

AGENDA
FLUVANNA COUNTY PLANNING COMMISSION
Staff Conference Room
February 8, 2012
7:00 P.M.

PLANNING COMMISSION WORK SESSION

- 1. Open the Work Session** (Mr. James Halstead, Jr., Chairman)
- 2. Public Comment** (Limited to Three Minutes per Speaker)
- 3. Discussion regarding the Sign Regulations Section of the Zoning Ordinance**
- 4. Discussion regarding the Off-Street Parking Section of the Zoning Ordinance**
- 5. Discussion regarding the Tree Protection Section of the Zoning Ordinance**
- 6. Adjourn**

For the Hearing-Impaired – there is a listening device available at the Board of Supervisors Room upon request.. TTY access number is 711 to make arrangements.

For persons with Disabilities – if you have special needs, please call the County Administrator's Office at 591-1910 and relay your request.



COUNTY OF FLUVANNA

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Memo

To: Fluvanna County Planning Commission
From: Andrew J. Pompei, Planner
Date: February 3, 2012
Re: Review of the Sign Ordinance

The Board of Supervisors has asked the Planning Commission to re-examine the sign ordinance to address the concerns of some of Fluvanna County's business owners. The current sign ordinance was adopted in June 2010, and has not been reviewed since its adoption. At the work session on December 14, the Planning Commission decided to solicit public input regarding the sign ordinance at its meeting on January 25, 2012. Notices were posted in the *Fluvanna Review* informing the public of this discussion, and the Fluvanna County Chamber of Commerce advertised the event within its newsletter. Five (5) members of the public, most of whom operated businesses in the County, commented during the meeting.

Based on the input provided, the Planning Commission may choose to pursue a zoning text amendment, or it may decide that no action is necessary at this time. Planning staff has discussed possible modifications to the sign ordinance that would address the concerns presented by citizens, the Planning Department, and the Board of Supervisors; the Planning Commission may wish to discuss these suggestions at the work session on February 8.

- Changing Regulations regarding Temporary Signs

The Planning Commission may consider extending the amount of time temporary signs may be displayed. Currently, temporary signs may only be displayed for up to 30 consecutive days or up to 60 days total in a calendar year. The Planning Commission may consider allowing temporary signs to be displayed for up to 90 or 120 days; Culpeper and New Kent counties allow temporary signs to be displayed for up to 90 consecutive days (see Attachment 1: Page 1).

- Adopting Sign Setbacks

To prevent signs from blocking one another or encroaching upon the right-of-way, the Planning Commission may consider adopting sign setbacks. These setbacks would require signs to be positioned a certain distance from the property line. Currently, signs must only be located outside any right-of-way or sight triangle (See Attachment 1: Page 4). Many localities require signs to have a setback of five (5) to ten (10) feet from the adjacent right-of-way; some localities, including Culpeper, Cumberland, and Goochland counties, require significant sign setbacks from residential districts.

- Allowing Multiple Business Signs per Parcel

The Planning Commission may consider allowing multiple business signs (monument and freestanding signs) on parcels with significant road frontage. Currently, only one business sign is allowed per parcel (See Attachment 1: Page 2). The Planning Commission may consider allowing one monument-style business sign per 300 feet of frontage; no more than two monument signs would be permitted on any given parcel. Albemarle County allows one additional freestanding sign on parcels greater than four (4) acres with more than one (1) approved entrance, and Fauquier County allows an additional freestanding sign on parcels with at least 200 feet of frontage and an approved entrance.

- Changing Regulations regarding Moving Signs

The Planning Commission may consider allowing wind-driven moving signs in certain instances. Currently, moving signs are specifically prohibited in Fluvanna County; most other comparable localities also prohibit moving signs (see Attachment 1: Page 4). The Planning Commission may consider allowing wind-driven moving signs with a permit if they are placed close to the principal structure on-site and are located far enough from rights-of-way as to not serve as an unsafe distraction for passing motorists. The number of wind-driven moving signs permitted should be restricted.

If you have any questions or comments, please contact the Planning Department at (434) 591-1910 or via email.

Attachments

Attachment 1: Comparison of Sign Ordinances for Select Virginia Localities

Comparison of Sign Ordinances for Select Virginia Localities
Temporary Signs for Business Use

	Existing Ordinance	Albemarle County	Culpeper County	Cumberland County	Fauquier County	Gloucester County	Greene County
Temporary Signs for Business Use							
Are they permitted?	Yes	Yes	Yes	Yes	Yes	Yes (in certain instances) Temporary signs for private businesses are not permitted	Yes
How long are they permitted for?	≤ 30 consecutive days ≤ 60 total days per year	≤ 15 consecutive days No more than four temporary sign permits issued per establishment per year	Temporary signs are considered signs displayed for 90 days or less; if displayed more than 90 days, they are considered permanent signs and require a permit. The duration of permitted display varies by sign type.	≤ 30 days	The duration of permitted display varies by sign type. Temporary business signs may be displayed for up to 14 days, up to 6 times a year	The duration of permitted display varies by sign type. Temporary business signs are not permitted.	≤ 30 days
How many temporary signs are permitted per business establishment?	No	1 per street frontage per establishment	Depends on type of temporary sign. Some specify 1 per parcel, others have no specifications.	No limit Portable signs must be spaced at least 200' apart.	1 per business	Not permitted	6 per calendar year
Is notification/permit required?	No	Yes A Temporary Sign Permit Application must be submitted and approved.	No	Yes	Yes (for certain sign types) Off-site real estate directional, temporary business/activity signs, temporary on-site agricultural products signs, and temporary civic signs require permits.	No	Yes

	Existing Ordinance	Goochland County	Hanover County	James City County	Louisa County	New Kent County	Orange County
Temporary Signs for Business Use							
Are they permitted?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
How long are they permitted for?	≤ 30 consecutive days ≤ 60 total days per year	≤ 30 days	≤ 60 total days per year comprising no more than 4 periods	≤ 30 days	Special Advertising: ≤ 14 days Temporary Event: Up to 1 month before advertised event, no more than 1 week after event. No more than six months per calendar year.	≤ 90 days After removal, may not be displayed at the same location for at least 90 days.	≤ 60 consecutive days ≤ 120 total days per year per site or per event
How many temporary signs are permitted per business establishment?	No Limit	No Limit Portable signs must be spaced at least 200' apart.	1 per frontage	No Limit	2 per parcel	No Limit	No Limit
Is notification/permit required?	No	Yes	Yes (for most temporary signs) Temporary, nonilluminated portable signs 6 sq. ft. or less (1 per street frontage) do not require a permit.	Yes	No	No	Yes (freestanding temporary)

Comparison of Sign Ordinances for Select Virginia Localities
Number of Signs Permitted in Commercial and Industrial Areas

