



VDOT Land Use Regulations

February and March 2012

VDOT Land Use Regulations

Outline of Presentation

- Overview
- Traffic Impact Analysis
- Secondary Street Acceptance Requirements
- Access Management
- Land Use Permits
- Changes in Limited Access

VDOT Land Use Regulations

Goals for Today's Training

- What's changed?
 - Regulatory changes in 2011
- Refresher
 - Theory and basic application
- Consistency
 - Outcomes
 - Processes

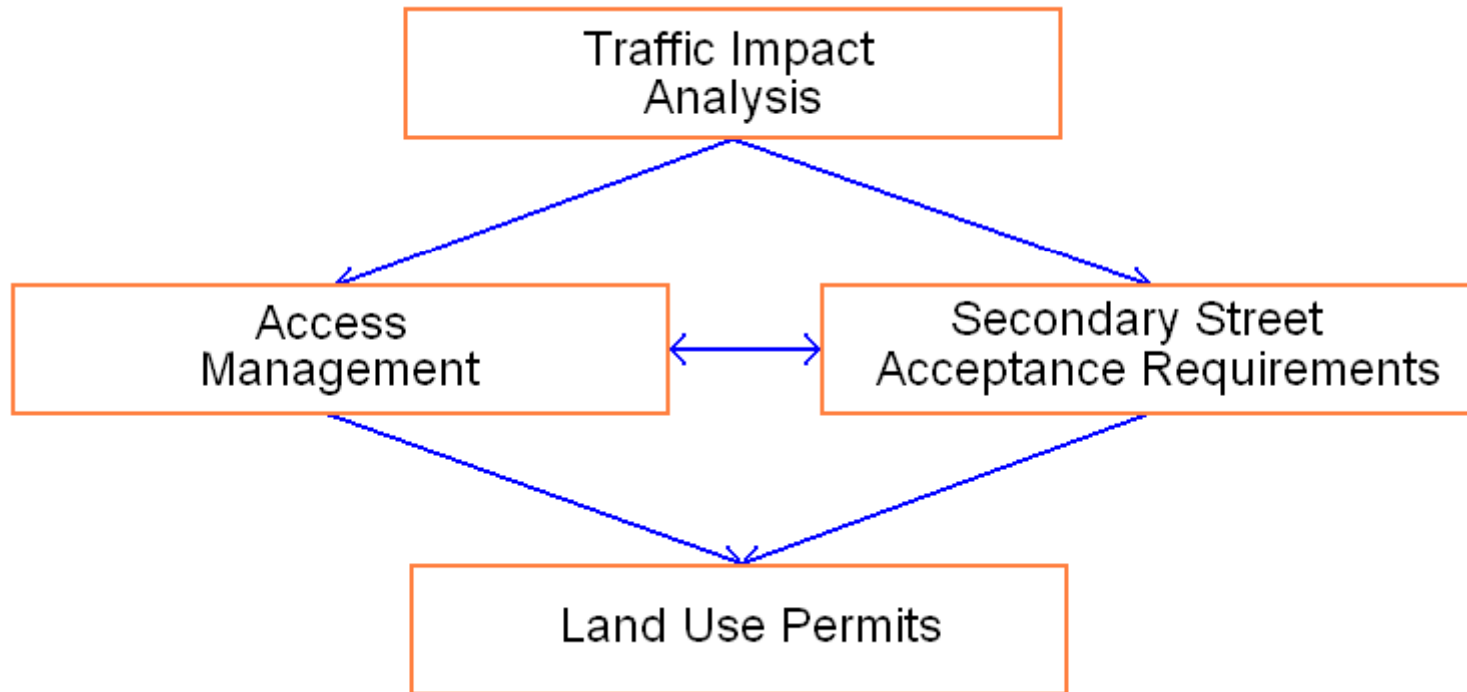
VDOT Land Use Regulations

VDOT's Land Use Regulations

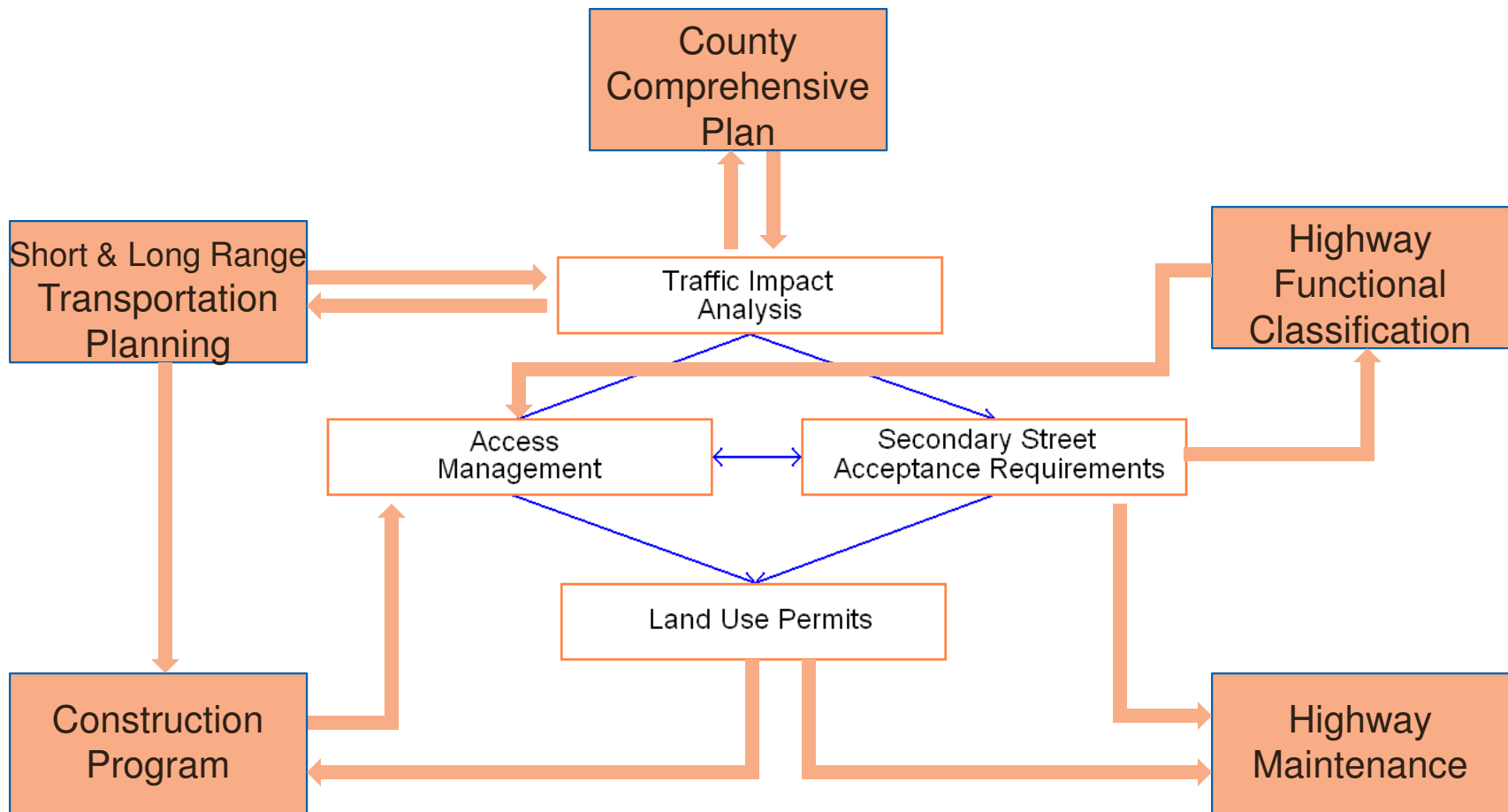
<http://www.viriniadot.org/projects/landuse.asp>

- Traffic Impact Analysis (Chapter 527)
 - Provide traffic information on land use proposals
- Secondary Street Acceptance Requirements
 - Requirements for streets to be accepted by VDOT
- Access Management
 - Regulate entrances/connections to state highways
- Land Use Permits
 - Regulate activities allowed to occur on highway R/W

