flow on the major road while simultaneously improving it within the facility itself. Design has a significant impact because the ability to move vehicles off the highway and into a parking lot is strongly related to the movement of traffic within the parking lot.<sup>36</sup>

### **Benefits of Access Management**

Access management offers several potential benefits for a highway system. It can reduce the sense of traffic congestion the typical driver experiences. By maximizing a highway's capacity, it can delay the requirement for new highway construction. By balancing travel speed with access, it can reduce or maintain travel time between two points. By reducing traffic disruption, it can help reduce air pollution and fuel consumption. The main benefits of access management, however, are improved traffic flow, enhanced highway safety, and preserved traffic corridors.<sup>37</sup>

### **Improved Traffic Flow**

Highways encourage a certain amount of economic and land development; highway construction, therefore, is part of a self-perpetuating cycle. Planners design roads to handle a certain amount of business activity; road construction stimulates business and development activity, and demand for the road soon increases. Eventually, demand for the road exceeds the road's capacity and traffic flow diminishes until the road is upgraded or traffic is diverted. Wider roads and increased capacity, in turn, generate increased development and, therefore, increased demand for the road.<sup>38</sup> As noted by Stover and Koepke:

The improved accessibility provided by extensive arterial street improvements stimulates increased development which in turn results in increased traffic volumes and property values. Unless access management and design are carefully addressed, the level of service will be seriously degraded. The result will be a decrease in market area and a decrease in property value.<sup>39</sup>

Access management seeks to manage the effect of private access on the flow of traffic, preserving a highway's capacity and delaying or eliminating demand for major upgrades or new construction. Well-designed access regulation can even increase a highway's speed and capacity.<sup>40</sup> With better managed access, there are fewer conflicts between traffic moving through

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<sup>36</sup> *Id.*

<sup>37</sup> Koepke and Levinson *supra* note 1 at 11.

<sup>38</sup> *Id.*

<sup>39</sup> Vergil G. Stover & Frank J. Koepke, *Transportation and Land Development* 4 (1988).

<sup>40</sup> See Freddie Vargas & G. Vivek Reddy, *Does Access Management Improve Traffic Flow? Can NETSIM be Used to Evaluate?* In 1996 National Conference on Access Management Proceedings 433, 442 (1996).

the corridor and traffic seeking to stop at points along the corridor. The actual volume and speed of the traffic can then move closer to the intended capacity of the road. A typical four-lane arterial road with a high level of access management can handle almost 10,000 more vehicles per day than the same road without access controls.<sup>41</sup>

Private property owners may initially oppose access management, fearing that access could be regulated out of existence by an overzealous department of transportation. Restrictions on access generally place local interests for frequent and convenient access against a regional interest in faster and less congested travel. On the one hand, more restricted access might frustrate and discourage customers from using a particular commercial establishment. On the other hand, improved traffic flow could have beneficial effects on commercial activity. An individual's willingness to travel to a particular shopping center depends on the amount of time required to reach it. The actual distance is less important than convenience and travel time.<sup>42</sup> Therefore, the faster a particular highway can carry traffic to a given business district, the larger the potential market area or customer base. Conversely, the more congested a highway becomes, the more travel time increases and market area decreases. One study showed that a 10 percent reduction in traffic speed would result in a 19 percent reduction in market area; a 50 percent reduction in speed reduces the market area to 25 percent of its optimal size.<sup>43</sup> In addition, because access management is not a static improvement but rather a tool that seeks to maintain a highway's capacity, the market area could remain close to the same size, even as the population of the market area increases.

Improved traffic flow does more than expand market area: it can also diminish business operating costs. Companies that depend on daily or weekly deliveries would benefit from improved traffic flow, because a faster moving highway would reduce the cost of time and fuel needed to make a delivery, thus reducing delivery costs. Moreover, employee travel would be faster and more predictable along access-managed highways, thus reducing cost and time associated with such travel.

## **Enhanced Highway Safety**

The correlation between direct private access and the crash rate is so strong that a federal report declared: "One thing is clear, the most important geometric design element in reducing accidents is access control."<sup>44</sup> A comprehensive access management plan that combines access decisions based on a highway's intended function with safety-based geometric design standards can greatly reduce the number of access-related crashes. It can do so without drastic reductions in traffic speed by minimizing "the variety and spacing of events to which the driver must respond."<sup>45</sup> For example, on heavily traveled corridors, access management ensures that

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<sup>41</sup> See Transportation Research Board, *Highway Capacity Manual* (1985).

<sup>42</sup> Williams & Forester, *supra* note 9 at 3.

<sup>43</sup> *Id.*

<sup>44</sup> Julie Anna Cirillo, Federal Highway Administration. *Safety Effectiveness Highway Design Features Vol. 1: Access Control* 6 (1992).

<sup>45</sup> *Id.* at 2.

intersections are safely spaced and driveways are properly designed, thus reducing the risk of crashes from turning or decelerating vehicles.

In 1995, there were 127,126 reported motor vehicle crashes in Virginia, resulting in 82,400 injuries and 900 deaths.<sup>46</sup> Many of these crashes were access related: 10.3 percent of all Virginia crashes involved yielding improperly, 11.2 percent involved left-turning movements, and 1.8 percent involved improper turns.<sup>47</sup> Studies in other states and at the national level have shown that many accidents are access related. A study in Colorado found that the crash rate on uncontrolled arterials was 2 times that on roads with “intensive use of access management” and that “access-managed routes experience 50 to 65 percent fewer accidents.”<sup>48</sup> In Minnesota, sections of two-lane highways with “one or more” commercial driveways had double the crash rate of sections with only residential driveways.<sup>49</sup>

The cost of access-related crashes is enormous. Colorado estimates the annual cost to be \$900 million, or 57 percent of all crash costs, not counting upstream rear-end crashes caused by access problems.<sup>50</sup> For 1995, Virginia’s total annual cost of all crashes, including hospital costs and property damage, was \$3.216 *billion*.<sup>51</sup> Even if Virginia managed to reduce crash costs by only 5 percent through a more comprehensive access management program, Virginia residents could realize hundreds of millions of dollars in savings.

The effect of individual access management tools illustrates the significant impact access management can have on crash rates with minimal impact to private property. Studies have shown that controlling driveway width can result in annual crash reductions of 40 percent of driveway crashes; developing alternating left-turn lanes can reduce total crashes 28 percent, and providing left-turn deceleration lanes can reduce crashes by up to 50 percent.<sup>52</sup>

Moreover, Virginia’s experience with limited access highways partially demonstrates the relationship between access and accident rates. Although interstates are designed to different standards than U.S. primary routes, a comparison of crash rates is useful to demonstrate the potential crash reductions that access controls can provide. In Virginia, U.S. Rte. 250 outside of Richmond between Short Pump and Glenside, which is not access controlled, was the site of 435 crashes in 1 year. However, I-64, which carries more than 19 million more vehicles annually than U.S. Rte. 250 and is access controlled, was the site of 60 crashes—less than one-seventh the crash rate of the less-traveled, non-access-controlled highway.<sup>53</sup>

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<sup>46</sup> Virginia Department of Motor Vehicles, *Virginia Traffic Crash Facts* 1 (1995).

<sup>47</sup> *Id.* at 17-18.

<sup>48</sup> Demosthenes, *supra* note 3 at 2.

<sup>49</sup> Cirillo, *supra* note 44 at 6.

<sup>50</sup> Williams & Forester, *supra* note 9 at 3.

<sup>51</sup> *Virginia Traffic Crash Facts*, *supra* note 46 at 1.

<sup>52</sup> Flora & Keitt, *supra* note 11 at 12.

<sup>53</sup> E. D. Arnold, Jr., *Why Build Limited Access Highways?* 3 (Virginia Transportation Research Council Report No. 91-TA2, 1991).

## Preserved Traffic Corridors

An access management program can help balance the competing interests of local commercial development along major arterials and regional interests for highway capacity and traffic safety. Business development and highway improvements often follow much different paths, with one lagging behind the other. With transportation system improvements there are often delays in funding and disputes over location and environmental impacts. Twenty years is not an uncommon time frame for widening or rerouting a highway. As such, highways are in a constant state of being either under- or overutilized. Only briefly does the traffic demand for a highway match its capacity.<sup>54</sup>

Without access management, the only means of reducing congestion other than massive restrictions on development or the elimination of access points is to undertake road widening or highway relocation projects. Either alternative is extremely costly, difficult to plan, and the source of tremendous irritation for the businesses and residents whose property the state condemns for the new road or the wider right of way.

Relative to the cost of reconstructing or relocating existing routes, access management has the potential to reduce highway construction costs significantly and/or extend facility life. Although access management programs do have costs associated with land condemnation or construction of medians or frontage roads, they are significantly cheaper than the alternative. Even with generous compensation to affected landowners for restricting or eliminating access, it is still less expensive to manage access than to build new highways.

For example, Rte. 1 in Fairfax and Prince William counties is heavily congested and will be widened over the next several decades (from four lanes to six, along with new sidewalks and a median). The cost for the project is estimated at \$500 million, with the required destruction or relocation of more than 150 businesses.<sup>55</sup> If an access management plan for this road had been in place while the surrounding area was developing, the traffic-carrying capacity of the corridor might have been preserved, making the current project either unnecessary or less costly. An access management plan also might have preserved the corridor's economic vitality.<sup>56</sup>

To be effective, land development and access management must be closely coordinated.<sup>57</sup> Access management can preserve the appearance and functionality of a corridor by reducing the spread of urban sprawl and strip development, just as zoning and other land use controls can support or detract from a corridor's access management goal.<sup>58</sup> If access to the highways is reduced through strict limits on the number of access points, businesses cannot spring up along the highway one after the other. They must develop laterally away from the highway or share access points. In the long run, commercial facilities will have to adapt by developing better and deeper means of internal circulation on their property.<sup>59</sup>

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<sup>54</sup> Koepke & Levinson, *supra* note 1 at 11.

<sup>55</sup> Michael D. Shear, *Route 1 Restoration at a Price*, Washington Post, June 15, 1997 at B1.

<sup>56</sup> *Id.*

<sup>57</sup> Koepke & Levinson, *supra* note 1 at 1.

<sup>58</sup> *Id.* at 10.

<sup>59</sup> Garber & White, *supra* note 18 at 64.

## Environmental Benefits

The Clean Air Act Amendments of 1990 and ISTEA (now replaced by TEA-21) place emphasis on “developing new techniques to use the existing infrastructure in the most efficient manner to relieve congestion and reduce accidents.”<sup>60</sup> A consequence of the efficient use goal is that at some point access management must limit or even eliminate access currently available to private businesses and residences. However, reducing congestion would also have environmental benefits.

## Regulating Access vs. Property Rights

Regulating access to a public highway is a somewhat complicated legal matter and often turns on how a court views the regulation. The basic inquiry that courts use to analyze access-related property issues becomes: Is the regulation a valid exercise of the state’s police powers or is the regulation a taking of a private property right that requires compensation? It is often the characterization of the act that determines its legality, as captured in the following passage:

[I]t should be noted that the [inquiry] . . . falls between two well-recognized rules in the law of eminent domain: (1) the right of access belonging to the landowner whose property abuts upon a street or highway may not be *taken* by governmental authorities without payment of just compensation, and (2) such right of access, however, may be *regulated* under the police power for the public safety or welfare, and such regulation is not compensable.<sup>61</sup>

## Police Power

A state’s police power allows it to regulate public activities for the health, safety, and welfare of the community as a whole. It is the same authority that allows a state to regulate the speed limit for a highway segment, the driving age, and the requirement for automobile insurance. However, a property owner also has a set of specific rights to the use of his or her property, often metaphorically referred to as a “bundle of sticks.” This phrase encompasses a broad range of individual property rights, including an owner’s right to exclude others, the right to transfer the property, and the right to the property’s use and enjoyment. In Virginia, there is also an express statutory right to have safe and reasonable access to public highways.<sup>62</sup> However, this access right is subject to the valid exercise of the state’s police power that includes the authority to set conditions on, or in proper cases restrict, access to public highways. In general, when the state’s action is properly characterized as an exercise of the police power, the property owner is not entitled to compensation. The judicial opinions reason that as long as the property owner retains a substantial amount of his original bundle of sticks there is no requirement for compensation under either the Fifth Amendment to the U.S. Constitution or Article 1, Section 11, of Virginia’s constitution.

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<sup>60</sup> Garber & White, *supra* note 18 at 1.

<sup>61</sup> Roland F. Chase, *Abutting Owner’s Right to Damages for Limitation of Access Caused by Conversion of Conventional Road into Limited Access Highway* 42 ALR 3d 13, 21 (1972).

<sup>62</sup> Va. Code Ann. §33.1-197 and §33.1-198 (Michie 1996).



## Eminent Domain

A somewhat contrasting legal doctrine to police power is the doctrine of eminent domain, which requires just compensation when property rights are taken from a landowner by the government.<sup>63</sup> Eminent domain grants a state the legal right to take private property provided it is for a public purpose and the landowner is compensated. This doctrine allows a state to plan development of highways and public utilities across private property without concern for holdouts and strategic bargainers. Without this power, a single property owner could halt the project by refusing to sell or by only agreeing to sell at a greatly inflated price.

Eminent domain is particularly important for the construction and expansion of roads. VDOT can condemn land to build or improve a highway as long as the owner is paid the fair market value of the land taken for the project.<sup>64</sup> However, if VDOT restricts access to a highway, it is not always clear whether compensation is required. Access of adjoining property to a highway is a statutory right in Virginia, so in general when VDOT takes away the right of access of a property to the highway it must compensate the landowner. If the restriction falls under the umbrella of a state's police power, however, no compensation is due.<sup>65</sup>

## Virginia's Existing Access Authority

Before looking at VDOT's rights and limits under the doctrine of police powers, it is first helpful to look at VDOT's existing regulatory authority. In 1946, Virginia passed legislation giving the owners of private homes and commercial establishments the right to make connections to state highways at places where entrances were desired.<sup>66</sup> However, this connection right was conditioned upon the landowner first obtaining a permit from VDOT.<sup>67</sup> The permit was required to ensure that the entrance provided a safe, convenient means of ingress and egress from private property onto public highways.

Virginia's highway entrance requirements are established and regulated through the *Minimum Standards of Entrances to State Highways*, which VDOT develops and administers. This program involves site-by-site reviews of requested entrance permits by VDOT's local resident engineer for basic safety issues such as vehicle stopping and driver sight distances. For major access points, more detailed permitting requirements are set out in VDOT's *Land Development Manual*. The *Minimum Standards* set out a basic site-by-site review approach, subject to the underlying requirement of safe ingress and egress. They do not take into account the collective impact of multiple access points on a roadway's function.

The preface to Virginia's *Minimum Standards of Entrances to State Highways* appears to capture much of the concept of comprehensive access management:

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<sup>63</sup> U.S. Const. amend. V.