	Existing Ordinance	Albemarle County	Culpeper County	Cumberland County	Fauquier County	Gloucester County	Greene County
Number of Signs Permitted in Commercial and Industrial Areas							
Awning Sign	1 per establishment	Considered a projecting sign; see requirements for projecting signs	No limit on number; limited by area requirements. 1 sq. ft. per linear foot of awning; only permitted on first floor. Counts against maximum sign area.	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of facades facing public roads.	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage (max. 150 sq. ft.) Considered a building sign.	Depends on Zoning District 1 per structure to No Maximum Considered On-Structure Sign	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage (max. 500 sq. ft. if >300' from public ROW, max. 300 sq. ft. if <300').
Business Sign (Individual)	1 per parcel	1 per street frontage, or 2 per entrance, for lots with at least 100 feet of continuous street frontage Plus 1 per lot if the lot is greater than 4 acres and has more than 1 approved entrance	1 per site	Unspecified	1 per site Additional sign is allowed along any street where the property has a minimum 200 ft. of frontage and an entrance	1 per lot Considered On-Premise Sign	1 per parcel Lots with multiple frontages may have up to 2 signs, but no more than 1 per frontage
Business Sign (Shopping Center)	1 per shopping center or business park entrance	1 per street frontage, or 2 per entrance, for lots with at least 100 feet of continuous street frontage Plus 1 per lot if the lot is greater than 4 acres and has more than 1 approved entrance	1 per development site frontage	1 sign per entrance into the development	1 per site Additional sign is allowed along any street where the property has a minimum 200 ft. of frontage and an entrance	1 per lot Considered On-Premise Sign	1 per shopping center Lots with multiple frontages may have up to 2 signs, but no more than 1 per frontage
Canopy Sign	1 per establishment	Considered a wall sign; see requirements for wall signs	No limit on number; limited by area requirements. Maximum size of 12 sq. ft. Counts against maximum sign area.	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of facades facing public roads.	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage (max. 150 sq. ft.) Considered a building sign.	Depends on Zoning District 1 per structure – No Maximum Considered On-Structure Sign	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage (max. 500 sq. ft. if >300' from public ROW, max. 300 sq. ft. if <300').
Electronic Message Sign	1 per parcel	Requires special use permit	Not permitted	Unspecified	Unspecified	Unspecified	Unspecified
Projecting Sign	1 per establishment	1 per street frontage	No limit on number; limited by area requirements. 1 sq. ft. per linear foot of awning; only permitted on first floor. Counts against maximum sign area.	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of facades facing public roads.	1 per tenant	Depends on Zoning District 1 per structure to No Maximum Considered On-Structure Sign	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage (max. 500 sq. ft. if >300' from public ROW, max. 300 sq. ft. if <300').
Wall Sign	1 per road frontage	No limit on number; limited by area requirements. For C-1, CO Districts: 1 sq. ft. per 1 linear ft. of building frontage, not to exceed 100 sq. ft. For HC, PD-SC, PD-MC Districts: 1.5 sq. ft. per 1 linear foot of building frontage, not to exceed 200 sq. ft.	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of the front façade of the building or all facades facing public roads.	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage (max. 150 sq. ft.) Considered a building sign.	Depends on Zoning District 1 per structure – No Maximum Considered On-Structure Sign	No limit on number; limited by area requirements. 1 sq. ft. to 1 linear ft. of building frontage (max. 500 sq. ft. if >300' from public ROW, max. 300 sq. ft. if <300').

Comparison of Sign Ordinances for Select Virginia Localities
Number of Signs Permitted in Commercial and Industrial Areas

	Existing Ordinance	Goochland County	Hanover County	James City County	Louisa County	New Kent County	Orange County
Number of Signs Permitted in Commercial and Industrial Areas							
Awning Sign	1 per establishment	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of the front façade of the building or all facades facing public roads.	No limit to 1 per frontage, depending on zoning district Considered a wall sign	No limit on number; limited by area requirements. Total area of such signs if constructed alone or in combination with other building signs shall not exceed the maximum allowable square footage for walls signs.	1 per establishment	Unspecified	No limit on number; limited by area requirements. Commercial: Total area of permanent signs should not exceed 2 sq. ft. of signage per linear foot of building frontage. Industrial: Total area of permanent signs should not exceed 1 sq. ft. of signage per linear foot of building frontage.
Business Sign (Individual)	1 per parcel	1 per business in Residential-Office No limit in commercial and industrial districts.	1 per street frontage	1 per street frontage	1 per lot or premise 2 if the lot fronts on two or more streets	1 per street frontage	
Business Sign (Shopping Center)	1 per shopping center or business park entrance	1 per entrance into the development	1 per street frontage	1 per major street frontage	1 per lot or premise 2 if the lot fronts on two or more streets	1 per street frontage	
Canopy Sign	1 per establishment	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of the front façade of the building or all facades facing public roads.	No limit – 1 per frontage, depending on zoning district Considered a wall sign	No limit on number; limited by area requirements. Total area of such signs if constructed alone or in combination with other building signs shall not exceed the maximum allowable square footage for walls signs.	1 per establishment	Unspecified	
Electronic Message Sign	1 per parcel	Unspecified	1 per street frontage	Unspecified (Only permitted for certain applications)	Unspecified	Unspecified	1 per development (in certain areas)
Projecting Sign	1 per establishment	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of the front façade of the building or all facades facing public roads.	1 per business	1 per public entrance in mixed-use districts (considered a blade sign)	1 per lot or premise 2 if the lot fronts on two or more streets Considered a business sign	Unspecified	No limit on number; limited by area requirements. Commercial: Total area of permanent signs should not exceed 2 sq. ft. of signage per linear foot of building frontage. Industrial: Total area of permanent signs should not exceed 1 sq. ft. of signage per linear foot of building frontage
Wall Sign	1 per road frontage	No limit on number; limited by area requirements. Wall and projecting signs combined may not exceed 10% of the front façade of the building or all facades facing public roads.	No limit – 1 per frontage, depending on zoning district	1 per façade with a public entrance	2 or more per establishment as authorized by the Zoning Administrator	1 per street frontage	

Comparison of Sign Ordinances for Select Virginia Localities
Other Sign Provisions

	Existing Ordinance	Albemarle County	Culpeper County	Cumberland County	Fauquier County	Gloucester County	Greene County
Are moving signs permitted?	No	No	No	Yes	No	Yes	No
Are off-site commercial signs permitted?	No	No	No	No	No	Yes 1 per parcel	No
Are there setbacks for freestanding signs?	Signs are exempt from setback requirements in all zones, provided that they are located outside any public right-of-way and do not interfere with vehicular sign distances.	Generally 10 feet in rural and low-density residential zones, and 5 feet in high-density residential, commercial and industrial areas.	Freestanding signs must be 5 feet from street side property lines, 15 feet from interior property lines, and 30 feet from any residential district.	Freestanding signs must be 15 feet from any street or right-of-way and 100 from the boundary of any residential district.	Freestanding signs must be located 2 feet from any building, 2 feet from the curb line of a service drive/travel lane, and 5 feet from any front property line. The signs must be setback a distance equal to the height of the sign from any side or rear property line.	No	Freestanding signs within agricultural and residential districts must be 10 feet from rights-of-way. Freestanding signs within business and industrial districts must be 5 feet from rights-of-way.
Are there minimum distance requirements between freestanding signs?	No	No	On development sites within multiple frontages, there must be 60 feet of separation between signs.	No	No	No	No

	Existing Ordinance	Goochland County	Hanover County	James City County	Louisa County	New Kent County	Orange County
Are moving signs permitted?	No	No	No	No	No	No	No
Are off-site commercial signs permitted?	No	No	Yes (with special exception by the Board of Supervisors)	No	Yes	No	Yes
Are there setbacks for freestanding signs?	Signs are exempt from setback requirements in all zones, provided that they are located outside any public right-of-way and do not interfere with vehicular sign distances.	Freestanding signs within the R-O (Residential, Office) district must be 10' rights-of-way. Freestanding signs within the agricultural, commercial, and industrial districts must be 15' from rights-of-way and 100' from residential districts.	No	Freestanding signs must be 5 feet from any property line. Setback may be reduced by the Zoning Administrator if the sign is located within a mixed-use district.	Signs are exempt from setback requirements in all zones, provided that they are located outside any public right-of-way and do not interfere with vehicular sign distances (exact same language as Fluvanna County)	No	Permanent signs must be 300 feet from portions of Route 20 and Route 231 (Virginia Byways). On other primary highways, each permanent sign must be setback from the right-of-way a distance equal to its height.
Are there minimum distance requirements between freestanding signs?	No	No	In the Office/Service district, multiple signs on the same parcel must be at least 150 feet apart.	No	No	No	No



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Off-Street Parking Ordinances

Research Summary

Several Virginia localities have incorporated provisions into their parking ordinances to address stormwater quality, aesthetics, safety, and other issues. Fluvanna County may consider adopting similar provisions as its parking ordinance is amended.

The following goals of the Comprehensive Plan must be considered when revising Fluvanna County's parking provisions:

- Develop land-use policies and regulations that will preserve and enhance the County's natural environment (*Natural Environment: Goal 1*).
- Protect environmental resources (*Natural Environment: Goal 2*).
- Manage and protect surface water and groundwater resources (*Natural Environment: Goal 3*).
- Enable well-planned, coordinated, and sustainable development to occur throughout the County (*Land Use: Goal 2*).
- Preserve and enhance Fluvanna's unique identity and rural character (*Community Design: Goal 1*).
- Develop higher-density, walkable, mixed-use communities in the identified growth areas of the County (*Community Design: Goal 2*).
- Improve pedestrian and bicycle access to roads and provide off-road trails and walkways (*Transportation: Goal 3*).