How VDOT Land Use Regulations Relate to Each Other



How VDOT Land Use Regulations Relate to Other Processes



VDOT Land Use Involvement

Authorized by Titles 15.2 and 33.1 of the Code of Virginia

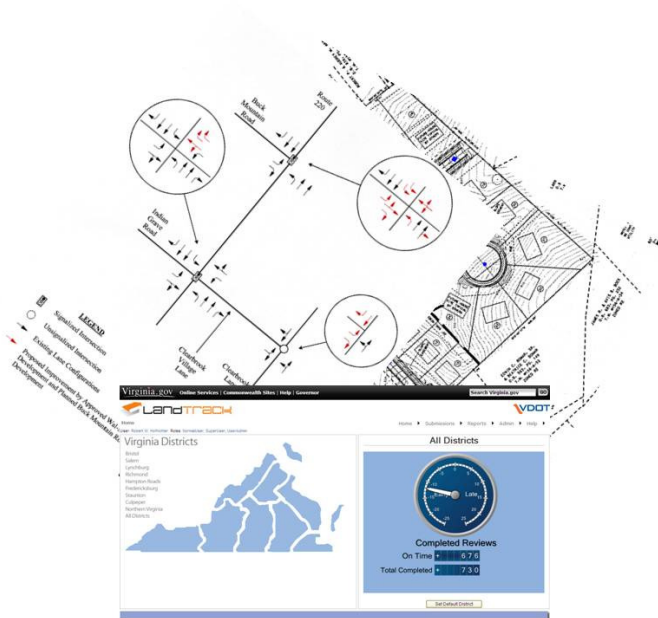
- Comprehensive plans and amendments
 - Provide assistance with transportation plan (at request of locality - § 15.2-2223)
 - Review proposal (at request of locality or if Ch. 527 triggered - § 15.2-2222.1)
 - Review “official map” (required - § 15.2-2237 for counties that have “official map”)
- Zoning
 - Review proposals (at request of locality or if Ch. 527 triggered - § 15.2-2222.1)
- Site plans
 - Review proposals (at request of locality - § 15.2-2258 and § 15.2-2286)
- Subdivisions
 - Review of preliminary plats (at request of locality - § 15.2-2260)
 - Review and approval (required for streets intended for state maintenance - § 33.1-70.3 or others at request of locality - § 15.2-2259)
- Entrances
 - Review and approval (required - §§ 33.1-197 through 33.1-198.1)

VDOT Land Use Involvement – Plan Review

- Plan or plat review for two purposes
 - As locality's transportation consultant
 - For VDOT regulatory activity
 - Subdivision street development (SSR / SSAR streets)
 - Site access (Access Management / LUPR)
- Nature of comments depends upon purpose of review
 - Should (recommended)
 - Shall (required)
- Plat signing
 - Acknowledge review (not approval of plat)

Traffic Impact Analysis Regulations (Chapter 527)

<http://www.virginiadot.org/projects/chapter527/default.asp>



Contact:
Paul Grasewicz

Traffic Impact Analysis Legislative History

2006 General Assembly: Chapter 527 creates new § 15.2-2222.1 in the Code which directs the VDOT Commissioner to develop and implement traffic impact analysis regulations for development proposals that will have a substantial affect on state highways, as of July 1, 2007

2007 General Assembly: Chapter 792 allows VDOT to phase implementation, with full implementation by January 1, 2009

2011 General Assembly:

- Chapter 647 removes site plans, subdivision plats, and plans of development from TIA regulations;
- Chapter 870 requires VDOT and CTB to review and revise based upon public input;
- Chapter 888 requires a lesser level of review for zoning actions that are consistent with comprehensive plan change that was previously reviewed by VDOT.

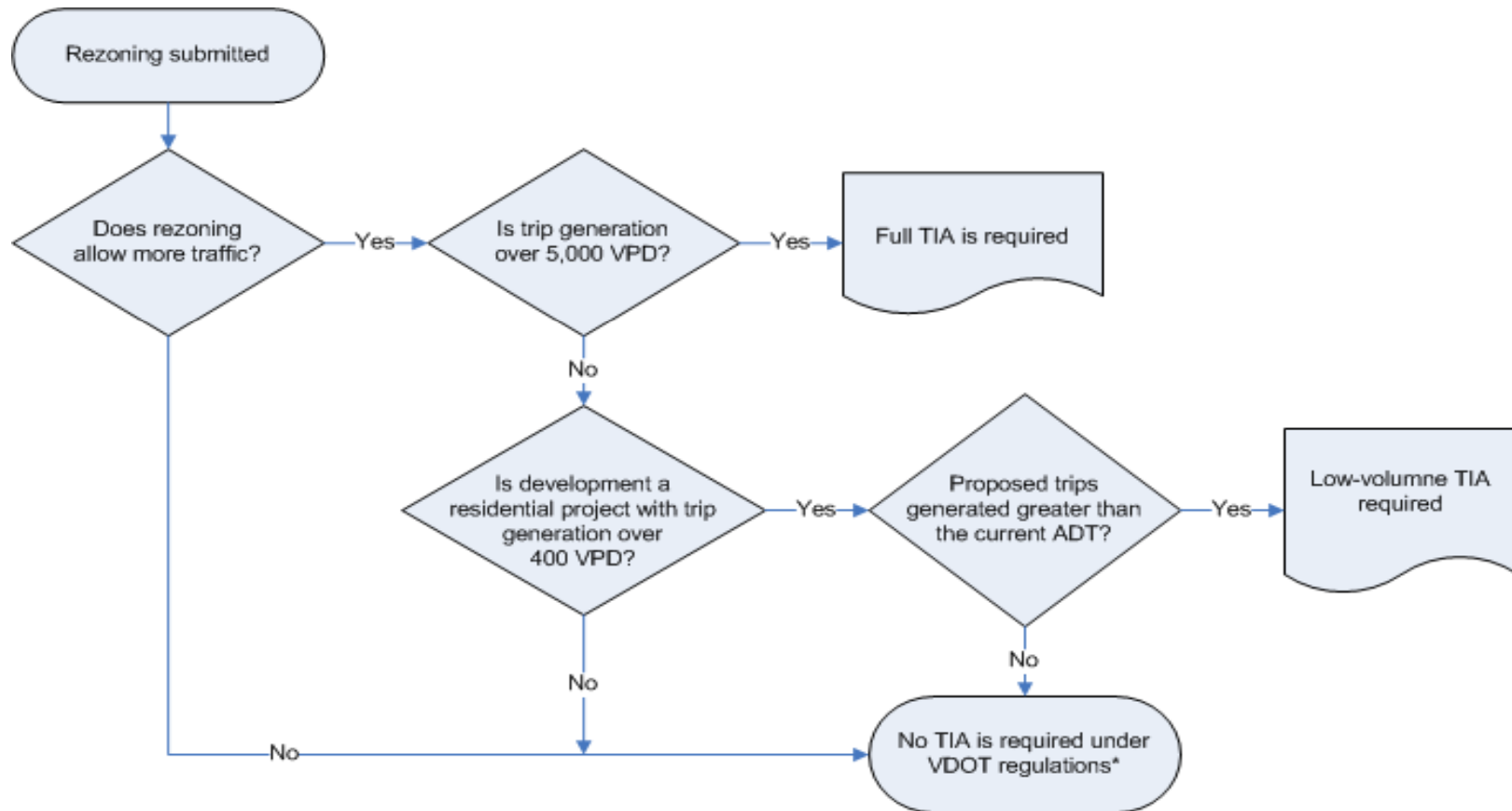
Traffic Impact Analysis

Land development proposals to be submitted

- “Substantially affect transportation on state controlled highways” based on traffic volume
 - 5,000 trips per day (standard threshold)
 - 400 trips per day and exceeds existing traffic on road (for residential development only, low volume road threshold)
- Dependent upon
 - Submission type
 - Comprehensive Plan or Plan Amendment (no TIA required)
 - Rezoning or Special Use Permit
 - Location
 - Within 3,000 ft of connection to VDOT highway (for non-VDOT localities)
- Exception: Rezoning that does not increase allowable trips (daily and peak hour) over those allowed under existing zoning

Traffic Impact Analysis

TIA submission thresholds for localities in which VDOT maintains local streets



* Locality can voluntarily submit or require submission of study to VDOT

Traffic Impact Analysis

Sample Developments That May Meet Thresholds

ITE Land Use Description	Code	Variable	Low Volume (400 Trips)	Standard (5,000 Trips)
Residential				
Single Family Detached	210	dwelling units	40 du	550 du
Apartment	220	dwelling units	60 du	670 du
Other				
Light Industrial	110	square feet	not applicable	690,000 sf
High School	530	students	not applicable	2,900 st
Hospital	610	beds	not applicable	420 bds
General Office Building	710	square feet	not applicable	560,000 sf
Shopping Center	820	square feet	not applicable	40,000 sf
Home Improvement Superstore	862	square feet	not applicable	170,000 sf

These are estimates that have been rounded and are not official thresholds. They are offered as examples only.