<sup>64</sup> Va. Code Ann. §33.1-89 (Michie 1996).

<sup>65</sup> Va. Code Ann. §33.1-197 and 33.1-198 (Michie 1996).

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

The primary purpose of Virginia's highway system is to provide for the safe and efficient movement of people and goods. As an aid in achieving this objective, certain uniform regulations are set forth in the manual for the purpose of controlling the use of highway rights-of-way where it is necessary to provide access to commercial, private and industrial properties abutting state roads.<sup>68</sup>

The *Minimum Standards* are coupled with Section 33.1-12(3) of the *Code of Virginia*, which grants the commissioner power to “make rules and regulations . . . for the protection of and covering traffic on and the use of systems of state highways.” This is the police power, which allows the Commonwealth Transportation Board to bar left turns, close medians, require left-turn lanes, and otherwise control the flow of traffic. This current authority, even if it grants most of the tools of access management, does not go as far as establishing a highway access classification or permitted access levels.

Access management techniques are difficult to analyze because different access management tools limit access to differing degrees. Regulating traffic flow by installing a no left turn sign at a break in a median is an example of the valid exercise of VDOT's police power, whereas the elimination of a property's access to any public highway is a clear example of a taking. However, a decision to deny access to a highway except by way of a long frontage or service road might be considered either an exercise of the police power or a taking depending on the specific facts. Both means restrict the right of ingress and egress from the property, although in different ways, yet one is definitely not compensable whereas the other may or may not be. Koepke and Levinson, commenting on access takings jurisprudence across the country, noted that “generally, uncompensated abridgement of access rights hinges on the legal question of reasonable alternative access.”<sup>69</sup> The distinction among jurisdictions focuses on how each jurisdiction interprets the meaning of “reasonable access.”

This is true of the line between takings and exercise of the police power in Virginia as well. The General Assembly vested the Commonwealth Transportation Commissioner with the power of eminent domain, but the Commissioner may not exercise the power for unnecessary or private purposes.<sup>70</sup> The determination of need, however, is generally left to “the public official or body charged with the duty of determining the location of a public road, . . . and a hearing thereon is not essential to due process under the Federal and State Constitutions.”<sup>71</sup> The eminent domain power vested in the commissioner is quite broad and not subject to extensive review, except for the question of just compensation. The following section analyzes VDOT's authority in three broad areas: managing the flow of traffic, limiting or restricting access to highways, and eliminating direct access from private property.

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<sup>68</sup> *Minimum Standards of Entrances to State Highways*, *supra* note 27 at ii.

<sup>69</sup> Koepke & Levinson, *supra* note 1 at 35.

<sup>70</sup> Va. Code Ann. §33.1-89 (Michie 1996).

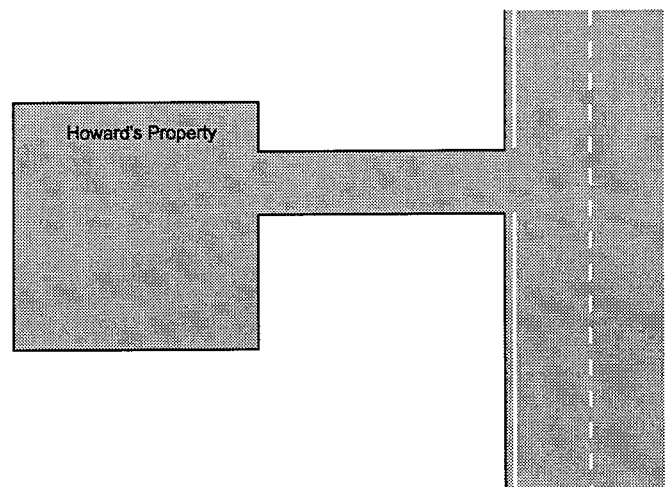
<sup>71</sup> *Stewart v. Fugate*, 187 S.E.2d 156, 159 (Va. 1972).

## *Managing the Flow of Traffic*

Regulation of the flow of traffic over public roads is a matter of a state's police power. Private property owners cannot assert a property interest in the flow of traffic past their property and, therefore, cannot assert a takings claim when VDOT alters traffic patterns, even if such alteration has a material effect on the property owner's business or access. Property owners bear the risk of the adverse effects of VDOT's use of its police powers.

The issue of VDOT's authority to regulate traffic flow was addressed in *State Highway Commissioner v. Howard*, which held that VDOT may regulate the flow of traffic without compensating those with property abutting the regulated road.<sup>72</sup> The Virginia Supreme Court held that private property abutters have "no right in the continuance or maintenance of the flow of traffic past [their] property" and, therefore, any restriction of that flow is not a taking requiring compensation.

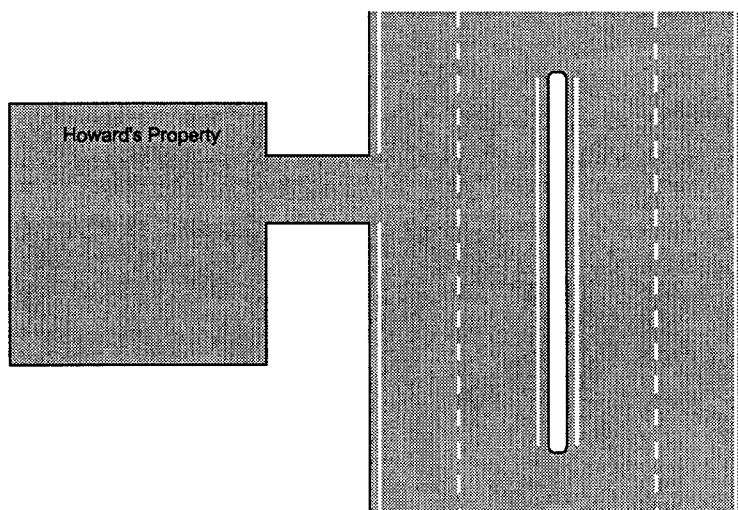
VDOT had condemned a portion of Howard's land to widen the highway against which his property abutted. Figure 11 depicts Howard's access before the widening project. In conjunction with the widening project, VDOT constructed a median that barred Howard from making left turns out of his property onto the northbound lanes and likewise barred entrance into his property from the northbound lanes. To travel north, Howard first had to enter the southbound lanes and then turn around at a break in the median further south. To enter his property from the northbound lanes, he had to pass his property, then turn at a median break further north and double back on the southbound lane.<sup>73</sup> Figure 12 shows how Howard's access was restricted by the new median.



**Figure 11. Howard's driveway before road widening**

<sup>72</sup> *State Highway Comm'r of Va. v. Howard*, 195 S.E.2d 880, 881 (Va. 1973). This is standard in most states: "In the great majority of the cases, the courts have ruled that the owner was not entitled to recover damages for limitation of access caused by a traffic regulation." 15 ALR 5th 821, 834 (1993).

<sup>73</sup> *Id.*



**Figure 12. Howard's driveway after widening**

The Virginia Supreme Court held that “circuitry of access” was not admissible in his condemnation hearing, because such circuitry was “an incidental result of a lawful act,” and “not the taking or damaging of a property right.”<sup>74</sup> The court further held that an abutting property owner “has no remedy if such dividing strip is reasonably adapted to benefit the traveling public.”<sup>75</sup> The only limitation on the Commonwealth’s power in implementing such regulations is that the state may not abuse the police power by “act[ing] unreasonably, fraudulently, or capriciously” and in challenging VDOT on these grounds the property owner has the burden of showing such abuse.<sup>76</sup>

Similarly, the Virginia Supreme Court has upheld VDOT’s authority to restrict traffic movements by sign. In *Davis v. Marr*, the property owner, Marr, sold a strip of land to VDOT to widen the highway in front of his property.<sup>77</sup> The contract of sale (but not the deed) included the stipulation that there would be a break in the median “approximately opposite the center of [Marr’s] Restaurant.”<sup>78</sup> However, in 1957, the State Highway Commission erected “No Left Turn” signs at the median break. Marr sued seeking to force VDOT to remove the signs.<sup>79</sup>

The case was decided on a combination of jurisdictional and contractual grounds (the deed is typically considered the final manifestation of the parties’ agreement to the extent that it is in conflict with the contract).<sup>80</sup> The Virginia Supreme Court ruled that the crossover, when initially constructed, was “subject to the regulations of the Highway Commission made pursuant to law,” and that the contract right Marr was attempting to enforce was “a right [the

<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> *Id.*

<sup>77</sup> *Davis v. Marr*, 106 S.E.2d 722, 723 (Va. 1959).

<sup>78</sup> *Id.*

<sup>79</sup> *Id.* at 724.

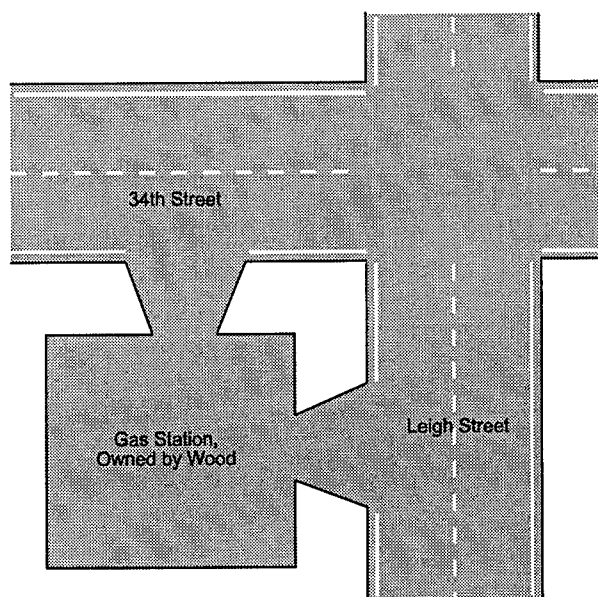
<sup>80</sup> *Id.* at 728.

commission's agent] had no power or authority to grant.”<sup>81</sup> Marr, in selling the land to VDOT, thought he had received permanent access to the median crossover; however, the court held that regulation of traffic across all medians is squarely within VDOT's authority under its police powers.

### *Limiting/Restricting Direct Access*

A more difficult issue is when VDOT seeks to restrict or limit access from private property onto a public highway. The Virginia Supreme Court held in *Wood v. City of Richmond* that in Virginia a city could close direct access to a road entirely, provided that it does not bar “reasonable access.”<sup>82</sup> This case established the relationship in Virginia between police power and a property owner's right of access.

Wood owned a gas station on a corner lot in Richmond.<sup>83</sup> Wood received city permits to construct a driveway onto each corner of the street (see Figure 13), but later the City of Richmond, enforcing a zoning ordinance, ordered that one of the driveways be closed<sup>84</sup> (see Figure 14). Wood asserted that “as an abutting [property owner], he [had] the right of access to his lot [from both streets comprising the corner], and that such right [was] absolute and inherent.”<sup>85</sup> The court disagreed and held that, although “an abutter has an easement in the



**Figure 13. Wood's initial driveway**

<sup>81</sup> *Id.* at 727.

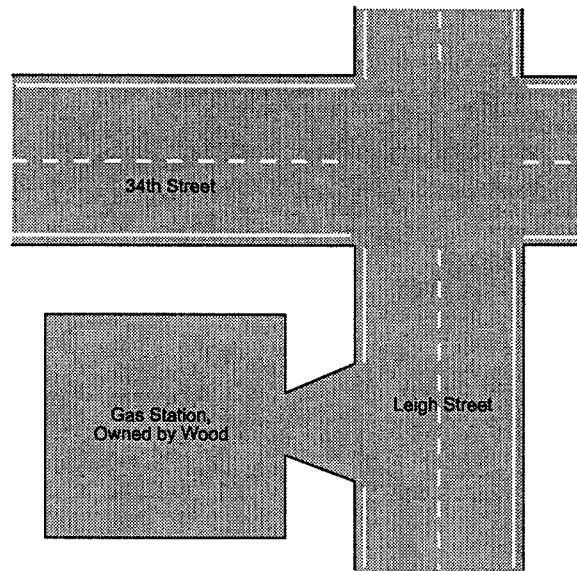
<sup>82</sup> *Wood v. City of Richmond*, 138 S.E. 560 (Va. 1927).

<sup>83</sup> *Id.* at 561.

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

public road which amounts to a property right,” the city exercising its police power could “control the use of the streets so as to promote the safety, comfort, health and general welfare of the public.”<sup>86</sup> The court held that the only property right that Wood could assert was a “reasonable right of access,” which it found as one access point.



**Figure 14. Wood’s driveway after revocation of access permit**

The police power can also regulate the size and location of driveway entrances onto public highways in accordance with *State Highway Commissioner v. Easley*.<sup>87</sup> In widening a section of Rte. 58, VDOT condemned part of Easley’s land that fronted Rte. 58 and was split in two by Rte. 1125<sup>88</sup> (see Figure 15). In addition, VDOT built curbing along the front of the property to regulate access to the highway. Figure 16 depicts the access restriction placed on the property. The Virginia Supreme Court rejected Easley’s argument and held that the curbing did not infringe on his property rights.<sup>89</sup> Instead, it held that the construction of curbing and restriction of access to two particular spots per parcel were within VDOT’s police power to “reasonably regulate the flow of traffic on the highway.”<sup>90</sup> Because there was “no evidence that the openings in the curbing would not provide . . . reasonable access to Rte. 58,” there was not a compensable taking, and evidence of the reduction in access could not be admitted to demonstrate damages to Easley’s property.<sup>91</sup>

<sup>86</sup> *Id.* at 562. This was in effect codified by Section 33.1-198 of the *Code of Virginia*.

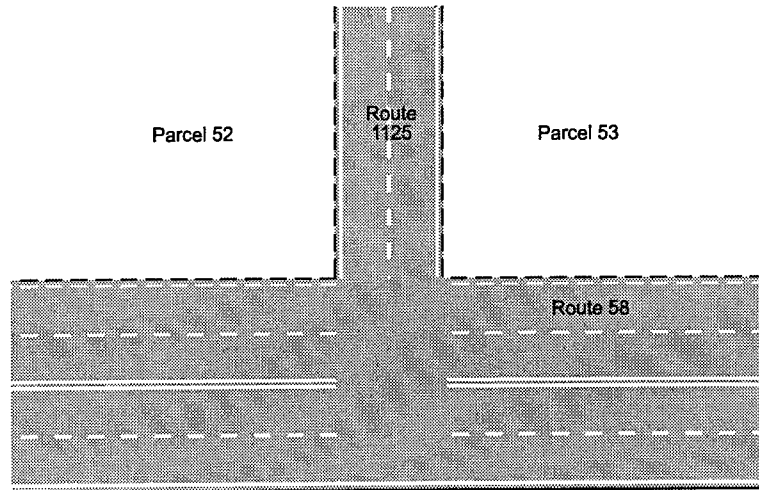
<sup>87</sup> *State Highway Comm’r of Va. v. Easley*, 207 S.E.2d 870 (Va. 1974).