A properly-written parking ordinance can help the County implement the following strategies outlined within the Comprehensive Plan:

- Review zoning and subdivision regulations to maximize environmental benefits through best management practices such as low-impact development, dark-sky lighting, quality and quantity stormwater controls, adequate buffering/screening, native landscaping, pervious surfaces, and walkability (*Natural Environment: Goal 1, Strategy 6*).
- Promote development projects that minimize environmental impact through the effective utilization of green infrastructure, low-impact development practices, and other innovative sustainable development practices (*Natural Environment: Goal 2, Strategy 1*).

Parking Ordinance: Research Summary

- Promote BMPs, particularly those recommended by the Rivanna River Basin Commission, to reduce non-point source pollution from development, farming, and other sources (*Natural Environment: Goal 3, Strategy 3*).
- Enhance the County's alternative transportation systems through the development process (*Community Design: Goal 1, Strategy 5*).
- Integrate a variety of transportation options, including pedestrian, bicycle, and vehicular (*Community Design: Goal 2, Strategy 4*).
- Provide secure bicycle storage shelters at all public facilities, and require or give parking space credits for commercial development (*Transportation: Goal 4, Strategy 9*).

The following pages describe the existing provisions of the Off-Street Parking Ordinance, summarize the requirements of other Virginia localities, and highlight innovative practices promoted by out-of-state communities. Input from Planning Staff, as well as local landscape professionals and developers, is also included.

Attached are a series of tables that compare Fluvanna County's off-street parking requirements with twelve other localities. All of the surrounding localities were researched, as well as other Virginia counties that have similar demographic, historic, and/or environmental characteristics.¹

¹ Buckingham County, which borders Fluvanna County to the south, does not have an off-street parking ordinance.

Parking Ordinance: Research Summary

Minimum Parking Requirements

Minimum parking requirements establish the minimum number of parking spaces that each use must provide. If the minimum parking requirements are excessive, undeveloped land will be unnecessarily converted to impervious cover and developers' construction costs will increase. If too little parking is provided, visitors may attempt to park illegally on adjacent roadways or yards, potentially leading to unsafe traffic conditions.

Existing Fluvanna County Ordinance

The existing ordinance establishes minimum parking requirements for a variety of uses (see attached charts).

Example Regulations

All of the surrounding localities (except Buckingham County) have implemented minimum parking requirements. These requirements, and the individual uses specified, vary amongst localities.

One group that studied Fluvanna County's parking ordinances suggested that the County reduce its minimum parking requirements for office buildings and retail shopping centers to 3 spaces per 1,000 square feet (see *Reducing Runoff from New Development: Recommendations for Fluvanna County*).

Staff believe that many of the minimum parking requirements are excessive and could be reduced to more accurately reflect parking needs. They also suggest that additional uses be added to Table 1: Off-Street Parking Requirements (Sec. 22-26-8).

Local developers that were interviewed also commented that the current parking requirements are excessive, especially when compared to neighboring localities.

Fluvanna County's current ordinance states that the number of parking spaces installed may not exceed the minimum parking requirements by more than forty percent (40%) without the approval of the Planning Commission. Staff believes that this number could be reduced to around twenty percent (20%), which would discourage the construction of excessive parking.

Parking Ordinance: Research Summary

Paving Requirements

Most localities require parking lots over a certain size to be paved or surfaced with a dust-free material. These regulations are intended to ensure that these parking lots remain accessible year-round and that they do not generate excessive dust. To reduce the impact increased impervious surfaces have on local water quality, some localities allow or require parking to be paved with permeable materials.

Existing Fluvanna County Ordinance

Per Sec. 22-26-5 of the Zoning Ordinance, “all access aisles, parking, and loading facilities for 5 or more vehicles shall be surfaced in accordance with intensity of usage and such improvement shall not be less than 6” of VDOT #21 or #21A aggregate base together with prime and double seal or equivalent.” Certain low-traffic uses (places of worship, car display areas, etc.) may have a base of only 3”.

Example Regulations

Generally, Virginia localities require parking lots with more than five (5) spaces to be paved with a dust-free surface. Some localities allow gravel to be used for lots larger than five (5) spaces, while others require asphalt or concrete to be used.

Some localities allow alternative paving materials to be used in certain situations (see “Examples of Low-Impact Development (LID) Parking Areas”). Pervious concrete, porous asphalt, open-jointed blocks, grass pavers, and other permeable paving options facilitate on-site stormwater infiltration, reducing runoff volume and velocity. At the Developers’ Roundtable in December 2010, participants hoped that the County would allow the use of pervious pavers; its use is not specifically mentioned in the current ordinance. Pervious pavements may be less durable than conventional surfaces, so they should generally be used only in low-traffic areas. These surfaces must be properly constructed and maintained, or they will become ineffective; sand and salt used for snow removal may clog the pores of permeable paving, significantly reducing infiltration.

York County allows the zoning administrator to approve unpaved or gravel parking areas that are part of a stormwater management plan, and James City County allows grass pavers to be used in low-traffic areas with the approval of the Planning Director. In Virginia Beach, if an applicant wishes to exceed the maximum parking requirements, the additional parking spaces, if approved by the Planning Director, must be constructed with a permeable paving material.

Several out-of-state communities also encourage the use of alternative paving methods. Hilton Head, South Carolina requires developers to use pervious materials when providing more parking than is required by code. In Pinehurst, North Carolina, at least 75 percent of all parking areas must be paved, but up to 25 percent of the parking area may be covered with gravel. Lexington, Kentucky allows parking lots in residential areas to be paved with gravel or loose aggregate for purposes of historic preservation and/or tree protection. To ensure the long-term maintenance of these materials, Toronto requires developers to follow an ongoing maintenance program that ensures the long-term functionality of permeable paving materials.

Parking Ordinance: Research Summary

Shared Parking

Shared parking arrangements allow multiple land uses to utilize the same parking area. These arrangements are feasible when the uses sharing the lot have different operating hours and peak visitation times. With a shared parking agreement, many localities allow for reduced parking requirements; the two uses do not have to supply as much parking as they would individually, because they share spaces with each other. The reduced parking results in lower construction and maintenance costs, as well as reduced impervious cover.

Existing Fluvanna County Ordinance

The current ordinance permits the use of shared parking agreements with the approval of the Planning Director and County Attorney (Sec. 22-26-3, C & D). Publicly-owned parking lots may also be used to meet on-site parking requirements, if they are within 600 feet of the development site.

Example Regulations

Most surrounding localities allow for shared parking agreements. Depending on the locality, shared parking agreements may require the approval of the Zoning Administrator, the Planning Commission, and/or the Board of Supervisors. Some localities place a cap on the amount parking may be reduced; for example, Albemarle County allows for a reduction in required parking of up to 35% with a shared parking agreement, while Hanover County allows a reduction of up to 20%.

Parking Ordinance: Research Summary

Parking Lot Siting

Parking lots can have a significant impact on the walkability of a particular corridor and the area's character. Buildings can be placed between parking lots and adjacent roadways to lessen their visual impact and make the street more pedestrian-friendly. Parking lots can be divided into smaller expanses to reduce their impact as well.

Existing Fluvanna County Ordinance

The ordinance states that, “to the greatest extent possible, parking areas shall not be located between the adjacent right-of-way and the principal structures on the site” (Sec. 22-26-3E).

Example Regulations

Few surrounding localities specify where parking facilities should be located on the lot. Some communities, including Culpeper County, require parking lots to be set back a certain distance from the property lines.

Like Fluvanna County, York County suggests, but does not require, parking to be relegated to the side or rear of main buildings (Figure 1). The ordinance states that the “location of all or the majority of off-street parking to the side or rear of the principal building is strongly encouraged so as to enhance the opportunities for landscaping in front of buildings and complement site architecture.” Fluvanna County's Comprehensive Plan encourages the use of relegated parking.

Nationally and internationally, other localities and agencies encourage that parking be located to the rear of buildings. The Kennebec Valley Council of Governments (Maine) says that, in designated growth areas (where encouraging multi-modal transportation is a priority), parking lots should not be located between the street and the front façade of the building, unless the Zoning Administrator or Planning Commission determines that environmental conditions or existing structures restrict adequate parking elsewhere on the site. Toronto, Canada prohibits new parking lots from being located between the front façade and existing roadways, and the city encourages parking areas to be sited away from the primary street frontages and street corners.

One developer suggested that, to encourage relegated parking, that the County may consider reducing its setbacks in commercial areas.