Traffic Impact Analysis

Comp plan submission not required to include TIA; rezoning is required to include a TIA

Published local study standards can be used, if certified by District

- Locality must request VDOT review of standards
- Written and posted requirements
- Must provide information on current and future conditions
- Meet reasonable professional standards and practice

Required elements

- Scope of study dependent upon amount of traffic generated but generally includes
 - Existing and proposed land use
 - Existing traffic and Level of Service (LOS)
 - Expected future traffic and LOS (without proposed development)
 - Expected future traffic and LOS (with proposed development)
 - Recommendations for traffic impact mitigation measures

Traffic Impact Analysis

Required elements (cont'd)

- Default assumptions and methodology
 - Are conservative, but may be modified based upon results of scoping meeting
 - Data collection (avoid holidays, inclement weather)
 - Trip generation (rates vs. equations based upon ITE methodology)
 - Internal capture rates (residential with others, hotel with office, office with retail)
 - Pass-by trip rates (per ITE Trip Generation Handbook)
 - Allow alternate trip generation for “Small Area Plans” (EPA-MXD methodology)
 - Level of service calculation (HCM methodology for vehicles, Transit Capacity and Quality of Service Manual for transit)
 - Modal split (bike/ped facilities, proximity to transit service)

Traffic Impact Analysis - Timeframes

- Comprehensive Plans and Plan Amendments
 - Request for meeting to be made within 30 days of receipt of package
 - Official response to locality within 90 days of receipt of package
- Rezoning
 - Request for meeting to be made within 45 days of receipt of package
 - Official response to locality within 45 receipt of package (no meeting)
 - Official response to locality within 120 days receipt of package (meeting requested)
- Other Events
 - Locality to submit package within 10 business days of locality's receipt
 - VDOT reply to scoping meeting request within 30 days, hold meeting within 60 days

Traffic Impact Analysis Other Requirements

- Rezoning submissions made that are consistent with previous comprehensive plan submission:
 - If technical analysis of traffic included in comp plan submission, rezoning submission may be of lowest scope (less than 500 VPH)
 - If for small area plan element, and small area plan included TIA, small area plan TIA serves as TIA for rezoning
- Before rejecting incomplete study or requiring resubmission:
 - Hold meeting and allow 30 days to make changes
 - If study still deficient (not in accordance with best professional practice, fails to document impacts, or incomplete), may require resubmission
- All submissions must be made with a paper copy and an electronic copy (via CD, DVD, or file transfer)
- VDOT must post submission and official response on website (via LandTrack)

Secondary Street Acceptance Requirements

<http://www.virginiadot.org/projects/ssar/>

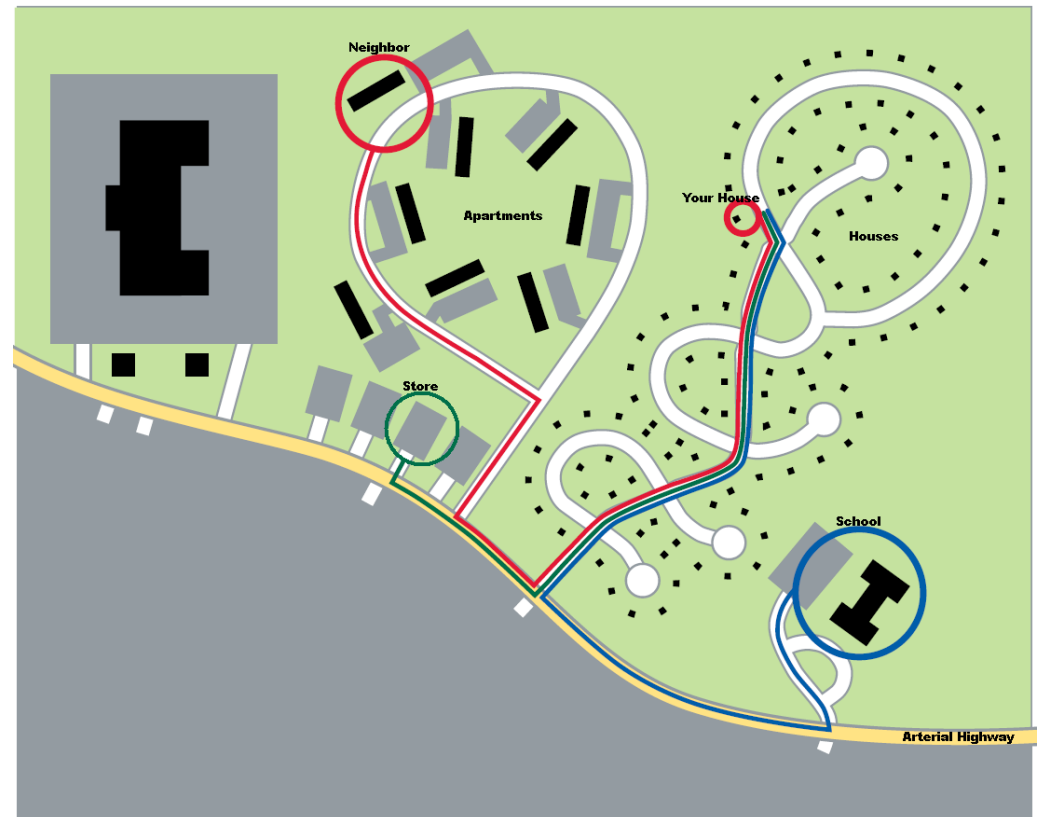


Contact:
Lynne Wasz

SSAR – The Problem

Current development patterns often rely on isolated street networks.

- Increased congestion
- Wider streets
- Discourages other modes of transportation
- Impacts on neighborhoods
- Unsustainable burden on major roadways



SSAR - Background

- Secondary Street Acceptance Requirements (SSAR) govern the acceptance of streets into the secondary system of state highways (does not cover VDOT-funded construction)
- In the past, streets have been accepted into the state system without consideration to the overall public benefit they provided
- §33.1-70.3 of the Code of Virginia, enacted in 2007, directed the Commonwealth Transportation Board to develop requirements that:
 - Improve connectivity of road and pedestrian networks
 - Minimize stormwater runoff and impervious surfaces (reduce local street widths)
 - Update performance bonding and cost recovery fees
- Chapter 870, 2011 Acts of Assembly, directed the CTB to solicit public comments and revise regulation accordingly

SSAR – Grandfathering & Applicable Former Requirements

- 2011 SSAR supersedes the 2005 SSR and the 2009 SSAR
- Developments submitted prior to July 2009: 2005 SSR
- Developments submitted between July 2009 and January 31, 2012: 2009 SSAR
- Plans submitted after January 2012: 2011 SSAR
- Grandfathered developments may choose to be designed using the 2011 SSAR requirements
- Subdivision Street Design Guide:
 - Appendix B – SSR
 - Appendix B(1) – 2009 and 2011 SSAR

SSAR - 2009 to 2011 Changes

- Eliminated “connectivity index” requirement
- Eliminated of “area types”
- Reduced median lot size for required pedestrian accommodations and combined with average daily traffic
- Required additional external connection when dwelling unit or vehicle per day thresholds are met per network addition

SSAR

Adding Streets as a Network

- In the past, streets have been considered for acceptance individually
- Phases of developments or an entire development will be accepted as a group or a network addition.
 - Allows for more flexible connectivity requirements
 - Focus on overall network and public benefit