<sup>88</sup> *Id.* at 871.

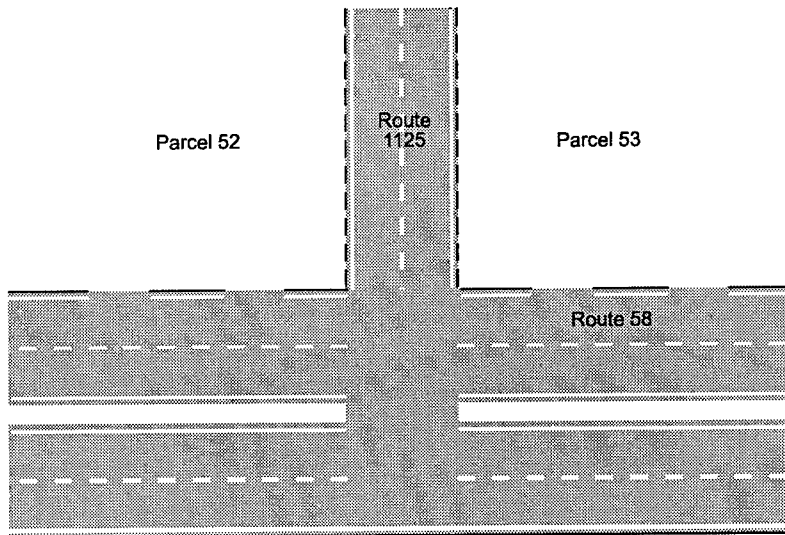
<sup>89</sup> *Id.* at 874. Easley, of course, was still compensated for the land actually taken for the widening.

<sup>90</sup> *Id.* at 875.

<sup>91</sup> *Id.*



**Figure 15. Easley's initial property configuration**



**Figure 16. Easley's property after road widening**

Finally in the case of *State Highway and Transportation Commissioner of Virginia v. Lanier Farm, Inc.*, the Virginia Supreme Court held that sometimes even the complete relocation of access to a piece of property can be a noncompensable exercise of the police power.<sup>92</sup> In this case, VDOT sought to acquire by condemnation the plaintiff's land for straightening a road near a large development.<sup>93</sup> The property owner sought to introduce evidence that the straightening would cause the road speed to increase and reduce the sight distance for his current entrance. He argued that because of this reduction the city would eventually force him to relocate the entrance, and thus he wanted to recover the cost of the driveway relocation up front before the widening occurred.<sup>94</sup>

<sup>92</sup> *State Highway and Transp. Comm'r of Va. v. Lanier Farm, Inc.*, 357 S.E.2d 531 (Va. 1987).

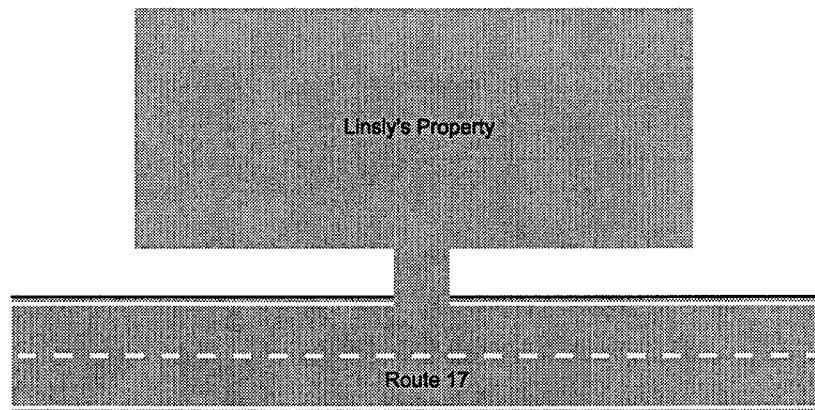
<sup>93</sup> *Id.* at 532.

<sup>94</sup> *Id.*

The court held for VDOT on several points, including finding that the property owner's prediction of a future regulation was itself too speculative to be considered a taking.<sup>95</sup> And as to his access rights, the court held that even if the city forced relocation of his entrance, even at tremendous expense to the plaintiff, the city's action would be within its police power. The court stated that "A mere partial reduction or limitation of an abutting landowner's rights of direct access, imposed by governmental authority in the interest of traffic control and public safety, constitutes a valid exercise of the police power and is not compensable in condemnation proceedings."<sup>96</sup> It went on to add that even though the entrance might be moved to a less desirable location, "the frustration of the owner's plans for development or future use of the property is not in itself a compensable item of damages."<sup>97</sup>

### *Eliminating Direct Access*

At some point restrictions go beyond the reasonable access standard and require VDOT to compensate the property owner. For example, in *State Highway and Transportation Commissioner v. Linsly*,<sup>98</sup> the property owner had land that abutted Rte. 17, as shown in Figure 17. VDOT began converting the route to a limited access highway. VDOT's condemnation action acquired some of his land and extinguished his direct access to the road.<sup>99</sup> VDOT proposed to construct a service road to provide Linsly's property with access to Rte. 17, as illustrated in Figure 18.<sup>100</sup> The Virginia Supreme Court rejected VDOT's arguments that the service road provided reasonable access and that the decline in Linsly's property value as result of the extinguishment should not have to be considered in setting damages.<sup>101</sup>



**Figure 17. Linsly's driveway before road improvements**

<sup>95</sup> *Id.* at 533.

<sup>96</sup> *Id.*

<sup>97</sup> *Id.* at 532-533.

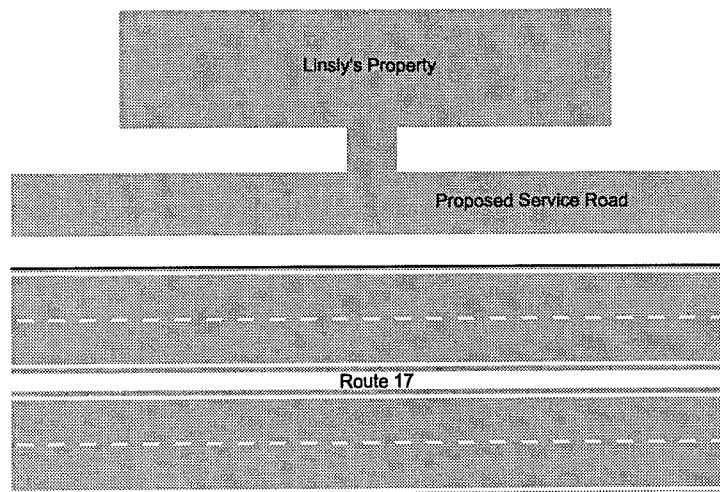
<sup>98</sup> *State Highway and Transp. Comm'r of Va. v. Linsly*, 290 S.E.2d 834 (Va. 1982).

<sup>99</sup> *Id.* at 835.

<sup>100</sup> *Id.*

<sup>101</sup> *Id.* at 836.





**Figure 18. Linsly's driveway after Rte. 17 became limited access highway**

The Virginia Supreme Court, in distinguishing Howard from Easley, agreed with Linsly, the property owner, that there was a difference in kind between limiting access, a valid exercise of police power, and extinguishing access altogether.<sup>102</sup> The court noted that the statute giving VDOT authority to convert highways to limited access highways contemplated the “extinguishment of easements of abutting landowners,” and thus the property owner was entitled to lost value of the easement taken.<sup>103</sup>

The court further addressed the issue of “circuitry of access” in *State Highway and Transportation Commissioner of Virginia v. Dennison*.<sup>104</sup> It held that evidence of circuitry of access to a public highway was admissible in condemnation hearings. In this case, VDOT had eliminated direct access from Dennison’s southern boundary with Rte. 23 north, so that access to his land from the northbound lanes was possible only after several turns, and access from the southbound was not possible at all. The Virginia Supreme Court upheld the admission in the condemnation hearing of the circuitry of access evidence in support of the owner’s claim for lost value.<sup>105</sup>

Although the facts placed the case roughly within *Linsly*, the court based its decision on the reasonable access discussion in *Easley*, where the court barred evidence of Linsly’s reduced access on the grounds he still had reasonable access to the highway. The *Dennison* court did not rule on the reasonableness of the access but held that the facts of the case were such that Dennison was entitled to present evidence that the remaining access was unreasonable.<sup>106</sup> Although the court did not overrule *Linsly*, this was a significant departure from the court’s earlier approach and seems to make circuitry of access a major factor.

<sup>102</sup> *Id.* at 838.

<sup>103</sup> *Id.* (The value of the easement, along with the other property taken, should be measured by calculating the difference in market value of the land immediately before the taking and immediately after.)

<sup>104</sup> *State Highway and Transp. Comm’r of Va. v. Dennison*, 343 S.E.2d 324, 328 (Va. 1986).

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

A few trial court decisions illustrate additional boundaries on access property rights in Virginia. In *Commonwealth Transportation Commissioner v. Miners Exchange Bank*, the Wise County Circuit Court held that replacing direct access to a highway with indirect access by way of a dead-end service road could be considered by the commissioners in determining just compensation.<sup>107</sup> In *Smith v. State Highway Commissioner*, the Scott County Circuit Court held that a particular type of direct access was actually *unreasonable*.<sup>108</sup> VDOT declared the northbound lanes but not the southbound lanes of U.S. 23 at a particular location limited access. Smith owned a restaurant on the southbound lanes, adjacent to U.S. 23 and State Rte. 727. VDOT closed access to Rte. 727 from U.S. 23 and constructed curbing along the restaurant's frontage with U.S. 23 except for a 25-foot-wide opening close to the facility. In the court's opinion the opening was so close to U.S. 23 that it held there was no reasonable access to the restaurant, even though there was additional access from a service road. In other words, the court declared that the remaining direct access was not reasonable and, therefore, VDOT's action was a *de facto* extinguishment of direct access. It held that Smith was entitled to compensation because VDOT replaced direct access with indirect access.<sup>109</sup>

In summary, the line between eminent domain and the exercise of the police power in Virginia becomes more ambiguous. Straightforward extinguishment of easements of access is clearly a taking, and property owners can recover the resulting property value damage. The situations that are not a straightforward extinguishment of access but achieve substantially the same result must be determined on a contextual basis. A clear rule is difficult to achieve under the court's reasonable access standard.

## Cases in Which Compensation Is Required

A property owner is entitled to just compensation for land taken by eminent domain and generally when a condemnation or restriction damages the residue of the property. If the property owner is entitled to compensation, the amount due is the difference in the market value of the land immediately before and after the regulation injury is done to the land; however, lost profits or damage to a business on the property are not by themselves compensable.<sup>110</sup> In addition, VDOT gets a credit for the value of any enhancement to the property as a result of its action.

*Town of Galax v. Waugh* provides a good example of how damages are calculated. The city's decision to raise the grade of a road in front of Waugh's property significantly altered the specific use of his property, and it left his retail business "practically ruined."<sup>111</sup> Nonetheless, the Virginia Supreme Court held that the damage adhered to the business and not the property. In fact, the resale value of his property actually increased as a result of the improvement, and

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<sup>107</sup> *Commonwealth Transp. Comm'r of Va. v. Miners Exchange Bank*, 33 Va. Cir. 261 (Wise County 1994).

<sup>108</sup> *Smith v. State Highway Comm'r of Va.*, 4 Va. Cir. 223 (Scott County 1984).

<sup>109</sup> *Id.*

<sup>110</sup> *Fonticello Mineral Springs Co. v. City of Richmond*, 137 S.E. 458 (Va. 1927).

<sup>111</sup> *Town of Galax v. Waugh*, 129 S.E. 504, 505 (Va. 1925).

because the enhancement in value was special (accruing only to those on the street, and not the entire town), it counted against Waugh's damage claim.<sup>112</sup>

Further, in *State Highway Commissioner v. Allmond*, the Virginia Supreme Court held that adjustment expenses may also be considered in determining damage done to the residue.<sup>113</sup> Adjustment expenses are those costs associated with fitting a property to adapt to the changed landscape as a result of condemnation. They are not to be confused with replacement costs, which are those costs incurred by an owner who wishes to purchase property or improvements to make up for the condemned property and improvements.<sup>114</sup> In addition, adjustment costs may only be used as "an aid in determining diminution in market value"; the costs themselves should not be included in the damage estimate.<sup>115</sup> In *Allmond*, the court found that Allmond's damages had improperly included adjustment costs, since the costs were calculated to include the relocation of Allmond's gas pumps and building. As a result, the award far outweighed the actual diminution in Allmond's property value. The court found this damage calculation method to be inappropriate.<sup>116</sup>

Likewise, in *State Highway and Transportation Commissioner v. Parr*, the Virginia Supreme Court found that "although the inconvenience resulting from the taking and expenses necessary to adjust the residue property to the new conditions are relevant considerations," the costs themselves can not be recovered.<sup>117</sup> Further, the landowner cannot recover based on the costs of converting the residue into the functional equivalent of the pre-condemnation property. The court noted, "if the take should acquire all of the usable portion of a tract and the residue consisted of a vertical cliff or a bottomless pit, the cost of restoration could exceed the post-take value of the entire tract."<sup>118</sup>

Access management could complicate the damage calculations for takings cases. Damage to the residue is measured by the diminution in market value as estimated by the assigned commissioners, offset by enhancements to the property. Adjustment costs can inflate the amount determined to be just compensation, however. Access management tools affect both of these categories. Moreover, access management may ultimately change Virginia's conception of property rights. As it is more heavily regulated, access itself may become increasingly more valuable. Removing access may be seen by Virginia's courts as something that is both an exercise of the police power and a taking of a right previously conferring convenience onto the property, on which the property owner had relied. Currently, however, most access management tools do not fall into the category of takings. It is unlikely to change, absent a determination by the legislature that as a matter of policy Virginia will compensate property owners for diminished access rights.

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<sup>112</sup> *Id.* at 511.

<sup>113</sup> *State Highway and Transp. Comm'r of Va. v. Allmond*, 287 S.E.2d 832, 836 (Va. 1979).

<sup>114</sup> *Id.* at 835.

<sup>115</sup> *Id.* at 836.

<sup>116</sup> *Id.*

<sup>117</sup> *State Highway and Transp. Comm'r of Va. v. Parr*, 230 S.E.2d 253, 255 (Va. 1976).

<sup>118</sup> *Id.*

## **Access Management Considerations for Virginia**

When dealing with traffic growth, a state faces a limited array of options. First, it can do nothing or defer action and accept the likely increase in congestion and vehicle crash rates that usually accompany increased highway access. Second, it can provide additional highway capacity by constructing additional traffic lanes and bypass routes around highly congested areas. Third, it can attempt to control or even reduce the number of vehicles using the roadway through various traffic management techniques. Fourth, it can reclaim and preserve its existing transportation infrastructure with a comprehensive access management program.