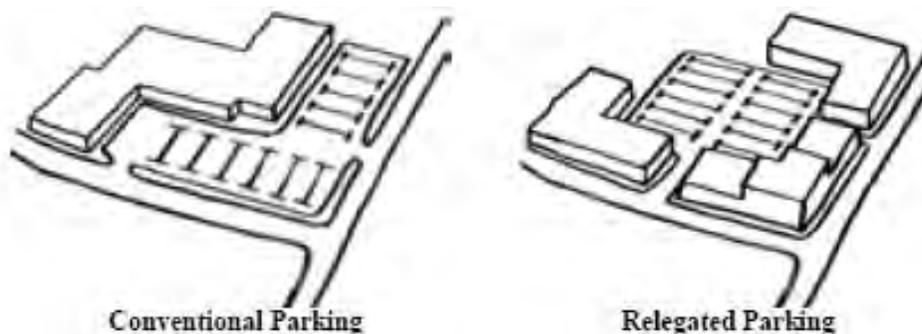


Figure 1: Relegated parking is located behind the buildings it serves, shielding it from public view
(Source: Fluvanna County Comprehensive Plan)

Parking Ordinance: Research Summary

Compact Cars

About twenty percent (20%) of automobiles on the road today are smaller, compact models. Instead of requiring that all parking spaces be built to accommodate larger vehicles, some localities are allowing smaller spaces to be constructed that are specifically for compact cars. These smaller spaces are not only less expensive to construct, but they reduce the amount of impervious cover on-site. According to some sources, compact parking stalls create up to thirty percent (30%) less impervious cover than stalls for larger cars.

Existing Fluvanna County Ordinance

The parking provisions within the Zoning Ordinance make no mention of parking for compact cars. Sec. 22-26-4B establishes minimum parking space dimensions that are greater than the size of parking spaces for compact cars.

Example Regulations

Several Virginia localities allow compact car spaces to be constructed to meet the minimum parking requirements. Culpeper and Louisa counties allow up to twenty percent (20%) of the spaces within a parking lot to be reserved for compact cars. Most localities require that compact car spaces be clearly marked, so that users know that these spaces are only intended for smaller vehicles.

Several groups have studied Fluvanna County's parking ordinances and have suggested that the County allow compact car spaces to meet the minimum parking requirements (see *Reducing Runoff from New Development: Recommendations for Fluvanna County*; ***An Evaluation of the Water Quality Benefits Provided by the Codes, Ordinances, and Policies of Fluvanna County, Virginia***).

One developer suggested that the County allow parking spaces that are located adjacent to landscaped areas to have a reduced length of sixteen feet (16'); since the cars may overhang the landscaped area, the parking space does not have to be as long. Albemarle County allows for shorter spaces adjacent to landscaped areas.

Parking Ordinance: Research Summary

Exceptions/Modifications

Most communities have minimum parking requirements, and some have instituted maximum parking caps. While minimum parking requirements are intended to ensure that there is adequate parking for the expected users, maximum parking regulations ensure that there is not excessive impervious cover on-site. In certain situations, it may be appropriate to modify the parking requirements. Localities provide processes by which developers may build fewer spaces than required, or they may request to build more than the maximum required.

Existing Fluvanna County Ordinance

There are no provisions that allow for a reduction in the number of required parking spaces, except through a shared parking agreement. The Planning Commission may allow an applicant to exceed the minimum parking requirements by more than 40% (Sec. 22-26-8B).

Example Regulations

Some Virginia localities provide waivers to those interested in building fewer spaces than are required. These waivers may be granted by the Zoning Administrator, Planning Director, Planning Commission, or the Board of Supervisors. Localities may offer reductions for projects that provide exceptional pedestrian connections, or those located within compact, pedestrian-friendly areas. In Louisa County, the Zoning Administrator may reduce the minimum parking requirements by up to ten percent (10%) based on how effectively a site accommodates pedestrian movement. Fauquier County allows neighborhood businesses that are oriented towards pedestrian and bicycle traffic to receive a 20 percent reduction in the parking requirements with the approval of the Board of Supervisors. Gloucester County allows the Zoning Administrator to modify or waive the parking requirements for uses within the historic Courthouse Village.

Other Virginia communities may allow waivers if a site accommodates mass transit. Albemarle County may allow for reduced parking for projects utilizing Transportation Demand Management Practices, with the approval of the Zoning Administrator. Gloucester County allows for significant parking reductions (up to 25%) for employers utilizing transportation demand management practices; developments that generate 1,000 or more daily trips and are located on major collectors must provide facilities to accommodate mass transit. James City County may reduce the parking requirements with the approval of a mass transportation plan; the parking needs must be reassessed every two years, and a reserve area must be set aside that is equal to the size of the number of spaces that were reduced.

Nationally, some communities have embraced the concept of “landbanking.” Landbanking is a method by which developers reserve an area for future parking; instead of building all of the required spaces at once, they may build a certain amount at first, then the rest at a later date. The reserve area may be landscaped or kept as open space. Some localities allow up to twenty-five percent (25%) of the required parking to be reserved for future construction. When landbanking is used, the locality should require that:

- The land be permanently reserved for parking;

Parking Ordinance: Research Summary

- The developer secure a performance bond for the anticipated cost; and
- The developer submit a schedule showing under what conditions the reserved parking will be constructed.

When properly implemented, this system prevents excessive parking from being constructed, provides usable open space, and provides localities with a tool of constructing additional parking when it is needed.

To encourage the construction of affordable housing, some communities do not require affordable housing projects to meet the minimum parking regulations. Some localities allow a reduction of up to 0.5 spaces per unit for deed-restricted affordable housing.

When interviewed, a local developer strongly encouraged the County to allow for parking modifications. He suggested that this parking modifications be permitted with the approval of the Planning Director.

Parking Ordinance: Research Summary

Parking Lot Access (Entrances/Exits)

Regulating parking lot access can help protect the safety of motorists and prevents road capacity from being compromised.

Existing Fluvanna County Ordinance

There are no provisions regarding access management within the current ordinance. The Virginia Department of Transportation (VDOT) has some regulations related to access management.

Example Regulations

Only a few localities surveyed have access management regulations for parking lots; most defer to VDOT regulations. Goochland County recommends that each parcel have no more than one entrance (or one combined entrance and exit) along primary roads. Hanover County allows commercial uses on public roads to have only one entrance per 300 feet of frontage; lots existing before the ordinance was enacted with less than 300 feet of frontage may have one entrance, but it must be located as far as possible from existing access points. New Kent County limits each lot to a maximum of two access points per street; the entrance centerlines must be at least 65 feet apart and be set back from any intersection at least 50 feet or one-half the lot frontage, whichever is greater (provided that in no case will the required setback distance exceed 200 feet).

Chapel Hill, North Carolina requires new parking lots to connect to existing ones, limiting the number of entrances needed and allowing customers to move from one lot to the next without re-entering public roads.

Parking Ordinance: Research Summary

On-Street Parking

Most communities do not allow on-street parking to count towards the minimum parking requirements. On-street parking may be appropriate in established villages or in neo-traditional developments, where space is limited and pedestrian activity is encouraged. On-street parking helps to slow traffic and serves as a buffer between the sidewalk and moving vehicles.

Existing Fluvanna County Ordinance

The current ordinance does not specifically allow on-street parking to count towards the minimum parking requirements.

Example Regulations

Few neighboring localities allow on-street parking to be used to meet the parking requirements. Albemarle County allows on-street parking spaces that are located along an abutting road (public or private) to count towards the minimum parking requirements; if they are located within a public right-of-way, they must be approved by VDOT.

One group that studied Fluvanna County's parking ordinances suggested that the County specifically allow on-street parking to count towards the parking requirements (see *Reducing Runoff from New Development: Recommendations for Fluvanna County*).

Parking Ordinance: Research Summary

Pedestrian Connections

Pedestrian connections are needed to allow visitors to move safely from their cars to adjacent buildings. They also allow pedestrians using nearby sidewalks to traverse the parking lot.

Existing Fluvanna County Ordinance

There are no provisions in the current ordinance requiring the construction of a sidewalk to connect a building with its associated parking area.