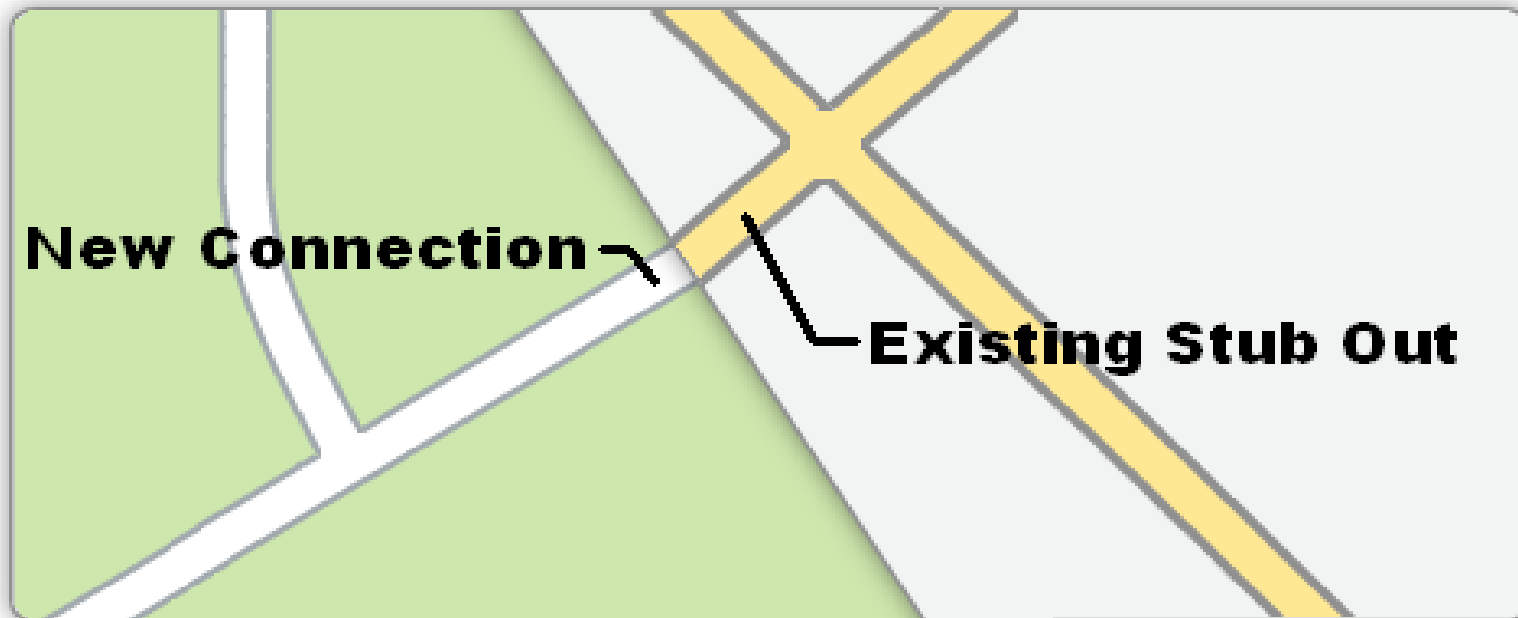
SSAR - Connectivity

- Basic connectivity requirements
 - Network addition must be connected to a publically maintained street
 - Connect to existing state-maintained stub outs
 - Two connections in multiple directions
 - Additional required connections based upon units or trips
- Second (and additional) connections can be stub outs
- Determined by network addition

SSAR

Stub Outs – Required Connection

- Connections to adjacent state-maintained stub outs are required
- District Administrator can waive requirement if connection to stub out is “unsafe”
- Network addition may not be accepted for maintenance at the discretion of the District Administrator: SSAR Section 100



SSAR

Multiple Connections Requirements

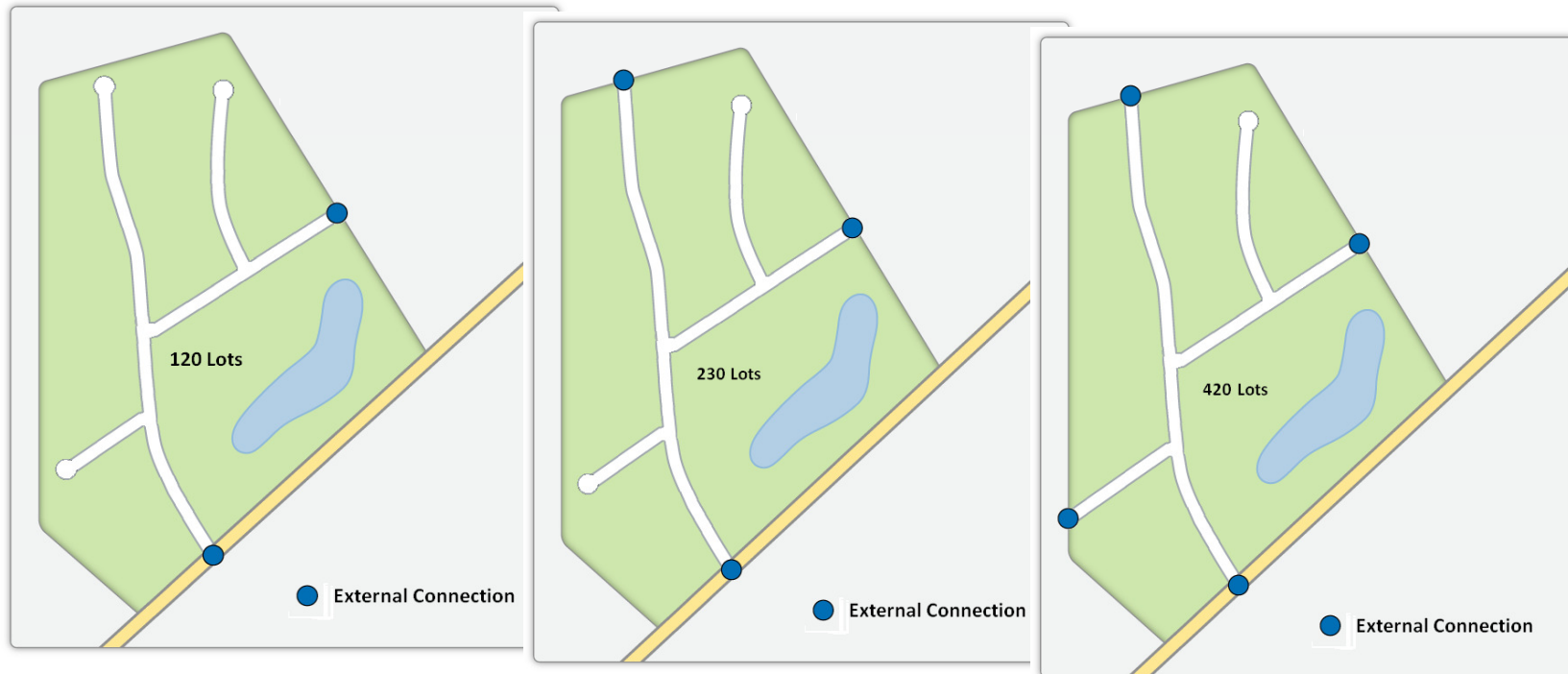
Two connections in multiple directions

- At least one connection to existing publicly maintained street
- Other connections can be stub outs to adjacent property or the next network addition for the development
- Stub outs **MUST** have expectation that they can be extended/connected



Required “Additional Connections” Standard

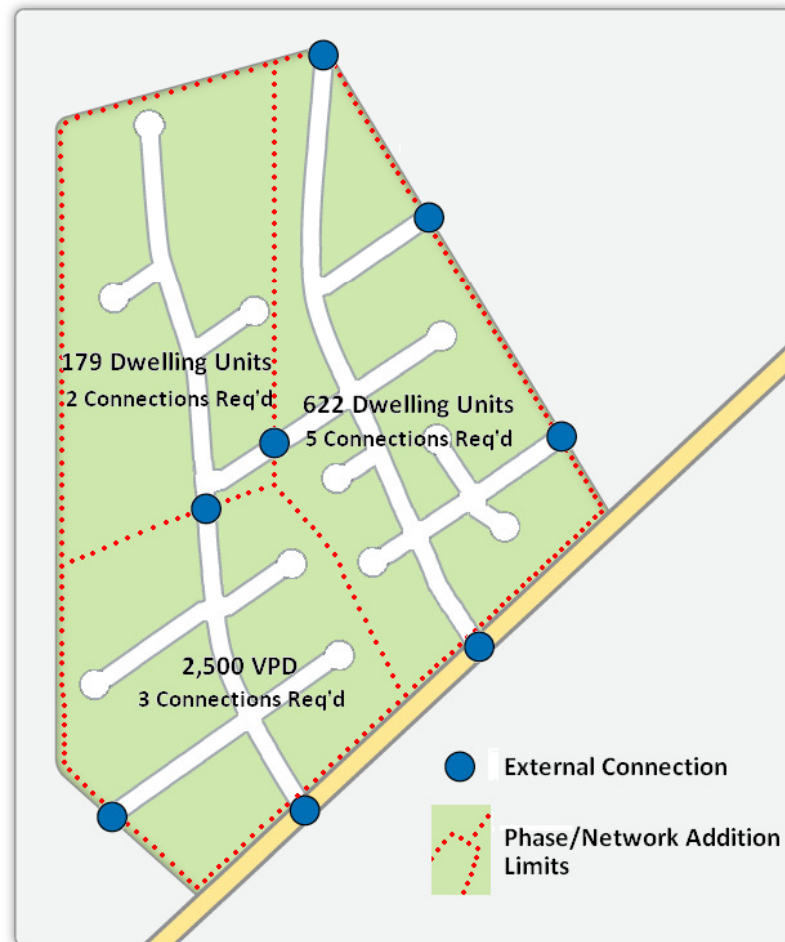
- Additional connections required based upon dwelling units in or traffic generated by network addition
- For over 200 residential units or 2,000 VPD trip generation (and for each additional 200 units or 2,000 VPD)
- Collector roads in county transportation plans can count as two connections