### **Should Virginia Regulate Access on a Systemwide Basis?**

The ultimate transportation policy question arising from this analysis is whether Virginia *should* regulate access to public highways through a comprehensive access management program. One answer is that the Commonwealth should regulate access to state highways because without such regulation, the unregulated right to access will be overutilized to the detriment of the system. This is a classic problem of externalities.

An *externality* is a cost that is borne by neither the producer nor the consumer of a good, a cost society ultimately bears. Allowing unlimited access to public highways creates such externalities. Highways are designed to move traffic at certain speeds and volumes and to provide access to areas along their route. When a traffic generator with a poorly planned or placed driveway causes traffic to slow down, that generator is imposing costs on all the users of that highway, such as travel delay, increased fuel cost, and increased risk of crashes. For example a non-local traveler on Rte. 29 in northern Albemarle County is confronted with substantial local traffic congestion with little real benefit from the seemingly convenient access local residents have to commercial developments along this corridor. Neither the Rte. 29 commercial district nor local residents directly bear all of the costs of Albemarle's land use decisions adjacent to Rte. 29. Instead, these costs are borne by others outside the local community. Even the eventual cost of widening or relocating the north Rte. 29 corridor is not borne by local governments.

There are few current incentives for localities or individual businesses to minimize their consumption of the limited resource of convenient access, even though collectively it would be beneficial to each to protect the asset. In fact, the benefits from access management will accrue only if the standards are applied uniformly. Rarely will one business along a traffic corridor determine the overall highway capacity. Instead it is the cumulative impact of all the entrances that ultimately determines the level of service.

An access management code can serve to internalize many of the costs associated with highway access. Both new and existing businesses can rest at ease knowing that the valuable access they purchased along the corridor will not be taken away by traffic congestion or a corridor bypass. They know ahead of time what it will cost to establish properly configured and located access points and can include that figure in their budgeting. Pricing decisions for the

goods or services sold will then also include the cost of providing proper access. In this way, businesses can internalize the cost of preserving the highway's function and do it at a cost much lower than the cost of constructing additional highway capacity or the expense of a bypass, the latter of which may result in the elimination of businesses altogether.

Notwithstanding the relatively broad authority of the police power, Virginia could adopt a policy of compensating certain types of restrictions on access. The General Assembly might consider a compensation program when access is restricted. Closing a median would likely not be compensable, as that already is well within the boundaries of the police power. However, other types of access restriction, even those leaving legally reasonable access might be compensated. Such compensation could avoid costly litigation and, more important, reduce voter resistance to access management. If citizens and businesses know they will be justly compensated for any lost access, they are more likely to support the idea. In addition, in almost all cases, the cost of managing access is substantially lower for the state than the alternative of reconstruction or bypass.

### **Methods of Applying Access Management Principles**

Koepke and Levinson identified four options for the creation and application of an access management program.

1. *Access Control by the Transportation Agency.* The responsible agency acting under authority granted by the legislature details and applies an access management policy. This is straightforward regulation by police power and construction and development by purchase or condemnation.<sup>119</sup> Although implemented through the police power, eminent domain issues can emerge if access to the road is eliminated or curtailed beyond a reasonable level.
2. *Access Management by Driveway Regulation.* The responsible agency achieves certain access management goals by establishing guidelines, standards, and specifications for the construction and placement of driveways. An example is Virginia's *Minimum Standards for Entrances to State Highways*.<sup>120</sup> This approach would make classification of roads by access level difficult, if not impossible.
3. *Access Control by Deed.* Government entities buys access rights, thereby securing the unlimited power to restrict or eliminate private access to the highway. This is a more permanent method than regulation, but it is likely to be more expensive.<sup>121</sup> The outright purchase of access rights (perhaps even by eminent domain) compensates landowners for restrictions that might not otherwise require compensation. Such purchase would eliminate the question of whether the government had authority to regulate access.

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<sup>119</sup> Koepke & Levinson, *supra* note 1 at 9-10.

<sup>120</sup> *Id.*

<sup>121</sup> *Id.* at 10.

4. *Access Control by Geometric Design.* Use of engineering standards may achieve many access management goals. In other words, absent specific guidance or a set of standards, planners and engineers can achieve some access management goals on a case-by-case basis, as individual intersections and driveways are planned. This approach would not achieve uniform technical standards, and it would not ensure that each engineer was operating with the same vision of access goals.

## **Opposition to Access Management**

Restriction of access will generate hostility from both commercial and residential landowners. Business owners likely will initially oppose it, perceiving an attack on their customer traffic; local governments might oppose it on jurisdictional grounds; and consumers could become frustrated by potential new inconveniences to which they must adjust. For example, the planned installation of medians along Rte. 1 in Ashland demonstrates the type of opposition likely to emerge. Businesses worry that the planned medians, setback requirements, and restrictions on signage will detract from their customer base; businesses do not wish these plans to “affect their ability to attract customers.”<sup>122</sup> However, in areas where it has been implemented, some businesses have supported access management and the effect it has had on the roads and do not think they have lost any business as a result. In Florida, for example, businesses differ as to the effect of access management.<sup>123</sup>

Another potential source of opposition might come from the localities themselves. The power to control land use decisions is jealously defended by local governments and any shift in the balance of power might be fiercely resisted. However, since the state owns the highway, it, too, is a property owner. Every piece of private property that connects to a state highway has the state of Virginia as an adjacent landowner.

## **Gaining Public Support for Access Management**

Potential support for access management could come from a variety of groups. First, commuters who depend on major highways should support the preservation of travel times that access management can provide. Second, environmental groups should support access management, as it can potentially reduce or defer the demand for new road construction. Third, the automobile insurance industry should find the potential for accident reduction and the severity of impact appealing. Finally, the tourism industry, which relies on the state highway system to deliver its customers, should support efforts to preserve highway capacity and traffic speeds.

Perhaps VDOT can develop broad public support for access management by informing the public of the benefits and drawbacks of such a program. Up-front public support can

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<sup>122</sup> Claude Burrows, *Business Access is Question; Road Work's Effect is Focus at Meeting*, Richmond Times Dispatch, May 14, 1997, at J-1.

<sup>123</sup> Angela Bradbery, *Median Closure Provokes Driving Debate*, Florida Sun-Sentinel, March 3, 1997, at 1B.

minimize litigation and controversy.<sup>124</sup> The planning process needs to be open and equitable, inclusive of all viewpoints, and more than a series of public hearings. VDOT should make an effort to determine the interests of those affected by an access management plan, identify common ground, and build an understanding if not outright support for the plan.<sup>125</sup> This entire process could take several years,<sup>126</sup> but it is essential that the public be involved in the entire process. If taxpayers see the virtues of access management, the legislature will be more likely to support the idea. But if the taxpayers are frightened or confused about access management, that will be reflected in the decisions of the General Assembly.

The ideas of access management should be communicated in terms accessible to everyone, especially laypeople. Access management should be presented in concrete terms that local property owners can recognize and understand.<sup>127</sup> In addition, VDOT should accept that ultimately any access management standards must also account for the political pressures and the desires of property owners. Although perfect or near-perfect use of engineering principles would be attractive to VDOT, taxpayers want more than simple efficiency on the roads. They also want access and convenience.<sup>128</sup>

### **Implementation Strategies**

Several options are available to implement an access management program. The method chosen should focus on a combination of factors: the likelihood of success of a given strategy, the role public input would play in the process, and the opportunity to communicate with the public that each would afford. Three legislative options are presented in the appendices. Appendix A is suggested language for a joint resolution to study the benefits and drawbacks of adopting a comprehensive access management program. Appendix B is suggested legislative language directing the Commonwealth Transportation Board to develop and implement a comprehensive access program. Appendix C provides an example of what a detailed legislative or regulatory access management program for Virginia might include.

The approach in Appendix A offers a good opportunity to begin the process of educating the legislature and general public on the benefits and drawbacks associated with a comprehensive access management program. It provides an opportunity to focus the legislature on the cause and possible solutions to highway congestion and safety risks.

The second option, a process-based approach used by Colorado, Florida, and New Jersey shown in Appendix B, might be the easiest way to get the most technically based access management program. In each state listed, the legislative bodies issued a relatively broad grant of authority to their respective department of transportation to develop access management codes in accordance with their state's administrative procedure acts. Although the clear legislative

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<sup>124</sup> Kristine Williams, *Public Involvement and the Politics of Access Management*. In 1996 National Conference on Access management Proceedings 49 (1996).

<sup>125</sup> *Id.* at 50-52.

<sup>126</sup> Keopke & Levinson, *supra* note 1 at 23.

<sup>127</sup> Del Huntington, *Marketing of Access Management*. In National Conference on Access Management Proceedings 59, 60 (1996).

<sup>128</sup> Garber & White, *supra* note 17 at 9.

mandate that courts often look to in interpreting administrative regulations is not present, the process is generally conducive to public involvement and flexibility based on changed conditions as the regulations are developed.

The process approach law should contain simple language endorsing the legislative body's support of the concept of access management. The drawback is that the legislature may not fully understand the scope of what it has passed. Although the idea of access management is a fairly easy sell, the specifics require tough choices. The legislature could pass an access management code without understanding the type of political problems it might cause, and then revoke it later, before its full effect can be measured.

Appendix C provides a look at the potential form of an access regulation and the drawbacks of drafting the entire legislation through the legislative body. In general, legislatures do not prefer to deal with the specifics of changes to a code as lengthy as Appendix C. The lengthy *Minimum Standards* were developed with less than a paragraph of legislative text. The high level of technical detail in the proposed statute establishes a clear legislative mandate for comprehensive access management, but the complexity and scope of the proposed law are such that legislative passage might be impossible. The proposed statute also has the drawback that reaching agreement on revisions and modifications in the future might be more difficult.

Alternatively, VDOT could fashion a piecemeal approach. VDOT could ask for legislative guidance on specific questions, such as legislative preference for traffic flow over access or speed over safety. It could also include specific statutory changes, requiring, for example, that property being subdivided provide a single access point for all parcels. Likewise, the legislature could require landowners to access the system from the lowest highway functional classification. Finally, VDOT could ask for the authority to develop access categories for each functional classification of road in the state highway system.

Another critical area VDOT could ask for authority to address is the need for better integration or coordination of local land use with the state highway system planning process. With the passage of the Byrd Road Act of 1932, VDOT assumed the lead role for planning and paying for Virginia's highway construction. With additional programs such as the primary highway system, the state's funding and planning role has expanded. However, one competing issue with the state's authority and responsibility for highway construction and operation is the requirement that private and commercial entrances have reasonable access to the state highway system.<sup>129</sup> A second is that in Virginia, localities have been granted authority over local land use decisions.<sup>130</sup> Other than by declaring a highway limited access, VDOT currently can manage highway access only through the use of the *Minimum Standards*.<sup>131</sup> Thus, if a local government chooses to focus growth along a major statewide traffic corridor, there is very little VDOT can do to prevent it.

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<sup>129</sup> Va. Code Ann. § 33.1-197 and § 33.1-198 (Michie 1996).

<sup>130</sup> See Va. Code Ann. § 15.1 (Michie 1996) in general.

<sup>131</sup> Va. Code Ann. § 33.1-58 (Michie 1996).



## CONCLUSIONS

- Virginia has experienced tremendous traffic growth over the past four decades and has responded by investing significant resources in the construction and upgrade of its highway system. However, as new road construction becomes more difficult from an economical, political, or environmental standpoint, it is imperative that existing highway capacity be preserved or perhaps improved by other means.
- An effective access management program goes beyond the individual tools and integrates them into a systemwide process.
- Access management reduces traffic conflict points by managing the location and design of access points. If successful, access management can reduce crashes by improving driving conditions and reducing traffic hazards. It can improve air quality by reducing vehicle idle time at traffic signals or because of congestion. Finally, it can help preserve or restore highway capacity and assist in discouraging urban sprawl and shrinking commercial market areas.
- Virginia lacks a comprehensive approach to managing access. The current system of site-by-site reviews lacks a systemwide approach to deal with rapid growth occurring along many of the state's primary arterials. Although Virginia has a funding hierarchy for its various types of roads and functional classifications to describe them, it lacks an integrated systematic functional hierarchy such as that adopted by Colorado, New Jersey, and Florida.

## RECOMMENDATIONS

1. Since VDOT bears financial responsibility of addressing traffic growth along primary highways, it should have a larger role in coordinating and planning local access to the Primary Highway System. This involvement could begin during the County's development of its Comprehensive Land Use Plan required by Section 15.1-446.1 of the *Code of Virginia*. Although localities are still the political choice for land use decisions, VDOT should be proactive in encouraging localities to address highway access issues in their decision-making process.
2. Virginia should adopt a comprehensive plan for managing access on the primary highway system. These roads form the backbone of the highway system and are critical for commuters, businesses, and tourists throughout the Commonwealth. The entrance standards should address both the current and desired functional categories assigned to these highways. At a minimum, a comprehensive plan for the primary highway system should be developed.
3. VDOT should explore funding options to purchase access rights along significant transportation corridors that are experiencing rapid development. The state should also seek to fund the construction of service roads or grade separated intersections ahead of

development. These efforts could be tied in with local and regional economic development programs.

4. VDOT, through the annual Six-Year Secondary Road Improvement Plan, should discuss and encourage local governments to factor access management into their land use decisions.
5. VDOT should revise the current *Minimum Standards* to factor highway capacity, safety, and traffic flow into permit decisions and the “minimum” standard. The standards should balance traffic flow and access. VDOT should consider different minimum standards based on purpose and functional classification
6. VDOT should consider adopting additional specific traffic site to address particular types of land use that significantly affect highway capacity and land-use similar to the special standards developed for drive-in theatres.