Example Regulations

Some Virginia localities require sidewalks to connect parking lots and their associated uses, but many do not. Albemarle County requires sidewalks between the parking area and the use it serves. Culpeper County specifically requires parking lots to be laid out to accommodate vehicular, pedestrian, and bicycle traffic; continuous, direct pedestrian access is required between the parking lot and the use, and large parking lots must include internal walkways (Figure 2). James City County requires developers to provide internal pedestrian access between parking areas, buildings, and public areas, and New Kent County requires sidewalks between businesses and industrial buildings and their parking facilities.

Some communities require developers to use speed tables, special paving, and other materials to clearly delineate areas where pedestrian crossings are located (Figure 3). Not only do these features improve safety, but they can be aesthetically-pleasing as well.



Figure 2: A direct, landscaped walkway links the business with the street
(Source: James City County Community Appearance Guide)



Figure 3: Alternative paving clearly delineates a pedestrian crosswalk.
(Source: James City County Community Appearance Guide)

Parking Ordinance: Research Summary

Bicycle Parking

To develop a multi-model transportation system, new development may provide facilities for bicycle parking (Figure 4). In villages and towns with higher densities, travel by bicycle is a feasible, environmentally-friendly alternative to the automobile.

Existing Fluvanna County Ordinance

The current parking regulations make no mention of bicycle parking facilities.

Example Regulations

Several Virginia localities require developers to provide bicycle parking facilities. Gloucester County requires bicycle and pedestrian facilities to be provided within all developments that have at least 25 employees on any shift or generate 500 average daily trips. James City County requires all retail and office development with at least 20,000 square feet of floor area to provide bicycle parking at the following rates:

Required Bicycle Parking	
Building Square Footage	Number of Facilities and Parking Spaces
20,000 to 50,000	1 Facility with a Minimum of 5 Parking Spaces
50,001 to 200,000	2 Facilities with a Minimum of 5 Parking Spaces per Facility
200,001 or more	3 Facilities with a Minimum of 5 Parking Spaces per Facility

Virginia Beach requires bicycle parking in all zoning districts for certain uses. For parking lots with 300 spaces or more, at least fifty percent (50%) of the required bicycle spaces must be indoors or covered. The requirements are as follows:

Use	Bicycle Parking Requirement
Primary or Secondary School	Equal to 5% of all building staff and students above Grade 3 level
College or University Building	Equal to 6% of the classroom capacity of each building
Dormitories or Residence Halls	1 space per 3 students
Public Transit Station	35% of the required number of automobile parking spaces, or a minimum of 20 spaces, whichever is greater
Recreation/Community/Fitness Centers	12% of the required number of automobile parking spaces
Parks and Ballfields	Minimum of 10 spaces

Parking Ordinance: Research Summary

Some out-of-state communities include incentives for those that provide bicycle parking. In St. Paul, Minnesota, a non-residential use with a parking area of 5,000 to 10,000 square feet may install a bike rack to substitute for two parking spaces. In Lexington-Fayette County, Kentucky, sites with 50 or more parking spaces may reduce the total minimum automobile parking space requirement by 1 parking space for every 1 bicycle space provided on a permanently-constructed bicycle rack; the maximum reduction in the automobile parking requirements is five percent (5%).

The Comprehensive Plan states that the County should require or incentive the installation of bicycle parking in conjunction with commercial development (*Transportation: Goal 4, Strategy 9*).



Figure 2: Unobtrusive bicycle racks are located in front of a government building.

(Source: Smithfield, Virginia Entrance Corridor Guidelines)

Off-Street Parking Ordinances

Examples of Low-Impact Development (LID) Parking Areas

Parking lots cover large portions of the American landscape. Since most parking areas are covered with impervious surfaces, they generate high quantities of stormwater runoff. If not properly managed, this runoff can damage local waterways. Low-impact development (LID) strategies aim to manage runoff on-site by taking advantage of natural water filtration processes. Below are some examples of parking facilities that have incorporated LID strategies into their design. These examples show that LID strategies can be attractive, unobtrusive, and functional. When revising its off-street parking ordinance, Fluvanna County may consider including provisions that allow and encourage the use of LID strategies within new developments.



Figure 1: This parking lot, which is associated with a LEED-certified building, utilizes asphalt for driving lanes and reinforced gravel for parking places. Sidewalks are constructed of porous pavers, and small landscaped detention areas are used instead of raised islands (Source: http://www.casfm.org/stormwater_committee/GPL-01.htm).

Examples of Parking Lots utilizing LID Strategies



Figure 2: Portions of this parking lot surfaced with interlocking “grass-crete” pavers, which allow for stormwater infiltration (Source: <http://www.venturariver.org/2010/03/first-lid-parking-lot-in-ventura.html>).



Figure 3: This parking lot in Colorado is paved with concrete blocks; rainwater infiltrates between the individual pavers (Source: http://www.casfm.org/stormwater_committee/MBP-02.htm).

Examples of Parking Lots utilizing LID Strategies



Figure 4: Stormwater from John Paul Jones Arena's parking and gathering areas are funneled into this bioswale, which contains native plants (Source: <http://ehs.virginia.edu/ehs/ehs.stormwater/stormwater.projects.html>)



Figure 5: Curb cuts channel stormwater into planting areas, allowing for on-site infiltration (Source: <http://olsonplanning.com/tag/low-impact-development/>).

Examples of Parking Lots utilizing LID Strategies



Figure 6: The central landscaping area is below the grade of the surrounding parking lot, allowing stormwater to run into the swale, where it is filtered by water-tolerant plants and allowed to infiltrate the soil (Source: <http://www.codepublishing.com/wa/edgewood/html/edgewd18/edgewd1895.html>).

Examples of Parking Lots utilizing LID Strategies

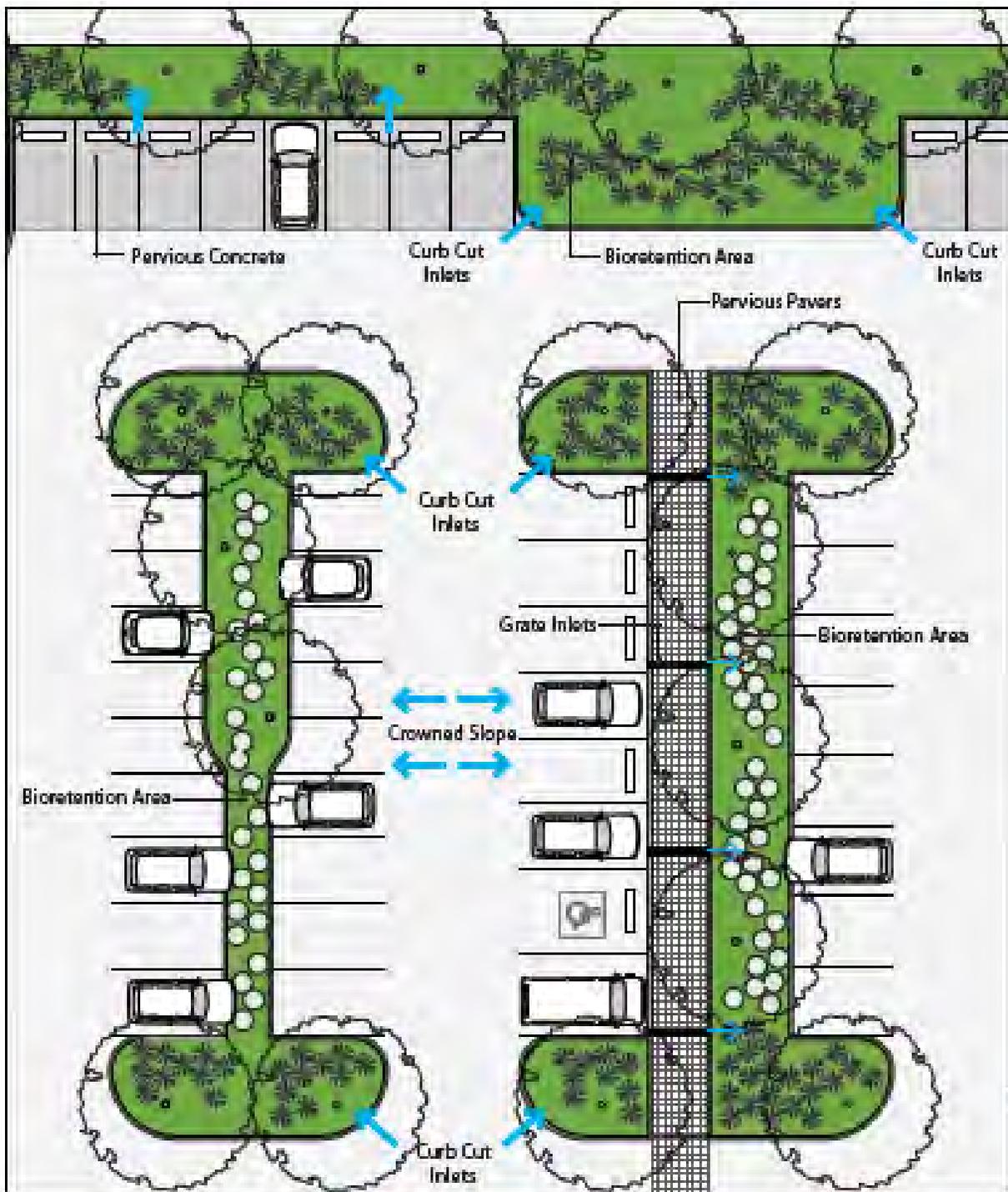


Figure 7: This is an example of a parking lot that utilizes a variety of LID strategies, including porous pavements and bioretention areas within landscaped islands.