SSAR

“Additional Connections” Standard

- Three network additions and different connectivity requirements



SSAR – Connectivity

Waivers to Multiple & Additional Connections

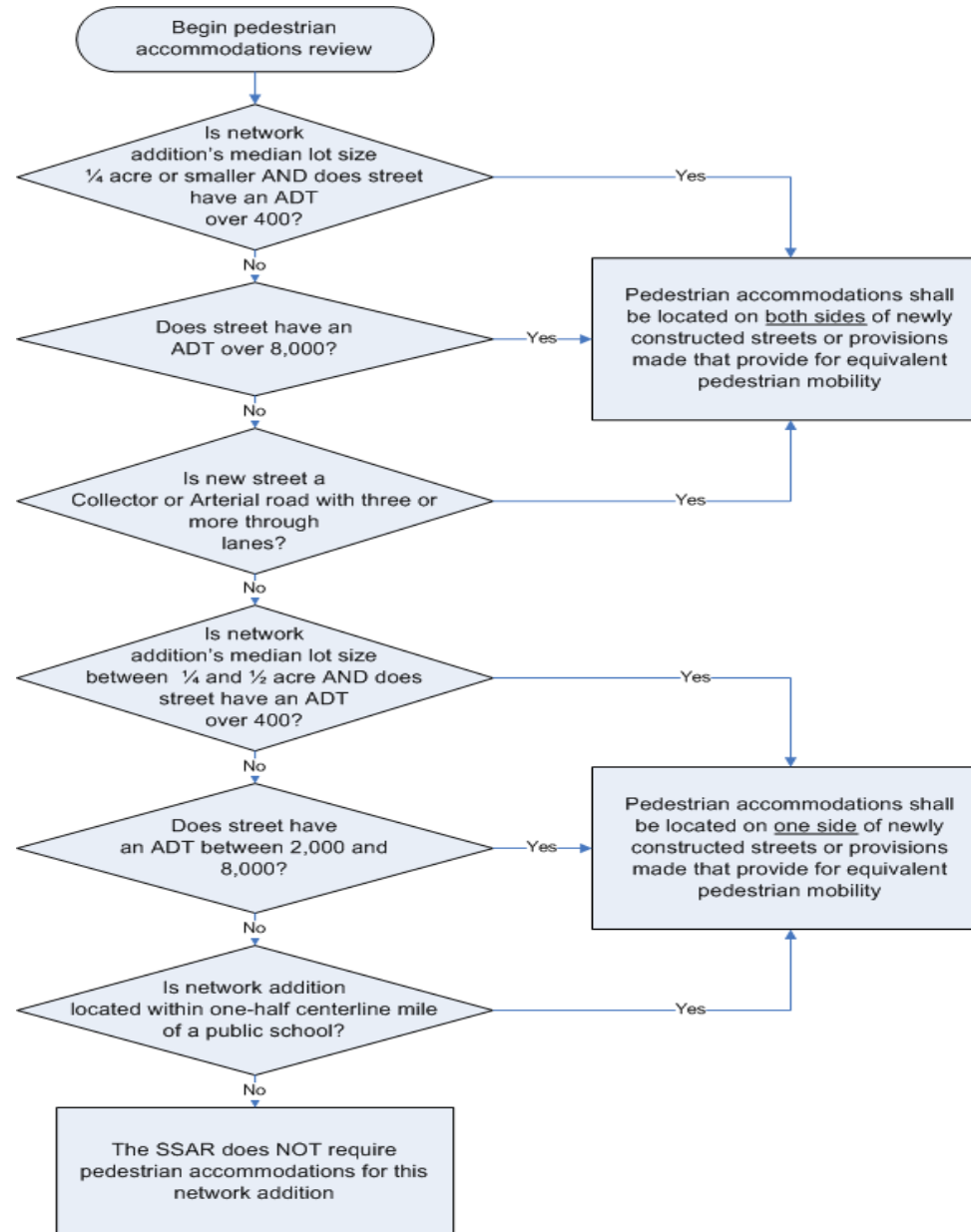
- 2009 SSAR allowed for few Connectivity exceptions
- 2011 SSAR – Requirements can be waived if Adjoining Property is:
 - Built out and re-development in 20 years is unlikely
 - Zoned for incompatible use
 - Unreasonable to connect to due to physical or technical constraints such as:
 - Water features: River, lakes or jurisdictional wetlands
 - Grades over 15% with elevation change greater than 5 feet
 - Limited access highways
 - Railroad tracks
 - Government owned properties with restricted access
 - Conservation easements (but not those put in place by developer)
- Connectivity waivers or modifications can be approved by District Administrator's Designee

SSAR

Pedestrian Accommodation Requirements

- Both sides of street when:
 - ADT over 400 for median lot size of 1/4 acre or smaller
 - ADT for street is over 8,000
 - Collectors or arterials with three or more travel lanes
- One side of street when:
 - ADT over 400 for median lot size between 1/4 acre and 1/2 acre
 - ADT for the street is between 2,000 and 8,000
 - Within one-half street centerline mile of a public school
- Exceptions can be made for provisions that provide “equivalent pedestrian mobility” – usually determined by Designee

SSAR - Pedestrian Accommodation



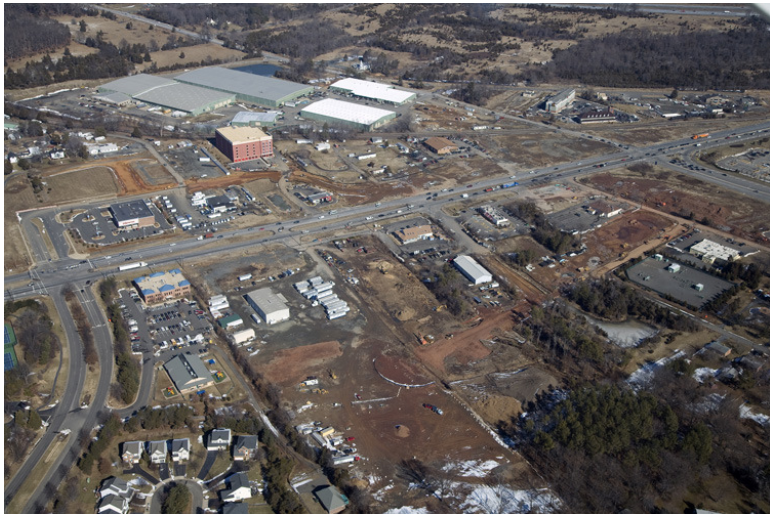
SSAR

Context Sensitive Street Design

- Design for speeds appropriate to area
 - Narrower streets (slower speeds and less runoff)
 - Must have adequate connectivity to use lower widths
- Improve safety for pedestrians and drivers
 - Lower vehicle speeds = lower risk of injury
 - Shorter crossing distance = lower exposure
- Flexible parking requirements
- LID techniques allowed within street right of way
 - Must have agreement with locality on maintenance of facility
 - Installed and maintained under land use permit

Access Management

<http://www.virginiadot.org/projects/accessmgt/default.asp>



Contact:
Paul Grasewicz

Access Management - Background

§ 33.1-198.1 of the Code of Virginia, enacted in 2007, directed VDOT to develop access management standards that:

- Enhance safety (through limiting the number and spacing of entrances)
 - Less confusing to drivers
 - Ability to focus on one conflict area at a time
- Increase fuel efficiency and reduced emissions
 - Helps to reduce “stop and go” driving
- Preserve critical roadway capacity
 - Ability to drive between destinations without using the “main road”
 - Reduce the need for new highways and adding lanes to highways
- Increase economic development opportunities
 - Enhanced mobility and market reach
 - Ability to locate and reach businesses
- Preserve property owners’ reasonable access to highways

Chapter 870, 2011 Acts of Assembly, directed VDOT to make changes with respect to entrances to family subdivisions

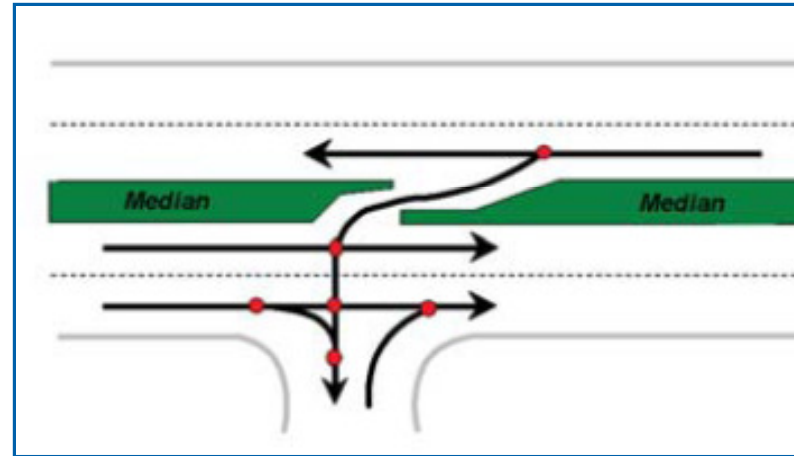
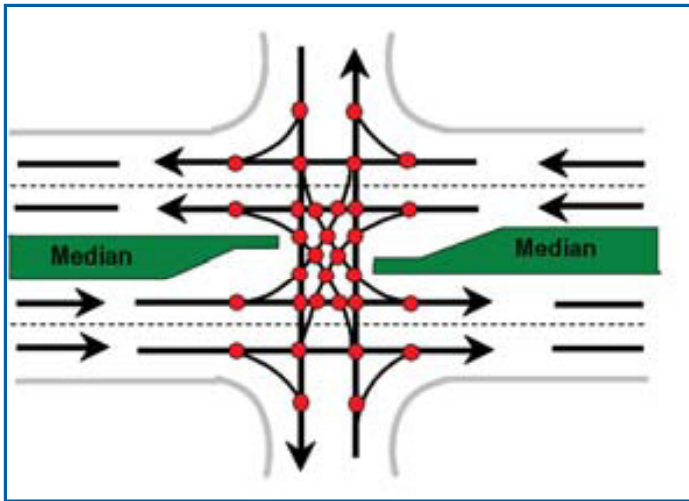
Access Management Regulations