## **APPENDIX A**

### **MODEL HIGHWAY ACCESS MANAGEMENT CODE**

**Proposed legal language (with commentary) for a Virginia highway access management  
program**

**To be included in Title 33.1, *Public Highways*, of the Code of Virginia**



**Code of Virginia**

**Title 33.1 (Proposed)**

**Highways, Bridges and Ferries**

**Chapter 14**

**Highway Access Management Code**

**Article 1**

**General Regulations**

|          |                                |
|----------|--------------------------------|
| Sec.     |                                |
| 33.1-501 | Purpose.                       |
| 33.1-502 | Organization of the Code.      |
| 33.1-503 | Implementation.                |
| 33.1-504 | Definitions and Abbreviations. |
| 33.1-505 | References.                    |
| 33.1-506 | Repealed Sections.             |

**Article 2**

**Administration**

|          |                                           |
|----------|-------------------------------------------|
| Sec.     |                                           |
| 33.1-507 | Purpose.                                  |
| 33.1-508 | Access Category Assignment.               |
| 33.1-509 | Obtaining an Access Permit.               |
| 33.1-510 | Processing Access Permits.                |
| 33.1-511 | Completion of Access.                     |
| 33.1-512 | Appeals.                                  |
| 33.1-513 | Use of Access.                            |
| 33.1-514 | Access Violations.                        |
| 33.1-515 | Access Control Plans.                     |
| 33.1-516 | Permit Fees.                              |
| 33.1-517 | Interchange Management Plans.             |
| 33.1-518 | Department Highway Construction Projects. |

### **Article 3**

#### **Highway Access Categories**

|          |                                          |
|----------|------------------------------------------|
| Sec.     |                                          |
| 33.1-519 | Purpose.                                 |
| 33.1-520 | Use of Article 3.                        |
| 33.1-521 | Category Design and Operation Standards. |
| 33.1-522 | Use of Access Categories.                |
| 33.1-523 | Category One.                            |
| 33.1-524 | Category Two.                            |
| 33.1-525 | Category Three.                          |
| 33.1-526 | Category Four.                           |
| 33.1-527 | Category Five.                           |
| 33.1-528 | Category Six.                            |

### **Article 4**

#### **Access Design Standards and Specifications**

|          |                                                                          |
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## Article 1

### General Regulations

**33.1-501. Purpose.** (A) The purpose of the Highway Access Management Code is to regulate access to and from state highways by providing the procedures and standards necessary to protect the public health, safety and welfare, to maintain smooth traffic flow, to maintain highway right-of-way drainage and to protect the functional level of the State Highway System while meeting state, regional, local, and private transportation needs and interests. (B) The lack of comprehensive access management standards for the State Highway System and the proliferation of driveways and other direct accesses to the State Highway System is a major contributor to highway accidents and has been the greatest single factor behind the functional deterioration of state highways throughout the Commonwealth. As new accesses are constructed and traffic signals erected, the speed and capacity of highways decrease, and congestion and hazards to the traveling motorist increase. As a result, significant amounts of tax dollars must be spent to widen highways, construct by-passes, reconstruct portions of highways, and provide additional operation and safety measures. The establishment of sound access management regulations enhances the development of an effective transportation system and serves to preserve the traffic carrying capacity of the State Highway System by providing a reasonable and sound balance between safe and efficient transportation services and land development access needs. It also serves to reduce causes and costs of traffic accidents, personal injury, property damage and highway maintenance, and acts to lengthen the effective life of transportation facilities thereby reducing government capital costs. (C) This Code addresses the design and location of driveways and other points of access to public highways in the State Highway System. It is based upon the past statutory and regulatory authority of the Commonwealth Transportation Board and the new authorities granted in this Act and considers existing and projected traffic volumes, the functional classification of public highways, metropolitan planning organization and regional planning district commission plans and needs, highway drainage requirements, the character of lands adjoining the highway, adopted local land use plans and zoning, the type and volume of traffic to use the access, other operational aspects of an access, the availability of vehicular access from lower classified roads, and the public health, safety, and welfare.

*Commentary:* Article 1, establishes the legislature's intent and purpose for enacting the Code. It provides guidance and direction to the Judicial Branch in reviewing the implementation of the Code by the executive branch.

**33.1-502. Organization of the Code.** Article 1 defines the authority, purpose and structure of the Highway Access Management Code, and defines those words that are technical or have specific definitions for the purposes of this Code. Article 2 describes the administrative procedures for implementing this Code. Article 3 defines categories for the State Highway System based on function and design and provides criteria for determination of allowable access to the system. Article 4 provides the authority for the Department to adopt standards for the design and construction of accesses to the highway system which are based upon criteria necessary to ensure the public health, safety, and welfare.

**33.1-503. Implementation.** (A) No person shall construct any access providing direct vehicular movement to or from any state highway from or to property in close proximity or abutting a state highway without an access permit issued by the Department. (B) Access permits shall be issued only in compliance with this Code. The Department is authorized to impose restrictive terms and conditions to the permit as necessary and convenient to meet the requirements of the Code. In no event shall an access permit be issued or authorized if it is detrimental to the public health, safety, and welfare. (C) Direct access from a subdivision to the State Highway System shall be permitted only if the proposed access meets the purposes and requirements of this Code. Local traffic from a subdivision abutting a state highway shall be served by an internal street system of adequate capacity, intersecting and connecting with state highways in a manner that is safe as well as consistent with the assigned access category (Article 3) and design requirements (Article 4). All new subdivisions of property should provide access consistent with the standards of Articles 3 and 4 of the Code. The Department will work with local governments in the review of subdivision plats and other divisions of property to ensure that future access requirements of divided property are consistent with the purposes and standards of this Code. The issuance of any permit, agreement, plat, subdivision, plan or correspondence by a local government shall not abrogate or limit the regulatory powers of the Department under this Code exercised in the protection of the public's health, safety, and welfare. (D) The Department will draft proposed Highway Category performance standards (Article 3) and access design standards (Article 4) for approval by the Commonwealth Transportation Board. Until the standards are adopted by the Board, all access applications will continue to be evaluated under existing Department procedures and in accordance with the "Minimum Standards for Highway Entrances." Except that permits, during the interim period, will expire one year after the Board adopts the standards, if the access has not been constructed.

*Commentary:* (A) All access points to the State Highway System require a permit, continuing the requirement of Va. Code §33.1-197 and 33.1-198. (B) Permits can not be issued if they endanger the public's safety. (C) Requires subdivided property to provide for an internal street system and comply with the standards of this Code. (D) Provides for a transition from current system of access management to the Code. Before implementation, the Department will submit access category standards, Article 3, and access design standards, Article 4, for approval by the Board.

**33.1-504. Definitions and Abbreviations.** The following words and terms when used in this Chapter shall have the following meaning unless the content clearly indicates otherwise.

"AASHTO" means American Association of State Highway and Transportation Officials.

"Acceleration lane" means a speed-change lane, including tapered areas, for the purpose of enabling a vehicle entering a roadway to increase its speed to a rate at which it can more safely merge with through traffic.

"Access" means any driveway or other point of entry and/or exit such as a street, road, or highway that connects to the general street system. Where two public roadways intersect, the secondary roadway shall be considered the access.



“Access category” means one of the categories described in Article 3 of the Code which determines the degree to which access to the State Highway System is controlled. Categories as they are assigned by the Commonwealth Transportation Board to specific highway segments are to be published by the Department in a State Highway Access Category Assignment Schedule.

“Access control plan” means a roadway design plan which designates access locations and their designs for the purpose of bringing those portions of roadway included in the access control plan into conformance with their access category to the extent feasible. This term is further defined in Article 2.

“Access operation” means the utilization of an access for its intended purpose, and includes all consequences or characteristics of that process, including access volumes, type of access traffic, access safety, time of the access activity, and the effect of such access on the State Highway System.

“Administrative Process Act” means the act contained in Va. Code § 9-6.14:1, as amended.

“ADT” means average daily traffic count.

“ADDT” means the annual average two-way daily traffic volume. It represents the total traffic for the year, divided by 365.

“Applicant” means any person, corporation, entity or agency applying for an access permit.

“Arterial highway” means a highway that has been designated by the Commonwealth Transportation Board in accordance with Va. Code § 33.1-26, as amended.

“Auxiliary lane” means any additional special purpose lane such as speed change lanes, hill climbing lanes, and turning lanes.

“Board” means the Virginia Commonwealth Transportation Board.

“Capacity” means the ability of the highway to provide service to the volume of vehicles seeking to use the highway. Capacity is most often considered the maximum amount of traffic that can be accommodated by a highway during the peak hours of demand. Sometimes it refers to the entire roadway, and sometimes to a single lane.

“Clear zone” means the total roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or a clear run-out area. The desired width is dependent upon traffic volume, speeds, and roadway and roadside geometry.

“Code” means the Highway Access Management Code.

“Commercial entrance” means an entrance serving all access points other than an individual private residence. Residential subdivisions are a commercial entrance.

“Control of access” means the condition in which the right of owners or occupants of land abutting or adjacent to access a roadway is controlled by public authority.

“Deceleration lane” means a speed-change lane, including tapered areas, for the purpose of enabling a vehicle that is to make an exit turn from a roadway to slow to a safe turning speed after it has left the mainstream of faster-moving vehicles.

“Department” means the Virginia Department of Transportation (VDOT).

“Design speed” means the maximum safe speed that can be maintained over a specified section of highway when conditions are so favorable that the design features of the highway govern, as defined in the latest edition of AASHTO’s *A Policy on Geometric Design of Highways and Streets*.

“Divided highway” means a highway with separated roadways for traffic in opposite directions, such separation being indicated by depressed dividing strips, raised curbing, traffic islands, or other physical barriers so constructed as to impede vehicular traffic or otherwise indicated by standard pavement markings or other official traffic control devices.

“Driveway” means an access that is not a public street, road, or highway.

“District office” means the office in each of the nine construction districts located throughout the state that implements the construction of the Department.

“Engineer” means the engineer representing the Department.

“Field approach” or “Field access” means an access to undeveloped or agriculture property that has a yearly average use of less than 1 vehicle per day.

“Frontage road” means a public street or road auxiliary to and normally alongside and parallel to the main highway, constructed for the purposes of maintaining local road continuity and controlling of direct access to the main highway.

“Functional classification” means a classification system that defines a public roadway according to its purposes and hierarchy in the state highway system.

“Grade separation” means a crossing of two roadways, or a roadway and railroad, or a roadway and a pedestrian walkway, at different elevations.

“Gradient” or “grade” means the rate or percent change in slope, either ascending or descending from or along the highway. It is to be measured along the centerline of the roadway or access.

“Highway” means the entire width between the boundary lines of every way publicly maintained when any part thereof is open to use of the public for purposes of vehicular travel or the entire width of every way declared to be a public highway. It includes bridges, culverts, sluices, drains, ditches, waterways, embankments, walls, trees, shrubs and fences.

“Interchange” means a facility that separates the elevation of intersecting roadways and provides directional ramps for access movements between the roadways. The structures and the ramps are considered part of the interchange.

“Interchange management plan” means a plan similar in nature to an access control plan but limited to the immediate influence area of an interchange for the protection of its functional integrity.

“Interstate system” means those highways designated by the Commonwealth Transportation Board in accordance with Va. Code § 33.1-48.

“Lane” means the portion of a roadway for the movement of a single line of vehicles. It does not include the gutter or shoulder of the roadway.

“Local government” means the County Board of Supervisors or the governing body of the cities and incorporated towns.

“MUTCD” means the Manual on Uniform Traffic Control Devices and the Virginia supplement.

“Median” means that portion of a highway separating the opposing traffic flows.

“Non-use” means the absence or lack of any significant purposeful and ongoing physical or economic activity on, or use of, a property or access by the owner or authorized persons, taking into account the nature, circumstances, zoning, and past use of the property or access. Non-use includes the occasional and inconsequential presence upon such property or access when not associated with any significant purposeful and ongoing physical or economic activity on, or use of, the property or access.

“Operating speed” means the highest overall speed at which a driver can travel on a given highway under favorable weather conditions and under prevailing traffic conditions without at any time exceeding the safe speed as determined by the design speed on a section by section basis, as defined in the latest edition of AASHTO’s *A Policy on Geometric Design of Highways and Streets*.

“Permit issue date” means the date when the authorized Department official signs the permit.

“Permittee” means any person or entity that can own property to whom an access permit is issued. The permittee is responsible for fulfilling all the terms and conditions of the permit.

“Person” means every natural person, corporation, association, firm, partnership, or other entity.

“Potential for signalization” means an access that has the potential within the life of the access permit to meet any of the warrants for a traffic signal as defined by the MUTCD.

“Prima facie” means a fact presumed to be true unless disproved by some evidence to the contrary. As evidence it is sufficient to sustain a judgment in favor of the decision by the Department.

“Primary system” means the State Highway System in accordance with Va. Code § 33.1-25, as amended.

“Private entrance” means an entrance serving as an individual’s private entrance to his or her residence and used for the exclusive benefit of the occupant with no other commercial purpose.

“Private subdivision road” means a road that serves more than one individual property, is privately owned and maintained and requires a commercial entrance permit.

“Relocate” means to remove and establish in a new place, and may include, if necessary to conform a property’s access to the provisions of the Code, merging or combining non-conforming access with other existing access so as to eliminate the non-conformance. In such event, the property owner or permittee, if applicable, may be required to remove all physical elements of the non-conforming access, such as curb cuts and surfacing material, and install curbing, barriers, or other physical separators to prevent continued use of the access.

“Right of way” means the land, property or interest therein, usually in a strip, acquired for and under the ownership, control, or jurisdiction of the Department, which is open or which is to be open within the future for the public travel. The area set out above includes not only the traveled portion but the entire area within and without the traveled portion from boundary line to boundary line, and also parking and recreation areas which are under the ownership, control or jurisdiction of the Department.

“Roadside” means that area between the outside shoulder edge and the right of way limits.

“Roadway” means that portion of a highway improved, designed or ordinarily used for vehicular travel exclusive of the sidewalk, parallel gutter, berm or shoulder. In the event a highway includes two or more separate roadways, “roadway” includes any auxiliary lane.

“Secondary system of state highways” means a highway not included in the State Highway System in accordance with Va. Code § 33.1-67, as amended, and may be referred to as “secondary roads.”

“Sight distance” means the distance visible to the driver of a passenger vehicle measured along the normal travel path of a roadway from a designated location and to a specified height above the roadway when the view is unobstructed by traffic. For crossovers and commercial entrances, sight distance is the distance measured between the height of the driver’s eye (3.5 ft) and the height of an object (4.25 ft) without horizontal or vertical obstruction to the line of sight.

“Signalization” means a traffic control signal.

“Slope” means the relative steepness of the terrain expressed as a ratio or percentage. Slope may be categorized as positive or negative and as parallel or cross slope in relation to the direction of the traffic.

“Speed change lane” means a separate lane for the purpose of enabling a vehicle entering or leaving a roadway to increase or decrease its speed to a rate at which it can more safely merge or diverge with through traffic. Acceleration and deceleration lanes are speed change lanes.

“State Highway System” means all highways and roads under the ownership, control, or jurisdiction of the Department in accordance with Va. Code 33.1-25, as amended.

“Stopping sight distance” means the distance required by a driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during driver perception and reaction times and the vehicle braking distance.

“Storage lane” means additional lane length added to a deceleration lane to store the maximum number of vehicles likely to accumulate in the lane during a peak hour period to prevent stored vehicles from interfering with the function of the deceleration lane or the through travel lanes.

“Subdivision” means the division of land into two or more smaller lots, tracts or parcels.

“Taper” means the widening of pavement to allow the redirection and transition of vehicles around or into an auxiliary lane.

“Time” means, for the purposes of this Code, time periods computed in accordance with Virginia Rules of Civil Procedure, Title 8.01, as amended.

“Traversable slope” means a slope from which a motorist will be unlikely to steer back to the roadway but may be able to slow and stop safely.