(Source Central California Coast Technical Assistance Memo – LID Parking Lots)

Article 24. Tree Protection

Sec. 22-24-1. Landscape plan -- General provisions for landscaping.

The purpose of this section is to provide guidelines for landscaping and screening of development sites subject to site plan approval. These requirements are intended to ensure that site development is harmonious with the surrounding properties, to promote the public health, safety and welfare, in accordance with the guidelines in the Comprehensive Plan; to help to conserve energy by providing shade and wind breaks; to encourage recharge of ground water by providing pervious area; to improve and preserve the air quality and minimize noise, dust and glare, and to preserve the rural character of the County.

Sec. 22-24-2. Landscape Plan Specifications.

- I. A certified Landscape Architect, arborist, horticulturist, land surveyor, or other person deemed qualified by the Director of Planning shall prepare the plan.
- II. The plan shall be prepared at a scale of not less than 1"=40' for areas along streets and roads, and not less than 1"=20' for areas around buildings, parking lots, and landscape areas.
- III. All landscape plans shall be on sheets not exceeding twenty-four inches (24") by thirty-six inches (36").
- IV. If the plan is prepared on more than one sheet, match lines shall clearly indicate where the several sheets join.

Sec. 22-24-3. Landscape Plan Contents.

- A. The Landscape Plan shall include the following elements
 1. Existing and proposed contours at intervals of five (5) feet or less.
 2. Property boundary lines.
 3. Limits of grading and clearing.
 4. Tree protection zone(s) as applicable.
 5. All proposed improvements.
 6. Existing and proposed underground and overhead utilities, including heights and/or depths.
 7. Rights-of-way and easements.
 8. Botanical and common name, size, spacing, and location of all trees, shrubs, and ground cover, and the location and extent of planting beds in which they are to be planted, if any.
 9. Plants shall be labeled on the plan by direct call-out method and not by symbols keyed to a plant list.
 10. A planting symbol to illustrate the natural canopy/cover of trees and the extent of growth of shrubs at maturity.
 11. A plant list or matrix showing the botanical name, common name, quantity, size, spacing, handling method, and general instruction, if any, specific to each plant.

12. General details illustrating the method of installation of plants, seeding, and sodding, including but not necessarily limited to size of plant pit, method of placement, backfill material, method of support, preparation of beds, mulch, etc.
13. Special details illustrating special conditions such as supplemental plant pit drainage, pruning for special effects, or other conditions requiring illustrated instructions.
14. General notes specifying the care and maintenance of plants for a period of three years following planting and the replacement of any dead, dying, or diseased vegetation required to be installed by this chapter for the life of the project.
15. Any and all information required for tree protection as indicated in Section B of this article.
16. Provide and identify adequate exterior water source.

Sec. 22-24-4. Minimum Standards.

A. The following shall be the minimum size of plant materials at installation:

1. Large shade trees ————— 2" caliper
2. Medium shade trees ————— 1.5" caliper
3. Ornamental trees ————— 1.5" caliper
4. Large evergreen trees ————— 8' in height
5. Medium evergreen trees ————— 6' in height
6. Small evergreen trees ————— 4' in height
7. Large shrubs ————— 2' in height
8. Medium shrubs ————— 2' in height
9. Small shrubs ————— 1' in height
10. Ground cover ————— 1 year plants

1. *Large shade trees* *1.5" caliper*
2. *Medium shade trees* *1.25" caliper*
3. *Ornamental trees* *1.25" caliper*
4. *Evergreen trees* *5' in height*
5. *Shrubs* *18" in height*
6. *Ground cover* *1 year plants*

~~B. All trees to be planted shall meet the specifications of the American Landscape Association. The planting of trees shall be done in accordance with either the standardized landscape specifications jointly adopted by the Virginia Nurserymen's Association, the Virginia Chapter of Landscape Designers, and the Virginia Chapter of the American Society of Landscape Architects, or the Road and Bridge Specifications of the Virginia Department of Transportation. Wheel stops, curbing, or other barriers shall be provided to prevent damage to landscaping by vehicles. Where necessary, trees shall be welled or otherwise protected against change in grade. All pervious areas of the site shall be permanently protected from soil erosion with grass, ground cover, or mulch material.~~

B. *All required landscaping shall be planted according to the following standards:*

1. *All trees to be planted shall meet the specifications of the American Landscape Association.*
 2. *The planting of trees shall be done in accordance with either the standardized landscape specifications jointly adopted by the Virginia Nurserymen's Association, the Virginia Chapter of Landscape Designers, and the Virginia Chapter of the American Society of Landscape Architects, or the Road and Bridge Specifications of the Virginia Department of Transportation.*
 3. *All required landscaping shall be planted between September 15 and May 1.*
- C. *Wheel stops, curbing, or other barriers shall be provided to prevent damage to landscaping by vehicles.*
- D. *Where necessary, trees shall be welled or otherwise protected against change in grade.*
- E. *All pervious areas of the site shall be permanently protected from soil erosion with grass, ground cover, or mulch material.*

Sec. 22-24-5. Requirements.

~~A. It is the specific intent of these requirements to promote landscape design and installation to mitigate the effects of new development on surrounding areas and specifically not to use plantings as a means of drawing attention to new development. To promote the protection and preservation of rural character, a palette of plant materials appropriate to the various zoning districts has been prepared and shall be followed as a general guideline in preparing plant plans for the various zones. The Landscape Plan should utilize those plant species that are best suited for the site. To facilitate this, a list of recommended and prohibited plants are broken down into native, assimilated non-native, exotic, and invasive species is available from the Director of Planning. Applicants may add plants to this list with the prior approval of the Director of Planning.~~

- ~~1. Residential zoning districts: Plantings shall be native and assimilated non-native, except in village or commercial settings. In these settings, where plantings are internal and generally not in view of the public road, street, or adjacent property, exotic species may be used.~~
- ~~2. Business and Industrial zoning districts: Plantings shall be native and assimilated non-native, except in areas generally not in view of the public road or adjacent properties. In these areas exotic species may be used.~~
- ~~3. Agricultural and all other districts: Plantings shall be native and assimilated non-native.~~

A. *It is the specific intent of these requirements to promote landscape design and installation to mitigate the effects of new development on surrounding areas and specifically not to use plantings as a means of drawing attention to new development. The landscape plan should help protect and preserve Fluvanna County's rural character.*