- Not retroactive, applies to new entrances
- VDOT will permit reasonably convenient access to parcels
- Property owner not denied access
- Fewest number of entrances to reduce decision points
- Focus on side streets
- Use of right-in/right-out entrance design
- Applicant to demonstrate the safety of the proposed entrance & its impact
- Applicant to mitigate impacts on highway operation and safety

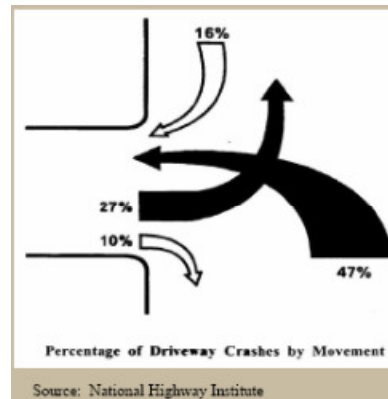
Access Management Basic Principles: Conflict Points

Conflict Points – Where two vehicles cross paths

32 Conflict Points

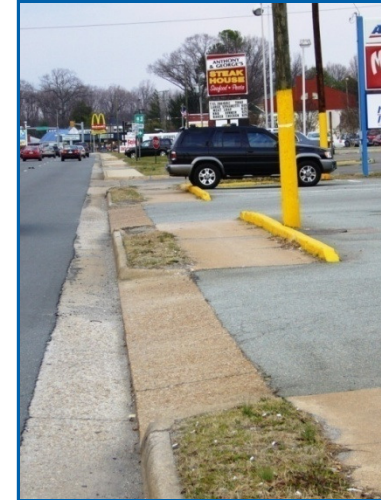
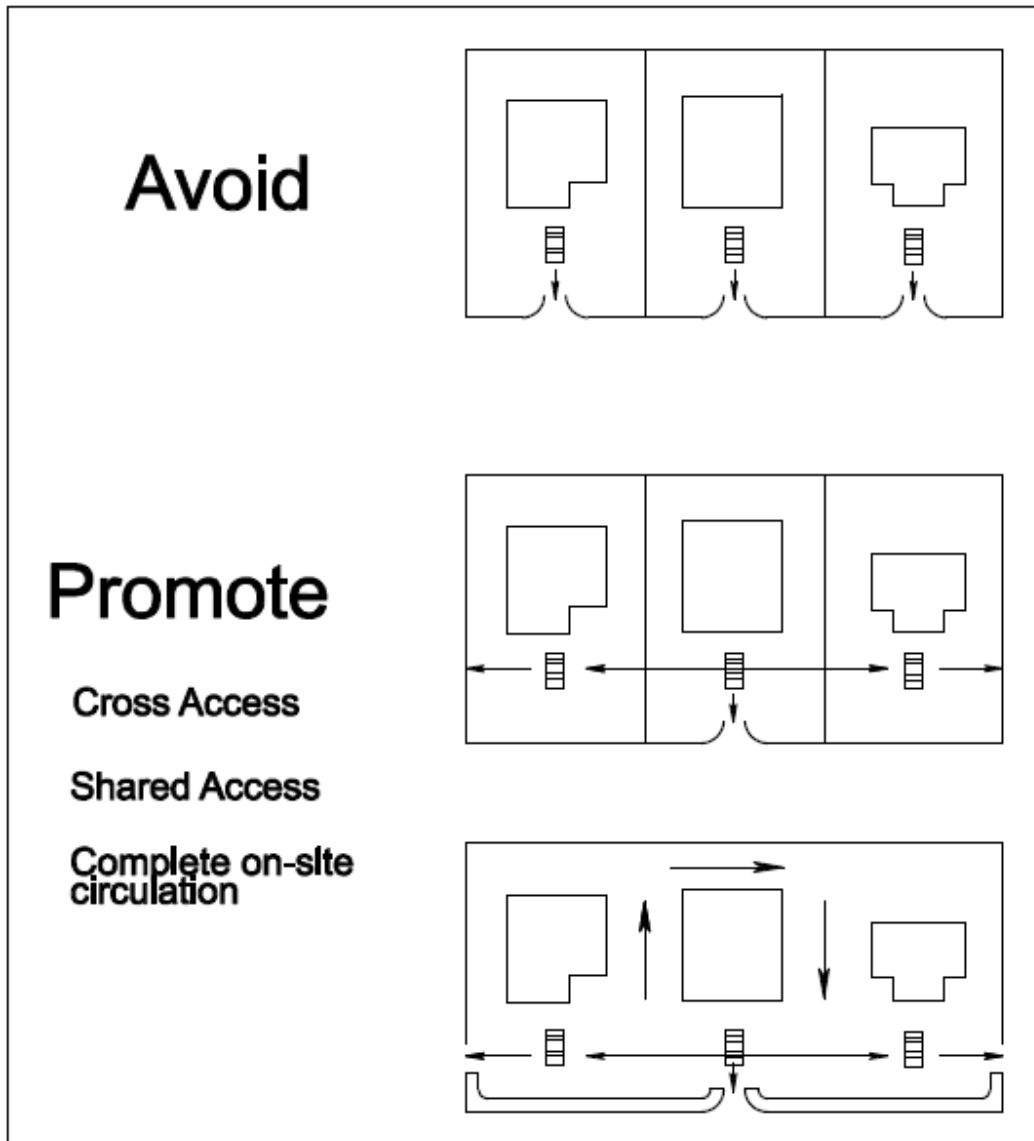


6 Conflict Points



74% of Crashes
Involve Left Turns

Access Management Basic Principles: Combining Access Points



Source: FDOT- Driveway Handbook, Dated March, 2005

Access Management Entrance Types

Three “types” of entrances

- Private entrance (§ 33.1-197)
 - 2 private homes, field entrance, low-volume utility use (less than 10 VPD)
 - No sight distance requirement
- Low Volume Commercial Entrance (§ 33.1-198)
 - Up to 50 VPD
 - Stopping sight distance required
 - Uses private entrance design standards (including spacing)
- Commercial Entrance (§ 33.1-198)
 - All other entrances
 - Intersection sight distance required
 - District L&D Engineer can approve LD-448 to waive intersection sight distance

Access Management: Existing Entrances

- Tenure of commercial entrance is conditional
- Entrance reconstruction, relocation, consolidation, or upgrading may be required due to:
 - Safety – physical degradation, other safety issue
 - Use – entrance traffic has increased or vehicle type changed
 - Maintenance – unserviceable due to heavy equipment
 - Change in use, more traffic – rezoning, site plan, new owner
- What if existing building has been vacant and now will be reused?
 - How long has it been vacant?
 - Increased trip generation over previous use - new use, building expansion, etc.

Access Management: Crossovers

- Closing crossovers prevents traffic crashes and maintains flow of traffic
- Adding left turn lanes improves crossover and highway operation