“Traveled way” means that portion of roadway for the through movement of vehicles, exclusive of shoulders, gutters, and auxiliary lanes.

“Trip” means a single or one-direction vehicle movement with either the origin or the destination inside a study area. A vehicle leaving the highway and entering a property is one trip. Later when the vehicle leaves the property and reenters the highway is a second trip.

“Vehicle length” means the maximum vehicle length expected to use an access point. All access will be designed for maximum vehicle lengths.

“Warrant(s)” means the criteria by which the need for a safety treatment or improvement can be determined.

**33.1-505. References.** The standards and specifications contained in Articles 3 and 4 of this Code are based on engineering judgment and the following references used by the Department.

"A Policy on Geometric Design of Highways and Streets," 1994. American Association of State Highway and Transportation Officials, Suite 225, 444 North Capitol Street, Washington, D.C. 20001, as amended.

"Manual on Uniform Traffic Control Devices for Streets and Highways," (MUTCD), A standard of the U.S. Department of Transportation and the Federal Highway Administration, Washington, D.C., as amended.

"Virginia Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways," as amended.

"Highway Capacity Manual," Special Report 209, 3<sup>rd</sup> Edition revised 1994, Transportation Research Board, Washington, D.C., as amended.

The current editions of the following manuals and standards of the Virginia Department of Transportation:

"Drainage Manual" VDOT Location and Design Division, as amended.

"Minimum Standards of Entrances to State Highways," VDOT Traffic Engineering Division, as amended.

"Land Development Manual." VDOT Traffic Engineering Division, as amended.

"Land Use Permit Manual" VDOT Maintenance Division, as amended.

"Road and Bridge Standards" VDOT Location and Design Division, as amended.

"Road Design Manual" VDOT Location and Design Division, as amended.

"Subdivision Street Requirements," VDOT Secondary Roads Division, as amended.

*Commentary:* Provides legislative approval of the Departments use of referenced sources in administering the Code.

**33.1-506. Repealed Sections.** (A) Upon passage of this Code, the adoption of the highway access categories (Article 3) and the access design and construction specifications and standards (Article 4), Virginia Code § 33.1-197 and § 33.1-198 are repealed.

*Commentary:* The two sections are repealed, after the new management program is in place.

## Article 2

### Administration

**33.1-507. Purpose.** Article 2 provides for the administrative procedures and related information and requirements for the implementation of the Highway Access Management Code. The provisions of the Administrative Process Act, Va. Code §9-6.14:1, apply to the extent they are not inconsistent with this Article.

**33.1-508. Access Category Assignment.** (A) The Commonwealth Transportation Board shall assign to each highway section or segment of the State Highway System an access category from Article 3 of this Code based upon the following factors: any assigned administrative or functional classification, existing and projected traffic volumes, adopted local transportation plans and needs, the character of land adjoining the highway, adopted local land use plans and zoning, the availability of vehicular access from lower functional classification roads, and metropolitan planning organization plans and needs. (B) The Department shall prepare a draft access category assignment schedule for the Board consistent with paragraph (A) above and Article 3 for the entire State Highway System. The Commonwealth Transportation Board shall adopt any processes or procedures it deems necessary to seek input from local governments or metropolitan planning organizations prior to assigning the category, but at a minimum the Department will forward a copy of the draft category to the local government for review. The final draft along with all written comments shall be presented to the Board for final approval. Upon the Board's adoption of the access category schedule, the Department shall complete any necessary procedures to make it effective. The approved category assignments shall be made available to the local government, regional planning districts, metropolitan planning organizations, and the public by means of the Department preparing a State Highway System Access Category Assignment Schedule. (C) The appropriate local government by resolution, for sections of state highways within their jurisdiction, or the Department may submit to the Board requests for changes in the adopted access category schedule. All requests shall include information pertaining to the considerations itemized in paragraph (A) above, as well as an explanation of the necessity of the requested change, and how the requested change is consistent with the purposes of this Code. The Department shall review and provide a recommendation to the Board on each request. The Board shall act upon pending category change requests within one year.

*Commentary:* This section could be implemented through the resident engineers and District personnel adopting sections based on broad access management principles. For example, the majority of secondary roads might be assigned an identical category with only a few secondary roads requiring higher category restrictions. In effect the majority of road mileage could be assigned through broad category assignments. The major assignment task would then involve the various segments of the primary system. (A) Directs the Board to assign one of the five access categories (Article 3) to each highway section based on the listed factors. It allows different sections of the same highway to have different access categories based on its specific factors. (B) The Department prepares the categories (Article 3) and initial assignments for each highway segment and submits them to the Board for approval. Once approved, the Department prepares a State Highway System Access Category Assignment Schedule. For example, the Department

might initially assign the entire secondary system to category four, but have different sections of the same primary route assigned to different categories. (C) Allows the Department as well as local governments to petition the Board to change their access category assignment. So in the example above, the Department could at a later date go back and identify certain segments of the secondary system that should be under a category 3 assignment. All local government requests are first reviewed by the Department.

**33.1-509. Obtaining an Access Permit.** (A) All access points to the State Highway System must have the Department's written approval of the requested access permit. (B) Prior to submitting a formal application, interested parties may request a preliminary conference with the appropriate Department personnel. The purpose of the conference shall be to review preliminary plans of an applicant. Applicants should provide preliminary maps, plans and other documents to illustrate the site, size and type of land use, estimated traffic volumes and vehicle types generated, existing and available access points, and other adjacent accesses. At the conference, participants will discuss Code requirements, site specific conditions, various options for access location and design, and the required items for the formal design. The preliminary conference does not bind either the applicant or the Department in evaluating the formal application submission. (C) Each applicant shall submit the completed access permit application and any required attachments to the appropriate resident engineer of the Department. Necessary attachments may include plans, maps, traffic studies, surveys, deeds, agreements, designs, documents, data, drainage, utilities and proof of insurance. The scale, location and anticipated impacts of the access proposal will determine the scope of the attachments required in the application. The applicant may be required to submit information needed to evaluate the impacts of the proposed access on the secondary system as well. All such submittals become the property of the Department. Items without such relevance on the approval or denial of the application or completion of the permit will not be requested. If the applicant is other than the surface rights owner of the property to be accessed, then the applicant must include written evidence of concurrence in the application by the surface rights owner. Complete names, addresses and telephone numbers of the property owner(s) and the applicant(s) shall be given on the application, along with the expected dates of construction and commencement of use of the access. (D) The Department may require from the applicant any additional information needed to evaluate the impacts of the proposed access on the highway system in regards to the regulatory purposes of the Code. (E) Misrepresentation of existing or future conditions or of information requested with the application shall be considered sufficient grounds for permit denial or revocation.

*Commentary:* (A) No permit is valid without the Department's written approval. (B) Provides for preliminary conferences to review the applicable issues for a specific permit, allows for earlier Department input. (C) Requires the applicant to submit all the necessary attachments for the Department to evaluate his or her application fully. If the information is not provided, the Department is not required to begin reviewing the permit. (D) Gives the Department flexibility in requesting more specific information. (E) Misrepresentation is grounds for denial or revocation.

**33.1-510. Processing Access Permits.** (A) The applicant shall submit the application and attachment(s) to the resident engineer for the county in which the work is to be performed. The



Department may refuse to accept the application when necessary and relevant information is missing from the application, or when there is no written evidence that the owner of the property's surface rights concurs in the application. When the application is considered complete, the Department shall date and stamp the application with the date of acceptance. A 45 day review begins with the acceptance of the application. (B) Upon acceptance of the complete application, the Department shall use the Code, and any other applicable Local, State and Federal laws and regulations for evaluating and acting on the application. The Department may grant the access as proposed, require design and location modifications as it considers appropriate, restrict one or more turning movements as necessary to reduce traffic and safety impacts, or deny the access, in accordance with this Code. The department shall complete its review and take final action to approve or deny the application within 45 days of acceptance. If modifications are required, the Department shall have 45 days to review the revised application. (C) Variance procedures, Article 4, may be considered for any design standard of this Code not applicable or feasible given specific proposed access site physical and traffic operation conditions. If an applicant wishes a variance from the standards of this Code, a request must be submitted as an attachment to the permit application form. (D) If the proposed access cannot meet the requirements or standards of the Code including variance criteria, the application shall be denied. (E) If the Department fails to act within 45 days from the date of acceptance of the complete application, including required modifications, the permit shall be considered approved and an appropriate permit issued in accordance with the design and construction standards of the Code. (F) If the Department approves the permit, the permit will be transmitted to the applicant for signature. It is the responsibility of the applicant to obtain the signatures of the permittee(s). The permittee(s) shall sign the permit if the terms and conditions are acceptable and return the entire permit with any required fee to the Department. In accepting the permit, the permittee agrees to all terms and conditions of the permit. If the Department has not received the signed copy and fee payment, if any, from the applicant within 60 days of the date of transmittal, the permit may be considered void. After receiving the signed permit and fee payment, the Department shall mark the permit paid, sign the permit, and return a copy to the applicant. If the permittee(s) does not agree to all the terms and conditions of the permit, the permit shall be considered denied. (G) The Department is authorized to designate responsible Department personnel for approval of the permit. (H) Denial of an application to enlarge, relocate, or modify an existing lawful access shall in no way impair the permit for or right to the existing access for its historical use. (I) The granting of an access permit conveys no rights, title or interest in state highway rights-of-way to the permit holder or property served. A permit for direct access to a state highway does not entitle the permit holder to control or have any rights or interests in any portion of the design, specifications or operation of the highway or roadway, including those portions of the highway built pursuant to the terms and conditions of the permit.

*Commentary:* (A) After a complete application is submitted to the resident engineer, there is a 45 day review process. (B) Department reviews the application based on this Code and other applicable regulations. (C) Applicant must request design variances at time of permit. (D) If the access does not meet the Code or variance it is denied. (E) After 45 days the permit is considered approved. (F) Due to the opportunity to place conditions and terms on the permit, the Department transmits the permit back to the applicant for signature, and once returned, the Department signs the permit and assigns a permit number. (G) Department is in charge of the permit review process and may modify it. This version is based on the process outlined in the

“Minimum Standards of Entrances.” (H) Application for permit modification does not affect existing permit. (I) By issuing the permit, the Department does not transfer any property interest to the applicant or restrict the Departments future use of the highway.

**33.1-511. Completion of Access.** (A) A permit shall be considered expired if the access is not under construction within one year of the permit issue date or before the authorized extension. The permittee may request a one-year extension from the Department, subject to its sole discretion to extend. No more than two one year extensions may be granted. Any requests for an extension must be in writing and submitted to the issuing authority before the permit expires. The request should state the reasons why the extension is necessary, when construction will begin, and include a copy of the approved permit. Extensions must be approved in writing. Any person wishing to reestablish an access permit that has expired must begin again with the application procedures. (B) The permittee shall coordinate all work within the state highway right-of-way with the Department and comply with Department work requirements and regulations. Construction of the access shall be completed in an expeditious and safe manner. (C) The Department may inspect the access during construction and upon completion of the access to ensure all terms and conditions of the permit are met. The Department is authorized to enforce the conditions of the permit during construction and to halt any access permit related activities that endanger public property or the public’s health and safety. (D) All highway related access improvements and appurtenances including pavement, curbs, gutters, sidewalks, shoulders, bike lanes, bike paths, drainage structures, ditches, traffic control devices, and auxiliary lanes, shall be within public right-of-way. Property required for highway access improvements shall be dedicated without cost to the Department, with the Department’s approval. (E) The construction of the access and its appurtenances as required by the terms and conditions of the permit shall be completed at the expense of the permittee. The Department may issue an order to prevent use of an access that fails to comply with terms and conditions of the permit and require the reconstruction of improvement of access to the required specifications of the permit. (F) The Department may adopt by regulation any additional requirements for the construction of the access consistent with this Code or state law.

*Commentary:* (A) Permits should be completed within one year of issue, with a maximum extension to three years. This allows the Department to manage changes to the use of a particular highway and provides for improved planning. (B) Access has to be completed in accordance with Department requirements. (C) Department has the right to inspect construction and enforce permit terms and conditions. (D) The access, as part of the highway system, must be dedicated to the Department. (E) Access construction is at the expense of the permittee. (F) Reserves power for the Department to make additional regulations.

**33.1-512. Appeals.** (A) Should the permittee object to the denial of a permit application by the Department or object to any of the terms and conditions of a permit placed there by the Department, an appeal must be made in writing within 30 days to the District Administrator, if the permit was denied by the resident engineer, and the Chief Engineer, if denied by the District Administrator. The request shall include the reason for the appeal and may include changes,

revisions, or conditions that would be acceptable to the permittee. A denial by the Chief Engineer may be appealed to the Commissioner for final agency action. The Board may modify appeal procedures.

*Commentary:* Appeals of denied permits or unaccepted terms and conditions must be made within 30 days and state the reason for the appeal.

**33.1-513. Use of Access.** (A) It is the responsibility of the property owner and permittee to ensure that the use of the access to property is not in violation of the Code, permit terms and conditions. The terms and conditions of any permit are binding upon all assigns, successors-in-interest, heirs and occupants. If any significant changes are made or will be made in the use of the property which will affect access operation, traffic volume, and or vehicle type or length, the permittee or property owner shall contact the Department to determine if a new access permit or physical modifications to the access are required. (B) The property owner may be required to reconstruct or relocate access to conform to the Code if a change in use of the property results in a change in the type or nature of access operation. A change in use may include, but is not limited to, structural modifications, remodeling, a change in the type of business conducted, expansion of an existing business, a change in zoning, a division of the property creating new parcels or a state of non-use for four years or more, but does not include modifications in advertising, landscaping, general maintenance or aesthetics that do not affect internal or external traffic flow or safety.

*Commentary:* (A) Permittee is responsible for compliance with terms and conditions of the permit and is to notify the Department if modifications to the access are required. (B) A change in use of the property may require modification to access. The permit process should be responsive to change

**33.1-514. Access Violations.** (A) Action pursuant to this Code initiated by the Department against an existing legal access either to revoke, suspend, limit, reconstruct, relocate or modify the access may be accomplished under the Administrative Process Act or the powers of eminent domain. (B) The Department may install barriers across, or remove, any access that is in violation of this Code or is an immediate threat to public health, safety, and welfare. The property owner shall be required to reimburse the Department for the expense of closing any access in violation of the permit or the Code.

*Commentary:* (A) The Department can take action to revoke or modify an existing access. (B) The Department can close an access point in violation of this Code.