- B. *The Landscape Plan shall utilize native and assimilated non-native species listed within the Fluvanna County Plant List. Applicants may add plants to this list with the prior approval of the Director of Planning, provided that the proposed species have a rated hardiness and growth habit appropriate for the intended location. A mixture of plant species should be used on each site.*
- C. ~~Trees~~ *Street trees shall be required along existing or proposed public streets in any non-residential development, or non-residential part of a mixed-use or multi-family development site that is subject to site plan approval, as follows: and all major subdivisions with an average size of one (1) acre or less. The placement of street trees shall be in accordance with Virginia Department of Transportation (VDOT) standards and shall not be located within sight triangle. The required plantings shall be located either within the right-of-way itself or within a five-foot (5') landscape preservation easement continuous to such right-of-way. The street trees shall be planted at the following rate:*
- ~~1. Two (2) large shade trees per 100 feet, on both sides of the street.~~
 - ~~2. An average of one (1) ornamental tree per one hundred (100) feet, on both sides of the street.~~
 - ~~3. An average of two (2) medium or small evergreen trees per one hundred (100) feet, on both sides of the street. Medium shade trees may be substituted for large shade trees at a ratio of 2 to 1, but may not constitute more than 40% of the total shade trees provided.~~
- 1. One (1) large shade tree shall be required for every forty(40) feet of road frontage; or*
 - 2. One (1) medium shade tree shall be required for every twenty-five (25) feet of road frontage.*
- D. *Minimum tree canopy coverage shall be provided for all new commercial, industrial, and multi-family residential development in accordance with the following requirements:*
- 1. Tree canopy coverage shall include all areas of coverage by plant material exceeding five feet in height, and shall be measured twenty years maturity after planting.*
 - 2. Tree canopy coverage shall be calculated for new plantings using twenty-year tree canopy coverage standards published by the Virginia Nursery and Landscape Association or other set of standards approved by the Zoning Administrator. When a coverage interval is cited in such standards, the smallest coverage figure for each interval shall be used.*
 - 3. All landscape plans shall include the preservation of existing trees, the planting and replacement of trees, or any combination thereof, to the extent that, at maturity of twenty years, a minimum tree canopy shall be provided as follows:*
 - a. Ten percent (10%) tree canopy for a site developed with commercial, office, institutional, or industrial uses;*

invasive species indicated on the list maintained by the ~~Director of Planning~~ Zoning Administrator may not be used in any circumstance.

- G. In areas in view of public roads and rights-of-way, landscape plans should specify plants and their spacing so they may grow in their natural habitat, achieving mature size with minor pruning and shaping.
- H. *Where landscaping is required, the property owner or developer shall provide performance guarantees as follows:*
1. *No certificate of occupancy shall be issued until the landscaping is completed in accordance with the approved landscaping plan. When the occupancy of a structure is desired prior to the completion of the required landscaping, a certificate of occupancy may be issued only if the owner or developer provides a performance bond or other form of surety satisfactory to the Zoning Administrator in an amount equal to the costs of completing the required landscaping. All required landscaping shall be installed and approved by the end of the first planting season following issuance of a certificate of occupancy, or the surety described above may be forfeited to Fluvanna County.*
 2. *A maintenance bond for the landscaping required by this Chapter shall be posted by the developer in favor of Fluvanna County. If the landscaping is installed prior to the issuance of a certificate of occupancy, then the maintenance bond shall be posted prior to the issuance of the certificate of occupancy. If the landscaping is bonded for installation, rather than installed prior to the issuance of a certificate of occupancy, then the maintenance bond shall be posted when the materials are planted and before the performance bond is released. The maintenance bond shall be in the amount of one-third (1/3) the value of the landscaping and shall be held for a period of three (3) years following the planting date. At the end of the three (3) year time period, the bond shall be released if all plantings are in healthy condition as determined by the Zoning Administrator. If the plantings installed in accordance with an approved landscape plan are not properly maintained by the owner, the surety described above may be forfeited to Fluvanna County.*
- I. *The landowner shall be responsible for the general maintenance and the timely repair and replacement of all landscaping required by this Chapter. All landscaping shall be maintained as follows:*

1. *Plantings shall be kept mulched to prevent weed growth and to retain soil moisture;*
 2. *Plant material shall be pruned to maintain healthy and vigorous growth with all pruning performed in accordance with generally accepted maintenance standard practices;*
 3. *All turf areas shall be kept mown;*
 4. *All plant and landscape material and landscaped areas shall be kept free of refuse and debris; and*
 5. *The landowner shall maintain any plant material required by this Chapter and any plant material that dies must be replaced in kind, or with a suitable substitute as approved by the Zoning Administrator. Preserved existing trees, that subsequently die, shall be replaced by new trees of a caliper and/or height as would be required by this Chapter.*
- J. Any minor requirements above may be waived or modified by the ~~Director of Planning~~ *Zoning Administrator* on a site-specific basis where conditions peculiar to the site may warrant or the objectives of the ordinance can be better achieved by other means. The ~~Director of Planning~~ *Zoning Administrator* may also approve minor spacing variations. The decision of the *Zoning Administrator* ~~Director of Planning~~ in this regard is appealable to the ~~Planning Commission~~ *Board of Zoning Appeals*.

Sec. 22-24-6. Parking lot landscaping.

- A. ~~The intent, in addition to those stated for landscaping in general, is to achieve a minimum of 50% screening of parking areas from public streets and adjacent properties.~~
- A. All development subject to site plan approval shall include the following required landscaping for parking lots consisting of five (5) spaces or more.
- B. Minimum planting areas are to be provided as follows:
1. One 9'x 18' planting island for every ~~twenty-five (25)~~ *twenty (20)* parking spaces in a row and at both ends of a parking bay.
 2. A nine- (9) foot planting strip between each adjacent area of parking of four (4) bays. ~~Where parking bays are adjacent to the nine- (9) foot planting strip, no planting islands are required.~~
 3. A nine- (9) foot planting strip shall be provided between access roadways and adjacent properties' parking areas and adjacent property of the same use.
 4. A twenty-five (25) foot planting area shall be provided between parking and adjacent properties of a different use and public streets and rights-of-way. The area shall be measured from the closest parking space to the adjacent property or right-of-way line.
- C. ~~Large shade trees~~ *Planting islands* shall be planted as follows:
1. One (1) large shade tree *and three (3) shrubs* in each 9'x 18' planting island.

2. Large shade trees shall be arranged so that the canopy at maturity will cover thirty-five (35) percent of the parking area placed mainly around the perimeter of the parking area and at the end of parking bays.
3. Medium shade trees may be substituted for large shade trees at a ratio of two (2) to one (1), if appropriately spaced and meeting all other canopy criteria. Medium shade trees shall not exceed forty (40) percent of the total number of shade trees.

~~D. Internal planting strips shall be planted with large shade trees every thirty five (35) feet, or medium shade trees as specified in the forgoing section. In addition, ornamental trees, small evergreen trees, evergreen shrubs, deciduous shrubs, and ground covers shall be planted to soften the visual impact of parked cars, create visual relief from expanses of pavement, help direct traffic, and create an aesthetically pleasing environment. The selection and arrangement of plant materials in these strips shall be to achieve these goals while avoiding conflict with sight distance, traffic safety standards, and handicapped accessibility. As a guideline, projecting plants sizes to maturity, thirty (30) percent of the strip should be covered by the canopy of ornamental trees, forty (40) percent by small, evergreen trees and shrubs, ten percent (10) covered by deciduous shrubs, and the remainder in ground cover, grass, or mulch.~~

D. Internal planting strips shall be planted as follows:

1. *One (1) large shade tree and five (5) shrubs every thirty-five (35) feet.*
2. *Large shade trees shall be arranged so that the canopy at maturity will cover thirty-five (35) percent of the parking area placed mainly around the perimeter of the parking area and at the end of parking bays.*
3. *Medium shade trees may be substituted for large shade trees at a ratio of two (2) to one (1), if appropriately spaced and meeting all other canopy criteria. Medium shade trees shall not exceed forty (40) percent of the total number of shade trees.*

E. Parking lots consisting of five (5) spaces or more shall be screened from view of public roads, rights-of-way, and adjacent properties. One of the following landscaping treatment options shall be utilized to meet the minimum screening requirements for parking lots:

1. *Landscape Strip Option: One (1) tree and ten (10) shrubs shall be planted for each thirty-five (35) linear feet, excluding driveway openings, within a planting strip that is ten feet (10') in width; or*
2. *Berm Option: One (1) tree and five (5) shrubs shall be planted for each thirty-five (35) linear feet, excluding driveway openings. The berm must be at least thirty (30) inches higher than the finished grade of the parking lot and shall not have a slope steeper than 2:1. The berm must be stabilized within groundcover or other vegetation; or*
3. *Woodlands Preservation Option: Existing woody vegetation shall be preserved as a buffer strip with a minimum width of thirty-five (35) feet. Additional tree or shrub plantings may be required by the Zoning Administrator. The woodlands*

preservation area must be placed in a landscape easement, and the landscape plan must demonstrate techniques to be used for removing underbrush, pruning, and protecting existing trees from any damage during site development; or

4. *Structural Option: A wall constructed of brick, stone, or architectural block, no shorter than three (3) feet and no taller than four (4) feet, shall be constructed along the entire width of the parking lot. One (1) tree and three (3) shrubs shall be planted for each thirty-five (35) linear feet, excluding driveway openings.*
- F. *The placement of bioretention areas within required planting areas is encouraged, provided that the bioretention techniques utilized are approved as part of an erosion and sediment control plan, stormwater management plan, or similar document. Examples of bioretention techniques include, but are not limited to, rain gardens, swales, infiltration trenches, and tree box filters.*
- G. When retaining existing trees in parking areas, enough ground around the tree should be left to allow for its survival or grass pavers should be used to allow air and moisture to reach the tree roots.