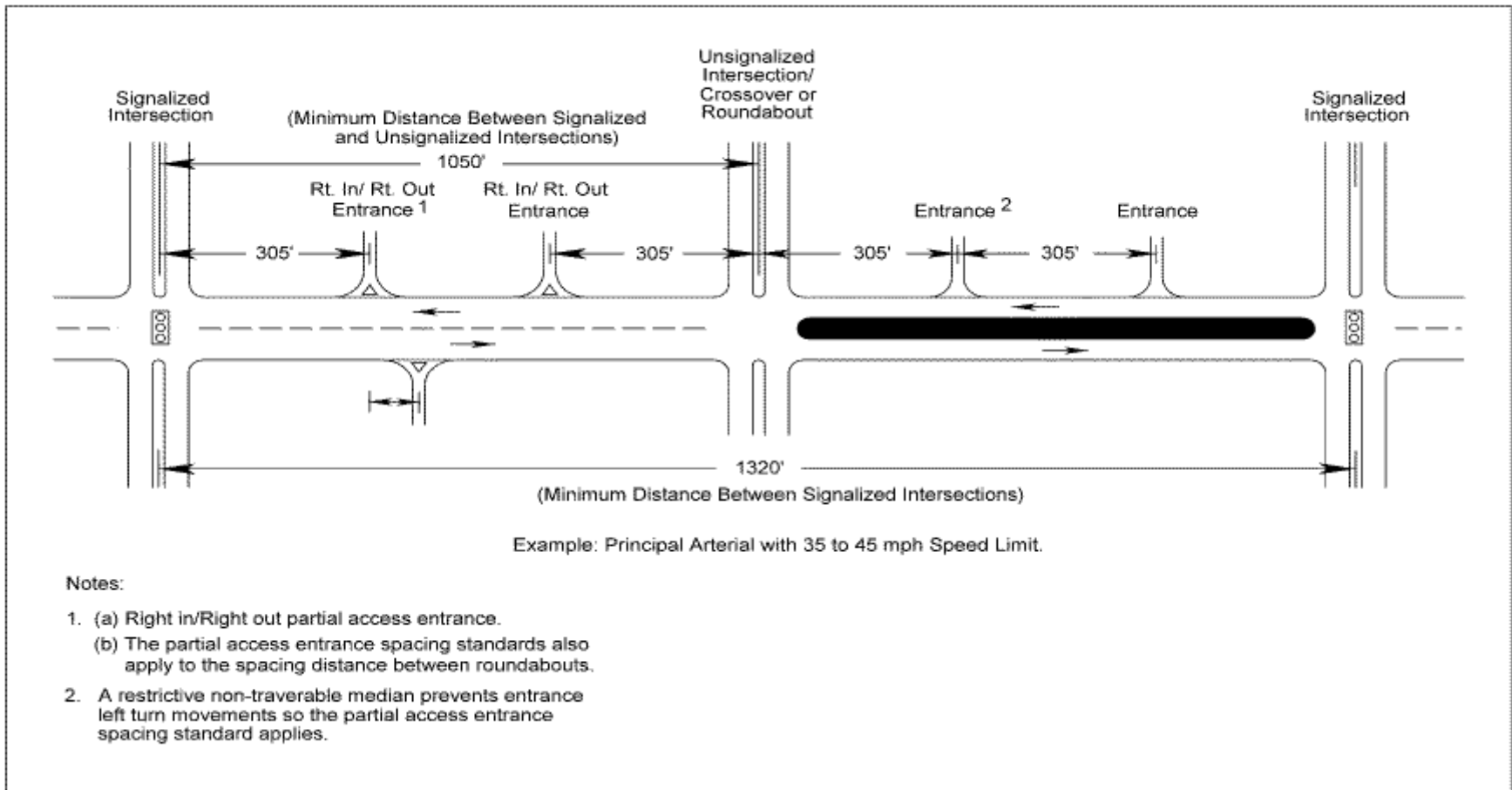


Access Management Entrance Spacing

Highway Functional Classification	Legal Speed Limit (mph)	Centerline to Centerline Spacing in Feet			
		Signalized Intersections/ Crossovers	Unsignalized Intersections/ Crossovers	Full Access Entrances	Partial Access One or Two Way Entrances
Principal Arterial	≤ 30 mph	1,050	880	440	250
	35 to 45 mph	1,320	1,050	565	305
	≥ 50 mph	2,640	1,320	750	495
Minor Arterial	≤ 30 mph	880	660	355	200
	35 to 45 mph	1,050	660	470	250
	≥ 50 mph	1,320	1,050	555	425
Collector	≤ 30 mph	660	440	225	200
	35 to 45 mph	660	440	335	250
	≥ 50 mph	1,050	660	445	360
Local Street	Commercial entrance spacing: See Figure 4-11.				

Contained in Appendix F of Road Design Manual (January 2012)

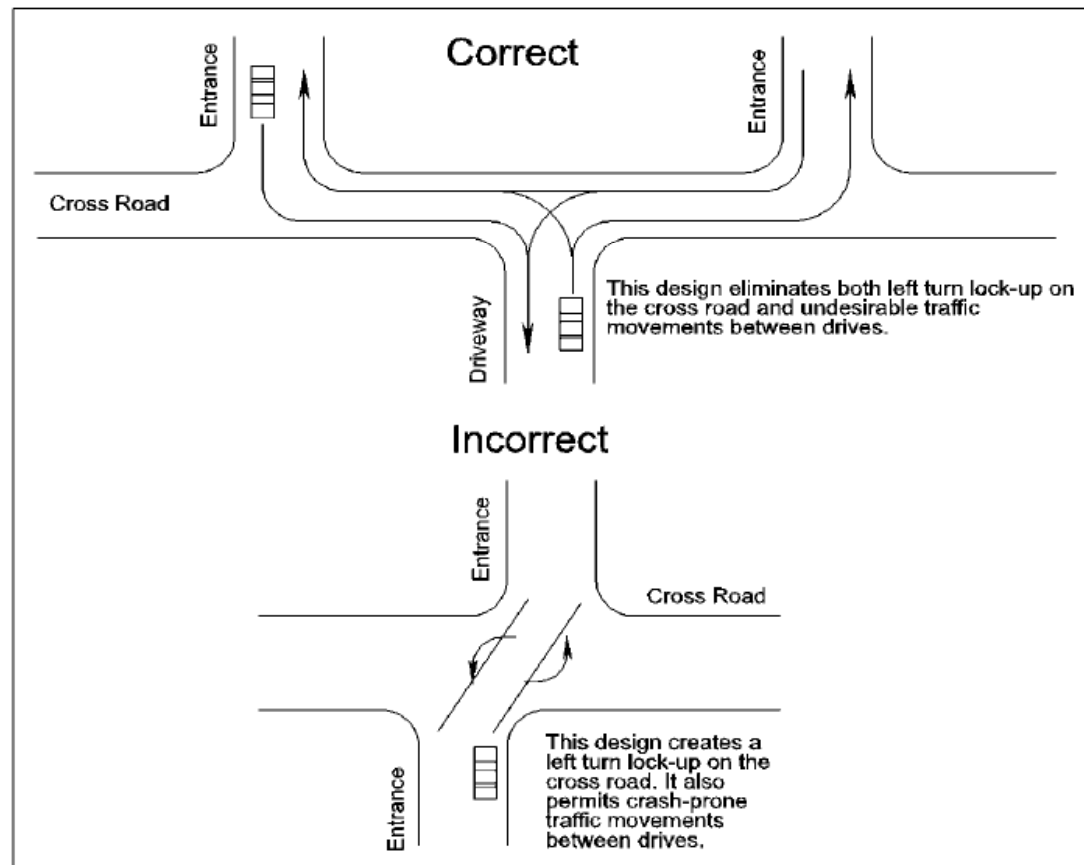
Access Management Entrance Spacing



Access Management Entrance Spacing

Full access driveways on opposite sides of highway

- Sufficiently offset to:
 - Prevent “left turn lock-up”
 - Prevent direct crossings