**33.1-515. Access Control Plans.** (A) The Department may, at its discretion, develop an access control plan for a designated portion of state highway. An access control plan provides the Department and the local government with a comprehensive roadway access design plan for a designated portion of state highway for the purpose of bringing that portion of highway into conformance with its access category and its functional needs to the extent feasible given existing

conditions. The plan should achieve the optimum balance between state and local transportation planning objectives, and preserve and support the current and future functional integrity of the highway. (B) The access control plan shall indicate existing and future access locations and all access related roadway design elements, including traffic signals, that are to be modified and reconstructed, relocated, removed, added, or are to remain. To the extent practical the plan shall meet the functional characteristics and design standards of the assigned category and conform to all standards and specifications in Article 4. (C) The plan will be developed in accordance with the Administrative Process Act. (D) The plan must receive the approval of the local government to become effective. Where an access plan is in effect, all actions taken in regard to access shall be in conformance with the plan and Article 4 of the Code unless a variance under Article 4 is approved. Modifications to the plan must receive the approval of both the local government and the Department.

*Commentary:* Allows the Department and local government to develop an access plan for a highway segment and requires future actions by both sides to be in compliance with the plan, unless they both agree to modify it.

**33.1-516. Permit Fees.** The Department shall establish a reasonable schedule of fees for access permits required by the Code. The cost shall not exceed the costs of the administration of the permit program.

**33.1-517. Interchange Management Plans.** (A) An interchange management plan is required for any new interchange or significant modification to an existing interchange. The interchange and management plan must receive the approval of the Chief Engineer. (B) An interchange management plan is a simplified roadway and right-of-way concept plan for the intersection of a primary highway with a lower function highway where an interchange structure exists or is to be built or modified. Such plans shall include schematics for the location of all future and current access locations; anticipated traffic patterns, traffic signal locations, signing, striping and the acquisition of access rights where necessary; and any other controls that will ensure the continued protection of the functional integrity of the interchange. The interchange management plan shall be developed by the Department, presented for review to the local governing body and published as part of the locality's six-year road improvement plan. (C) Plan development procedures may follow the requirements of Access Control Plans, where they apply. The design of the plan should be developed using desirable level standards of traffic operation planning and roadway design standards where feasible. Access rights should be obtained for a sufficient distance along the lower functioned highway to preserve the highway capacity.

*Commentary:* (A) The plan is essential to preserving highway operational capacity. The local government should be allowed to review the plan, but VDOT is left with the authority to develop and implement the plan.

**33.1-518. Department Highway Construction Projects.** (A) If in the course of highway improvements it is necessary to reconstruct, improve, relocate, close or bring into conformance with this Code an existing access(s), the Department will initiate appropriate procedures, permits and agreements. (B) An access may not be upgraded to serve a greater purpose, unless such improvement is allowed by this Code. The cost of any upgrade shall be at the expense of the property owner if necessitated by changes or anticipated changes in the use of the property. (C) Public highway reconstruction project is not required to bring local access into full compliance with current Code standards, but only to the extent reasonable within the limitations and scope of the project, consistent with design parameters and available public funds. (D) Where there are multiple accesses to the same ownership, public highway reconstruction may result in the combining and reduction of the number of driveways or modification of driveway size and design in order to meet necessary design and safety standards.

*Commentary:* During highway improvement projects, the Department is authorized to modify access to the extent reasonable and consistent to this Code.

### **Article 3**

#### **Highway Access Categories**

**33.1-519. Purpose.** This article provides for a hierarchy of highway categories for access control purposes, with category one being the most access restrictive. The number, spacing, type, and location of access points and traffic signals have a direct and often significant effect on the capacity, speed, and safety of the highway and are managed by the category system of this article. The location, operation and design standards within each category are necessary to ensure that the highway segment will continue to function at the category assigned. Each segment of state highway will be assigned a category as provided in Article 2 of the Code. These assignments will be listed in the State Highway System Access Category Assignment Schedule, created by the Department pursuant to Article 2.

*Commentary:* Directs the Board to adopt categories for access control purposes, based on the listed factors. This planning tool will allow a highway to continue to function at its assigned level by managing new access points to it.

**33.1-520. Use of Article 3.** The existing highway is not required to meet the design standards of the assigned category at the time it is assigned. All new access permitting and other access design decisions shall meet the design standards in this article for the assigned category of the highway segment. A proposed access that may be allowed under Article 3 criteria, but fails to meet the design or safety criteria of Article 4, should be denied unless a design variance can be approved. Nothing in this Code is intended or shall be interpreted as requiring the Department to authorize a traffic signal or left turn movement at any location. No traffic signal shall be authorized without the completion of an analysis of traffic signal system operation, design and safety, or which does not meet MUTCD signal warrants.

*Commentary:* This article is a planning tool that assigns access standards for highway segments based on the highways purpose in the system. New accesses must comply with the access category standards and old access may be retrofitted by the Department to comply.

**33.1-521. Category Design and Operation Standards.** (A) The Board shall adopt category design and operation standards for the five access categories of this article. The Board shall then assign each highway or highway segment within the State Highway System to one of the access categories. These categories are for access management purposes, and shall not be read to eliminate, replace or otherwise alter the purpose of highway categories described in this article. The Board shall establish access design standards respecting the type of access permitted, the spacing of driveways, and other access characteristics for each category. The standards at a minimum shall include maximum and minimum speeds, desired average travel speed, driveway spacing, median openings, median type, connection spacing, corner clearance, auxiliary lane requirements, allowable turning movements, restricted turning movements, traffic signal spacing and interchange spacing. (B) The Department shall prepare the draft category design and operation standards, consistent with this article, for the Board's approval. The Department shall design the standards to achieve the fundamental goal respecting access and traffic flow for each of the categories of highways. Upon approval by the Board, the standards shall be published by the Department of Transportation and made available to the public.

*Commentary:* (A) Currently state roads are categorized through a mix of funding definitions and functional classifications. The Board shall design standards "respecting access and traffic flow for each category." The categories will create access standards that match the highway's functional categories. This article gives the Department the authority to have different access standards for different segments of a highway, based on the functional determinations of the Board. (B) The Department drafts the standards for the Board's approval.

**33.1-522. Use of Access Categories.** Current traffic volume and speed on a highway or highway segment, or the current form of the highway or highway segment, shall not prohibit assigning of that highway or highway segment to a higher access category. The Board may assign a highway or highway segment to a category based on reasonable forecasted travel needs, planned upgrading, planned or expected future land development, other factors relating to future use of the highway or abutting land, or for other planning factors.

*Commentary:* This section allows the Board to designate a highway for a future use versus current use. The article provides for managing future access to a highway, even if it is not in compliance with the assigned category. In addition, the category set by the Board will provide long range planning for modifications to the highway. For example, if a segment of highway is experiencing rapid development, the Board can adopt a category that takes into account the anticipated development and results in planning new accesses to the higher category.

**33.1-523. Category One (Interstates and Limited Access).** Highways that are part of the Primary System and have capacity for high speed, high volume traffic over long distances, including interstate, intrastate, interregional, intercity and certain intracity travel. This category includes rural and urban interstate highways, urban and rural by-passes, limited access highways, and principal arterials that meet or are intended to meet the traffic goals of this category. Service to abutting land is entirely secondary to the safe, efficient and effective movement of traffic. Land abutting category one highways has no right to direct access.

*Commentary:* All interstate and limited access highways are assigned to this category. Other primary highways can be assigned to this category. For a given highway, certain segments may have this category while other segments have lower categories. The Department will propose technical standards such as access ramps, opposing traffic movements, grade separation, median design, and minimum speed differentials for each category.

**33.1-524. Category Two (Principal Arterials).** (A) Highways that supplement the federal interstate system by providing traffic corridors for interstate travel, intrastate travel between principal metropolitan centers, interregional travel and intracity travel between major activity centers. This category includes rural and urban principal arterials. Service to abutting land is subordinate to the safe, efficient and effective movement of through traffic consistent with the purpose of the highway. Direct private access from abutting property shall not be granted unless there is no reasonable alternative means of accessing the general highway system. This is the highest category of road for which at-grade intersections are allowed. (B) All vehicular overpasses, underpasses, bridges, structures and ramps are designated category two. No additional access rights shall accrue and no additional access shall be provided upon the splitting or dividing of existing parcels or contiguous parcels under the same ownership or controlling interest. All access to newly created properties shall be provided internally from the existing access or a new access determined by the permit application consistent with this category. All permits to this category are conditioned so that if the highway is reconstructed, the direct access location will be closed and alternative access may be required to a frontage road or by other available means. Opposing roadway traffic movements should be separated by physical constraints such as grade separation or a median separator of sufficient design to physically prevent illegal and opposing movements. Intersections with heavy traffic volumes should have either grade separations or interchanges. Signalized intersections may be programmed to give the priority route a better level of service than the lesser route, to include "rush hour" traffic flow. (C) The Department will draft standards for the Board's approval consistent with this category to include minimum desired speed without traffic signals, median spacing and crossovers, minimum desired speed with signals, desired spacing of intersecting highways and streets, private access criteria, right turn only criteria, and left turn criteria.

*Commentary:* While not reaching the control of category one, this category subordinates the abutting land owners rights to not just safety, but also to the efficient and effective movement of traffic. The Board has authority to either designate an entire highway or a certain segment to this category.

**33.1-525. Category Three (Arterials).** (A) Highways that provide access to the arterial network and serve as intercommunity corridors in urban areas, and intracounty corridors in rural areas. These roads include urban minor arterials and rural arterials. Direct private access is secondary to the safe, efficient and effective movement of traffic consistent with the goal of the road. Access, where possible, should come from lower level streets. (B) No additional access rights accrue upon splitting or dividing an existing parcel or contiguous parcel under or previously under the same ownership or controlling interest. All access to the newly created properties shall be provided internally from any existing access or a new access determined by Code Design standards or by permit application and consistent with this category. A change in use of the access may require reconstruction or relocation of the access. (C) The Department will draft category three design and operation criteria for the Board's approval.

*Commentary:* This category allows access management to preserve the function of category three roads which are often very desirable for commercial development.

**33.1-526. Category Four (Heavily Developed Arterials).** Highways that provide access service within residential, commercial and industrial areas of urban areas, and provide access to local roads and smaller towns in rural areas. Category four roads include urban collectors and rural minor collectors. These routes are generally not of regional, state, or national significance. This category will typically be assigned within developed portions of cities and towns where there is established development making the assignment of a higher functional category unrealistic or unnecessary. This category is not to be assigned to encourage increased access, but should be used based on current developed conditions. Direct private access must be balanced against the safe, efficient and effective movement of traffic consistent with the goal of the road. (B) Direct access will generally be limited to right turns. Left turns may be permitted subject to Department regulation and level of service.

*Commentary:* Grants more liberal access to roadways in rural areas and on roadways which do not connect major activity centers. However, the category is still anchored to safe, efficient, and effective movement.

**33.1-527. Category Five (Secondary Roads).** Highways that include urban and rural secondary roads. They provide direct access to adjacent land, are not intended for long distance or high volume traffic movements, and generally provide access to collectors and arterials. Access shall be denied only for reasons of protecting the public safety, health or welfare. The efficient flow of traffic is secondary to private access. Preference in traffic signal location, timing and operation shall be given to highways with a higher access category.

*Commentary:* Unlimited access from private property to a state maintained road, except for safety. Access along roadway is not projected to impact the state highway system. Consistent with city and county land use planning authority, any negative impact of access is only felt by local travel. Must comply with design standards of Article 4.



**33.1-528. Category Six (Local and Frontage Roads).** Highways that include local, service, and frontage roads. These roads have access as their dedicated function and shall be treated in a fashion similar to Category Five Roads.

## **Article 4**

### **Access Design Standards and Specifications**

**33.1-529. Purpose.** The Department shall develop design and construction standards and specifications to protect the public health, safety, and welfare; to maintain smooth traffic flow; to maintain highway right-of-way drainage; to protect the functional level of the highway; and to promote, improve, and maintain highway safety.

*Commentary:* Broadens the scope of the “Minimum Standards for Entrances” to include traffic flow and the functional level of the highway.

**33.1-530. Creation of Access Design and Construction Standards and Specifications.** The Board shall approve design and construction standards and specifications for private direct access to state highways. The standards shall be published in accordance with the Administrative Process Act and may be modified as required. If an access is acceptable under Article 3 of this chapter, the actual design and construction of the access must also conform to the standards established in this article. Nothing in this article shall be read to override, alter, modify or avoid the requirements and standards described in Article 3 and related Department regulations.

*Commentary:* Provides statutory recognition of Board's authority to develop access design standards for state highways. The Department will draft the necessary standards for the Board's approval. Basically, the Minimum Standards will be upgraded to reflect the additional criteria of the Access Categories.

**33.1-531. References.** The most recent edition of the references in Article 1 may be used when considering the design standards to be applied to a variance under this article.

**33.1-532. Use of Article 4.** (A) If the Department determines that an application for access meets the access category of Article 3, then Article 4, shall be used to precisely locate, design, and construct the access. A proposal for access may not 1) presume a lower posted speed limit than currently posted; 2) request a lower speed limit in order to accommodate the access unless specifically directed in writing by the department; 3) propose a decrease in service level; or 4) propose a reduction in traffic safety. (B) If an access application meets Article 3 criteria and is unable to comply with Article 4, the permit shall be denied unless a variance is authorized pursuant to this article.

*Commentary:* An access must meet both the access category and the design standards. The applicant cannot request a lower speed limit in his or her application.

**33.1-533. Design Factors Subject to Regulation and Control.** The Commonwealth Transportation Board shall establish standards and specifications for access to the State Highway System, to maintain the flow of traffic according to each highway's functional requirements and categorical goal as established by Article 3, to protect and promote public safety, to maintain proper drainage, and for other purposes. The standards and specifications shall include, but are not limited to the following design elements: (A) Access width, for highways with and without curbs; (B) Access radii, based on the longest vehicle to use the access on a daily basis; (C) Access surfacing, referring to the material used for the surface of the access; (D) Auxiliary/Speed change lanes, meaning a separate lane for vehicle entering or leaving a highway to either increase or decrease speed, including standards and specifications for: general speed change requirements; deceleration and acceleration lanes for right turning vehicles; deceleration and acceleration lanes for left turning vehicles; speed change lane length; taper design; median design; storage lane length; and grade adjustment; (E) Stopping sight distance, referring to the distance necessary for a driver of a vehicle to notice and then stop or slow down for another vehicle entering the intersection from the access, based on both perception and reaction time, and the distance required for the vehicle to stop; (F) Minimum Access spacing; (G) Other access design elements which have an effect on the flow of traffic, or the public safety.

*Commentary:* Most of the factors listed are currently covered by the "Minimum Standards for Entrances." This statutorily recognizes the Board's authority to establish design requirements for the items listed. The Department would draft and submit standards to the Board based on the listed criteria, which might be based on the current "Minimum Standards" or any desired revisions.