Sec. 22-24-7. Screening.

- A. Screening shall be required in the following instances:
 1. Commercial and industrial uses shall be screened from view adjacent properties in residential and agricultural zoning districts, except for commercial and industrial uses allowed by right in said districts.
 2. Parking lots consisting of five (5) spaces or more shall be screened from view of public roads, rights-of-way, and adjacent properties.
 3. Objectionable features, including but not limited to the following, shall be screened from the view of public roads, rights-of-way, and adjacent properties:
 - i. Loading areas
 - ii. Refuse areas
 - iii. Storage yards
 - iv. Dry Detention ponds
 - v. Maintenance areas
 4. If the required screening is consistent with an approved Master Plan subject to the requirements of the R-3 Residential zoning district.
 5. *The Zoning Administrator may require the screening of any use, or portion thereof, upon determination that the use would otherwise have a direct negative visual impact on a property designated as historic by its inclusion within the Historic Preservation chapter of the Comprehensive Plan.*
- ~~B. When required, screening shall consist of a planting strip, existing vegetation, berms, a wall or fence (fifty (50) percent solid), or a combination thereof to the reasonable satisfaction of the Director of Planning. When only vegetative screening is provided, such screening shall be provided to the reasonable satisfaction of the Director of Planning, but shall in no event be less than twenty-five (25) feet in depth. Vegetative~~

~~screening shall consist at a minimum of a double staggered row of large or medium evergreen trees planted at appropriate spacing for the species to achieve no less than thirty (30) percent screening at the time of planting. Areas indicated as tree protection zones may satisfy this requirement for screening.~~

- B. When required, screening shall consist of new plantings, existing vegetation, an opaque masonry wall or wooden fence, or combination thereof, to the reasonable satisfaction of the Zoning Administrator. Unless otherwise specified within this Chapter, one of the following landscaping treatment options shall be utilized to meet the minimum screening requirements:*
- 1. Evergreen Option: Two (2) rows of evergreen trees shall be planted ten (10) feet on center and staggered within a planting strip that is twenty-five feet (25') wide; or*
 - 2. Berm Option: Two (2) rows of evergreen shrubs shall be planted ten (10) feet on center and staggered. The berm must be at least thirty (30) inches higher than the finished grade of the parking lot and shall not have a slope steeper than 2:1. The berm must be stabilized with groundcover or other vegetation; or*
 - 3. Mixed Vegetation Option: One (1) large shade tree, one (1) medium shade tree, one (1) evergreen tree, and three (3) evergreen shrubs for each twenty (20) linear feet, within a planting strip that is twenty feet (20') wide; or*
 - 4. Woodlands Preservation Option: Existing woody vegetation shall be preserved as a buffer strip with a minimum width of seventy-five (75) feet. Additional tree or shrub plantings may be required by the Zoning Administrator. The woodlands preservation area must be placed in a landscape easement, and the landscape plan must demonstrate techniques to be used for removing underbrush, pruning, and protecting existing trees from any damage during site development; or*
 - 5. Structural Option: A wall or fence, no shorter than six feet (6') in height, shall be provided and one (1) evergreen tree or shrub shall be planted every ten (10') feet along the side of any such wall or fence facing a public street or use for which the screening shall benefit.*
- C. Within commercial, industrial, and multi-family residential developments, dumpsters and other refuse areas visible from public roads, rights-of-way, and parking areas shall be completely screened from view by a masonry wall constructed using architectural block, brick, stone, or a similar material that is compatible with the architecture of the principal structure. Alternative materials that adequately screen the refuse areas and prevent debris from leaving the refuse area may be used with the prior approval of the Zoning Administrator*
- D. Parking lots of five (5) spaces or more shall be screened in accordance with Sec. 22-24-6. .*

Sec. 22-24-8.1: ~~Statement of Intent~~ *Purpose of Tree Protection Plans.*

The purpose of this section is to promote the general health, safety and welfare through the protection and preservation of existing tree stands, individual specimen trees, and understory plants during the land disturbance/site development process. Preservation of existing tree stands, individual specimen trees, and understory plants shall be a primary consideration in the planning for, and implementation of, land development activities. For tree protection, barriers are required to prevent physical damage to trees or understory plants, and to prevent soil disturbance and compaction within tree protection areas. The more intense the development of the site, the greater the need for the protection and preservation of existing trees and understory.

Sec. 22-24-8.2. ~~When Required~~ *Activities Requiring Tree Protection Plans.*

Compliance with the tree protection program of this section is required on all site development plans involving land clearance of more than one-half of one acre (21,780 square feet of cleared land) in size, and all activities requiring a land disturbing permit except for the construction of a single or two family dwelling on an individual lot.

All plans prepared for compliance with this chapter shall clearly delineate areas of tree protection and provide construction details of tree protection barriers. Measures for tree protection shall be outlined in the general notes of the plan, including construction, inspection, and maintenance of barriers. The general notes shall also outline prohibited activities within the tree protection zones. The tree protection zone shall, to the extent possible, conform to the drip line of the trees being protected.

Sec. 22-24-8.3. *Tree Protection Plan Contents.*

- A. All tree protection plans shall indicate tree protection zone(s), in accordance with the following guideline:
 - 1. Existing stands of trees or individual specimen trees whose removal is not necessary for the development of the site or the construction of any facility.
 - 2. Preservation of existing trees to comply with the Landscape Plan requirements.
- B. All areas of tree protection shall be bounded by a tree protection barrier at the perimeter of the tree protection zone. Barriers shall completely surround the tree protection area, except where the area extends more than one hundred (100) yards beyond the construction zone or routes of access to the construction zone. The tree protection areas, beyond the one hundred (100) yards, must be flagged every one hundred (100) feet with continuous ribbon with “Do Not Enter” signs stating prohibited activity. Barriers and flagging shall be installed prior to any land disturbing activity. Barriers shall be a minimum of five (5) feet in height, stationary, and constructed of rigid or semi-rigid materials that must be dismantled to be moved. Barriers shall be of a color or flagged to be clearly visible by all people in the vicinity, particularly equipment and vehicle operators. Barriers shall be inspected and repaired on a routine basis and shall be completely removed prior to occupancy of the

development. The purpose of the barrier shall be to prevent damage to trees or understory plants and to prevent soil disturbance and compaction within the zone.

- C. The following activities are prohibited within tree protection zones:
 - 1. Operation of any vehicle or machinery, except as may be necessary for the installation of utility lines.
 - 2. Parking of vehicles or equipment.
 - 3. Storage of any materials or equipment.
 - 4. Discharge of any substance that may be injurious to trees or understory plants.

- D. Wherever feasible, utilities shall be designed and routed to avoid tree protection zones. If it is necessary to route utilities through tree protection zones, the following shall apply:
 - 1. Route utility trenches outside the drip line of trees or as far as possible from tree trunks.
 - 2. In areas of multiple trees, where trenches must go between trees, preference should be given to stay away from larger specimen trees.
 - 3. Equipment that is the lightest weight and makes the least possible impact shall be used to dig trenches and install utilities.
 - 4. Rubber-tired, rather than track equipment, shall be used whenever possible.
 - 5. Excavation materials are not to be placed against tree trunks and shall be placed as far away from trunks as possible.
 - 6. Where excavation materials are to be placed, indicator ribbons shall be placed on undisturbed areas prior to excavation, to facilitate restoring the area to the original grade.
 - 7. Areas where excavated material have been placed shall be restored to the original grade with the least amount of disturbance possible.

- E. Any damage done to trees within tree protection zones shall be immediately repaired.

- F. Any clearing within tree protection zones shall be done by hand.

- G. Where grade differences occur between the tree protection area and the finished grade of the adjacent areas, retaining walls and dry wells shall be used to prevent the need for grading in tree protection zones.