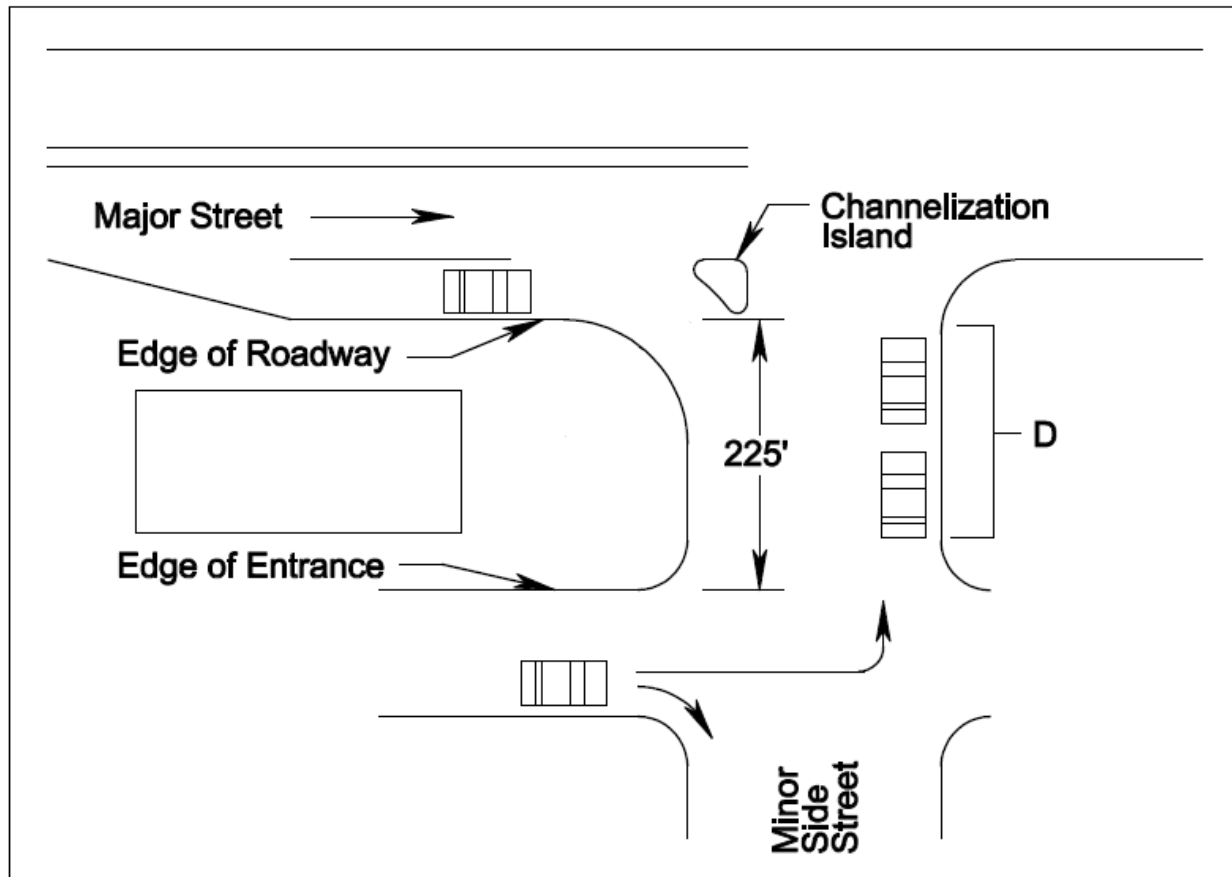


Modified from Driveway Handbook, March 2005, Florida Department of Transportation

Access Management Entrance Spacing

Corner clearance

- 225' or queue length (D)
- Not required from intersection of two local roads



Access Management – Exceptions to Spacing Standards

- Grandfathered locations for developments approved prior to Oct 2009
- Older established business corridor
- VDOT approved local access management corridor plans
- Within new urbanism/traditional neighborhood developments
- VDOT required (SSAR) second entrance to a subdivision
- Parcel has insufficient useable frontage due to parcel dimensions, physical constraints (exception for anything but a right-in/right-out)



Access Management – Exceptions to Spacing Standards

- Submitted in writing to VDOT District/Residency Office using the Exception Request form AM-1 or -2
- The request shall
 - Identify the type of exception (shared entrance, spacing, interparcel connection)
 - Describe reasons for the request
 - Include all required documentation (evidence of a wetland, new urbanism dev. design plan, traffic engineering study)
 - Applicant will receive a decision on request within 30 calendar
- Appeals
 - Designee's decision can be appealed to District Administrator
 - District Administrator's decision can be appealed to Commissioner

Land Use Permits

<http://www.virginiadot.org/business/bu-landUsePermits.asp>



Contacts:
Mutaz Alkhadra
Keith Goodrich

Land Use Permits – 24 VAC 30-151

Permits needed for any activity (except travel) on VDOT Right of Way

- District-wide permits
 - Utility service connections
 - Logging entrances (temporary)
 - Surveying
- Utility permits
- Entrances
- Assorted activities
 - Parades and races that block or stop traffic
 - Motorcycle rides and similar activities do NOT need permits
 - Banners
 - Non-VDOT Signs
 - Bus stop shelters

Land Use Permit Regulations – No Permit

- For activities not on R/W
 - Use of VDOT property that is not Right of Way (property management)
 - Park & ride lots, rest areas, waysides all count as R/W
- For normal activities in R/W
 - Like travel along the road (except for house moves)
 - For surveyors, if no work in road, no brush cutting, staying where pedestrians would be expected, not blocking sidewalk or lane
- Assorted
 - If working under a VDOT contract (contractors and subcontractors)
 - Mailboxes and newspaper boxes



Video clip from Texas Department of Transportation

Land Use Permit Authority

Who Issues Permits or Provides Permission

- Central Office
 - TMPD Issues district-wide permits
 - TMPD approves permit requests for activities not specifically covered by LUPR
 - Unique requests
 - Regional tree trimming
 - Chief Engineer approves limited access permit requests
 - Commissioner approves permits dealing with cell towers
- Districts
 - District Administrator approval required for median installations
 - District Administrator may grant waivers of fees and surety
 - District Administrator approval required to extend roadside memorial permits
 - District Roadside Manager approval required for vegetation control permits
 - District Administrator's Designee (generally TLUD or ALUE) issues most permits

Land Use Permit Regulations

Elements

- District-wide permits
 - Issued by Central Office
 - “District” defined as 9 contiguous counties or a single construction district
 - Not for: limited access, any activity that stops traffic for 15 minutes or more, cutting pavement/shoulder
- Utility permits
 - Requirements
 - Depth: 36” (telecommunications 30” with exceptions down to 18”)
 - Height: 21’ over limited access R/W, 18’ crossing non-limited access highways, NESC otherwise
 - Preferred location: outer edge of R/W (but exceptions possible)
 - Allows overlashing of existing lines
- Vegetation control
 - Including volunteer activities (coordinate with Roadside Manager, Residency)
 - Outdoor Advertising related (coordinate with OA Agent, Roadside Manager)

Land Use Permit Regulations

Elements (cont'd)

- Non-highway requests
 - Rest Areas
 - Activity must be for purpose of improving safety (coded as “special events”)
 - Coordinate with Safety Rest Area Facilities Manager (Maintenance Division)
 - Park & Ride lots
 - Is request for an activity not normally allowed or conducted?
 - Consider impact on primary purpose of facility (parking for commuters)
 - Discuss with TMPD!
- Multiple sites/activities under one single-use permit
 - Principal activity plus related additives
 - Example: commercial entrance + additional entrance + 300' turn lane + 200' curb and gutter + 2 drop inlets + 200' storm sewer
 - Similar activities located nearby (within 2 miles)
 - Example: multiple private entrances (serving several lots) along a road
 - Similar activities at same location but at different times
 - Example: town parades over the course of a year

Land Use Permit Regulations Signs and Markers

- Various Signs
 - Emergency vehicle access beacons and lights (signs by VDOT)
 - Flashing school speed limit signs (and similar)
 - Forestry fire warning signs (USFS or Department of Forestry)
 - Bird sanctuary (requests from towns and cities)
 - Storm drain inlet signs/stenciling (may have locality-wide permit)
 - No loitering (by locality)
 - Welcome signs (by locality)
 - No advertising
 - Not in limited access
 - Development signs (by developers or HOA)
 - Must have locality approval
- Roadside Memorials
 - Application must be by family member
 - Not allowed if a family member objects
 - Location must not be objected to by neighboring property owners
 - Permit for 2 years only (with 1 year extensions by DA allowed upon request) 53

Land Use Permit Regulations No Fee Permits

- In-Place
 - For subdivision street development
 - R/W made clear and unencumbered, but protection provided for utility via permit
- Prior-Rights
 - For utility easements on property formerly adjacent to road (but now within R/W)
 - Easement (and utility) stays but is subject to permit conditions
 - Notification prior to work
 - Work zone set up
 - Restoration of transportation facilities
- Assorted
 - Springs and wells
 - Crest gauges and water level recorders
 - Filming (traffic control costs by A/R)
 - Local government signs
 - Roadside memorials
 - Certified telecom service providers

Illicit Discharge into VDOT Right-of-Way

- “Illicit Discharge” is defined as any discharge into a storm water conveyance system that is NOT composed entirely of storm water
- Illicit Discharge can include the following:
 1. Sanitary wastewater
 2. Gas and motor oil
 3. Household cleaning products
 4. Paints and solvents
 5. Pesticides and herbicides

Change in Limited Access

<http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+24VAC30-401>



Contact:
R/W or
L&D or
Mutaz Alkhadra

Limited Access

Any Activity on or Dealing with Limited Access Requires CO Review

- Specific process depends upon activity/action sought by applicant
 - Interchange (either new or modification to existing)
 - IJR/IMR process (see IIM 200)
 - Regional Ops, R/W, L&D, and TMPD involved
 - Posting Willingness (or public hearing) required
 - CTB action required for new interchange or adjusting end points of existing interchange L/A lines
 - All VDOT costs paid by applicant (usually A/R)
 - Other access change
 - Generally L/A breaks or adjustments on partial controlled access facilities
 - Regional Ops, R/W, L&D, and TMPD involved
 - Posting Willingness (or public hearing) required
 - CTB action required
 - All VDOT costs paid by applicant (usually A/R)

Limited Access

- Specific processes (cont'd)
 - Longitudinal L/A line adjustment
 - Narrowing or widening area within L/A line
 - R/W, L&D, and Maintenance involved
 - All VDOT costs paid by applicant
 - Permit activity
 - Generally utility or landscaping work
 - TMPD review required
 - Permit fees charged (in exceptional circumstances, can recover costs via A/R)
 - R/W use fee or Resource Sharing Agreement (OSD)
- All limited access activities require approval by Chief Engineer
- Most activities that impact Interstate highways require FHWA review
 - Permit activities that do not impact operation generally do not require FHWA review



VDOT Land Use Regulations