**33.1-534. Drainage.** Each access shall be constructed in a manner that shall not cause water to enter onto the roadway or shoulder and shall not interfere with the existing drainage system on the right-of-way or any adopted local drainage plan. The permittee shall provide at his own expense, drainage structures for access that will become an integral part of the existing drainage system. The type, design, and condition of these structures shall meet the approval of the Department. The highway drainage system is for the exclusive protection of the state's right-of-way. It is not designed or intended to serve the drainage requirements of abutting or other properties beyond which has historically flowed to the state right-of-way. Drainage to the state highway right-of-way shall not exceed the undeveloped historical flow. The use of stormwater management practices shall be considered to control this flow from developed properties.

**33.1-535. Maintenance & Permit Transfer.** The permittee, his heirs, successors-in-interest and assigns of the property serviced by the access shall be responsible for meeting the terms and conditions of the permit, and for maintenance and cleaning of the access as required by daily use, natural and unnatural events, and other causes. The access must be maintained according to the standards and specifications at the time the permit was granted, unless the use or nature of the

property is changed, or the Commonwealth changes the function or nature of the highway. In such a case, the access must meet the standards of this article. Nothing in this article shall be interpreted to replace, alter, eliminate or transfer maintenance, funding or other responsibilities of the Commonwealth or its agents, or of the permittee, his heirs, successors-in-interest and assigns of the property serviced by the access, which are established by statute or otherwise.

*Commentary:* This requires that the landowner maintain his or her access in accordance with his or her permit. This provision conditions the owner's permit on accepting responsibility for meeting any functional change to the highway. The permit remains in force when the property's ownership transfer, but not if the nature of use changes. The permittee does not have a property right in his or her permit and must comply with any change to the highways access category.

**33.1-536. Variance Procedures.** (A) If an applicant wishes to seek a variance from the standards of the Code, a request must be submitted as an attachment or addendum to the permit application form. The request for variance shall state specific reasons why a variance is appropriate and include documentation to support such reasons. The request shall address the variance criteria of this subsection. The request and supporting documents should be submitted at the time of the permit application. Variances cannot be issued for procedural requirements. A separate variance request may be necessary where several variances are requested and where the variances may be approved in whole or in part. (B) In consideration of a variance request, the Department shall determine if (1) absent approval of the variance request, there is an exceptional and undue hardship on the applicant, and (2) a variance would meet acceptable engineering, operation and safety standards, and (3) a variance is reasonably necessary for the convenience and welfare of the public. A variance may not be contrary to the public interest, shall consider the locality land use master plan, shall consider the function of the highway and is subject to and limited by the purposes of this code as set forth in article 1. Deference is to be given to the decision of the Department regarding safety. (C) When a variance is approved, the reasons for granting the variance shall be clearly stated and included in the Department files. Restrictions and conditions on the use of the permit should be imposed as necessary to keep potential safety problems to a minimum. By the terms and conditions of the permit, the permittee may be required to improve, modify, eliminate, or correct the condition giving rise to the variance when it becomes evident that the reason for the variance no longer exists. If the variance and remainder of the application meets Code criteria, a permit shall be approved and the approved variance included in the permit file. (D) If a variance is granted to allow direct highway access where the access proposal cannot meet Code standards, or when the property would be without reasonable access absent the variance, the access permit may contain specific terms and conditions providing for its expiration at such times as the necessity for the variance no longer exist. (E) If the variance request is denied, the Department shall continue to process the permit application in a standard manner and may issue a permit if it can be approved without a variance. (F) The recommendations and actions of the Department regarding the variance shall be in writing and shall be included as part of the permit application files. Variance approval may only be authorized by a District Administrator. The Department may include in its actions any special terms and conditions that shall be imposed on the permit if approved.

*Commentary:* This provision allows the District Administrator to vary the access design in accordance with the Department's variance procedures. Limited flexibility is important given the state wide application of the Code. However, variances are to be the exception and not the rule. Special terms and conditions can be placed on the variance, such as time limits, or periods of use.

**33.1-537. Special Traffic Sources and Hazards.** The Board is authorized to make additional regulations and design standards for unique traffic sources or hazards. The Department at the request of the Board or upon its own initiative shall draft such regulations or standards for the Board's review, setting out the special circumstances that require the regulations, the means by which the regulations would promote the public's health, safety, or welfare, and such other information as the Board requires.

*Commentary:* Examples of special traffic sources might include drive-in movie theaters, truck or bus stops, high schools, outdoor concerts and festivals, sports stadiums, large shopping complexes, points of entry for heavy equipment, such as concrete plants or rock quarries that might require longer acceleration or deceleration lanes or wider shoulders.

## **APPENDIX B**

### **MODEL ACCESS MANAGEMENT AUTHORIZING LEGISLATION**

**A proposal for a legislative grant of express authority to have the Commonwealth Transportation Board develop and implement a comprehensive access management program**

**This approach is presented as an alternative to the proposal in Appendix A.**



# **An Act of Assembly**

## **Code of Virginia**

### **Title 33.1**

#### **Highways, Bridges and Ferries**

##### **Chapter 14**

##### **Highway Access Management Code**

###### **Article 1**

**§ 33.1-501. “Highway Access Management Program” defined.**—An access management program is defined as a comprehensive set of regulations and design standards that coordinate, maintain, and enhance the operation of the State Highway System by establishing a hierarchy for the state highway system, controlling the location and type of access to a highway based on a highway’s functional category, and regulating the allowed use and design of the proposed access.

**§ 33.1-502. Comprehensive Access Management Program.** — The General Assembly declares it to be in the public interest that a comprehensive access management program for the control and regulation of access points to the state primary and secondary highway systems be developed. The construction of new residential subdivisions, businesses, and other activity centers along state highways creates demands for connections to state highways and the multiplication of such connections degrades traffic flow, aggravates congestion and stimulates further suburban growth. When new accesses are constructed and traffic signals erected, the speed and capacity of highways decrease, and congestion and hazards to the traveling motorist increase.

**§ 33.1-503. Power and Authority of Board.** — The Commonwealth Transportation Board shall develop a comprehensive program for managing, regulating and coordinating connections of access points to the State Highway System by establishing the procedures and standards necessary to protect the public health, safety and welfare. The comprehensive highway access management program covers entrance roads servicing residential subdivisions, businesses, and activity centers. The program shall include at a minimum the following:

1. A program to regulate and coordinate the various types of access connection points to the State System of Highways;
2. A hierarchy of highway categories for access control purposes which include the following factors: the number, spacing, type, and location of access points and traffic signals and their impact on a highway’s capacity, speed, and safety;
3. Access control plans and interchange management plans indicating existing and future access locations and all access related highway design elements including traffic signals;

4. Highway safety and utilization criteria as a basis for reviewing and approving requests for new highway connections;
5. Methods to require developers to pay highway impact fees equal to the cost of all highway improvements necessitated by the connection, whether in the immediate vicinity of the connection or elsewhere, for any subdivision or commercial development that is planned to have fifteen or more residential units for which no fully-funded access has been included in the current six-year highway improvement plan;
6. Guidelines for allowing local governing bodies to develop more restrictive access management programs that coordinate access points with their zoning and comprehensive land use plan; and
7. Design standards for the various types of access based on the highway's classification and the intended use of the proposed access.

**§ 33.1-504. Implementation of Access Management Program.**—The Board shall begin implementation of the program by July 1, 2000.



## **APPENDIX C**

### **MODEL RESOLUTION**

**Proposed house joint resolution to authorize a study of the desirability and feasibility of adopting a comprehensive access management program**



## HOUSE JOINT RESOLUTION

*Establishing a joint subcommittee to study control of access points to the state primary and secondary highway systems and the establishment of a comprehensive access management program.*

WHEREAS, the lack of a comprehensive access management program for the State Highway System and the proliferation of driveways and other direct accesses to the system is a major factor in highway accidents and has been the greatest single factor behind the functional deterioration of state highways throughout the Commonwealth; and

WHEREAS, increased use of and dependence upon a transportation system based on the automobile has contributed to the phenomena of suburban growth and sub-urbanization of rural areas; and

WHEREAS, the construction of new residential subdivisions, businesses, and other activity centers along state highways creates demands for the connection of state highways with the roads and entrances serving those subdivisions, businesses, and activity centers; and

WHEREAS, the multiplication of such connections degrades traffic flow, aggravates congestion; and stimulates further suburban growth; and

WHEREAS, when new accesses are constructed and traffic signals erected, the speed and capacity of highways decrease, and congestion and hazards to the traveling motorist increase; and

WHEREAS, as a result, significant amounts of tax dollars must be spent to widen highways, construct by-passes, reconstruct portions of highways, and provide additional operation and safety measures; and

WHEREAS, existing statutes, policies, and procedures for slowing and ultimately managing suburban growth and sub-urbanization of rural areas by establishing standards for and placing limits upon connections between state highways and the roads serving residential subdivisions, businesses and activity centers; including the "Minimum Standards of Entrances to State Highways" and the "Land Development Manual" have been criticized as being inadequate for existing and projected traffic growth; and

WHEREAS, the establishment of a comprehensive access management program enhances the development of an effective transportation system and serves to preserve the traffic carrying capacity of the State Highway System by providing a reasonable and sound balance between safe and efficient transportation services and land development access needs; and

WHEREAS, a comprehensive access management program also serves to reduce causes and costs of traffic accidents, personal injury, property damage, highway maintenance, and acts to lengthen the effective life of transportation facilities thereby reducing government capital costs; and

WHEREAS, a Joint Legislative Audit and Review Commission Report titled “Improvement of Hazardous Roadway Sites in Virginia” raised the issue of the adequacy of VDOT’s procedures for administering and enforcing statutory provisions pertaining to commercial entrances and their impact on highway safety; and

WHEREAS, a Highway Access Management program should regulate access to and from state highways by providing the procedures and standards necessary to protect the public health, safety and welfare, to maintain smooth traffic flow, to maintain highway right-of-way drainage and to protect the functional level of the State Highway System while meeting state, regional, local, and private transportation needs and interests; and

WHEREAS, the Colorado, New Jersey, and Florida Departments of Transportation have successfully implemented a comprehensive highway access management program which has resulted in improved highway safety and utilization; and

WHEREAS, it appears highly desirable that the Commonwealth Transportation Board and the Virginia Department of Transportation be given power and vested with the responsibility of developing a comprehensive program for managing, regulating and coordinating connections of access points to the State Highway System; now therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, that a joint subcommittee be established to study the need for and determine the form of a comprehensive highway access management program for control of connections between access points to the State Highway System to include entrance roads servicing residential subdivisions, businesses, and activity centers. The joint subcommittee’s deliberation shall include, but not necessarily be limited to:

1. The desirability and feasibility of developing a comprehensive highway access management program to regulate and coordinate the various types of access connection points to the State System of Highways; and
2. The desirability and feasibility of establishing a hierarchy of highway categories for access control purposes which include the following factors: the number, spacing, type, and location of access points and traffic signals and their impact on a highway’s capacity, speed, and safety; and
3. The desirability and feasibility of establishing access control plans and interchange management plans indicating existing and future access locations and all access related highway design elements including traffic signals; and
4. The desirability and feasibility of establishing highway safety and utilization criteria as a basis for reviewing and approving requests for new highway connections; and
5. The desirability and feasibility of allowing local governing bodies or the Department of Transportation to require developers to pay highway impact fees equal to the cost of all highway improvements necessitated by the connection, whether in the immediate vicinity of

the connection or elsewhere, for any subdivision or commercial development that is planned to have fifteen or more residential units for which no fully-funded access has been included in the current six-year highway improvement plan; and

6. The desirability and feasibility of allowing local governing bodies to develop more restrictive access management programs that coordinate access points with their zoning and comprehensive land use plan.

The joint subcommittee shall be composed of five members as follows: three members of the House of Delegates, to be appointed by the Speaker of the House; and two members of the Senate, to be appointed by the Senate Committee on Privileges and Elections.

The direct costs of this study shall not exceed \$\_\_\_\_\_.

The joint subcommittee shall complete its work in time to submit its findings and recommendations to the Governor and \_\_\_\_\_ Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may withhold expenditures or delay the period for the conduct of the study.

The Division of Legislative Services shall provide staff support for the study. All agencies of the Commonwealth shall provide assistance to the joint subcommittee.



## **APPENDIX D**

### **HIGHWAY ACCESS CLASSIFICATION SYSTEMS**

**Highway access classification systems adopted by Colorado, Florida, and New Jersey for comparative purposes**





## **Colorado Highway Access Classification System**

| <i>Category</i> | <i>Description</i> |
|-----------------|--------------------|
|-----------------|--------------------|

- |    |                                                                                                                                                                                                                                                                                                              |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Interstate and other freeways. Often a staged design for upgrade to category 1. Control of private property by acquiring access is standard practice. At grade intersections allowed at 1 mile (rural) or ½ mile (urban) intervals.                                                                          |
| 2. | Urban and most rural arterials. About 75% of the state highway system. Direct private access is denied under most circumstances. Signals are at ½ mile intervals.                                                                                                                                            |
| 3. | Facilities which are more urban in nature. Direct access drives generally limited to one per parcel, unless access does not have the potential for signalization, left turns would not create safety or congestion problems and an alternative to the left turn would cause operational and safety problems. |
| 4. | Frontage and other service roads where access is a prime function.                                                                                                                                                                                                                                           |

## **Florida Highway Access Classification System**

1. Freeway facilities. This category is further broken down into four subcategories with interchange spacing requirements of between one and six miles.
2. Restrictive median with service roads. Minimum connection spacing 660 feet. Minimum spacing for directional opening in median 1320 feet. Minimum spacing for full opening in median 0.5 miles. Minimum signal spacing 0.5 miles.
3. Restrictive median. Minimum connection spacing 440 feet. Minimum spacing for directional opening in median 1320 feet. Minimum spacing for full opening in median 0.5 miles. Minimum signal spacing 0.5 miles.
4. No median. Minimum connection spacing 440 feet. Minimum signal spacing 0.5 miles.
5. Restrictive median. Minimum connection spacing 245 feet. Minimum spacing for directional opening in median 660 feet. Minimum spacing for full opening in median 0.25 miles. Minimum signal spacing 0.25 miles.
6. No median. Minimum connection spacing 245 feet. Minimum signal spacing 0.25 miles.
7. Both median and non-median controlled facilities. Minimum connection spacing 125 feet. Minimum spacing for directional opening in median 330 feet. Minimum spacing for full opening in median 0.125 miles. Minimum signal spacing 0.25 miles.

### **New Jersey Highway Access Classification System**

- O. Freeway, full control of access.
- I. Access via intersecting highway or street; direct access only when there is no alternative available.
- II. Right-turn only private access drives.
- III. Driveways with provision for left turn access from a state highway via a jughandle.
- IV. Driveways with provision for left turn access from a state highway via a left turn lane. Left turns from the site may be allowed.
- V. Driveways with left turn access limited only by spacing and safety considerations.
- VI. Driveway access limited only by edge (corner) clearance and safety considerations. Roads which have local access as there primary function.