Town of Port Royal

Established 1744

"Behold Us Rising"

RESOLUTION

TO APPROVE A SPECIAL USE PERMIT TO ALLOW A CONVENIENCE STORE WITH FUELING FACILITIES WITHIN THE BUSINESS/COMMERCIAL ZONING DISTRICT AND HIGHWAY CORRIDOR OVERLAY DISTRICT ON TAX MAP PARCEL NOS. 13A-4-A AND 13A-4-B.

WHEREAS, The Town of Port Royal has a long history of growth; and

WHEREAS, the land areas subject to this change were in the designated growth area of Caroline County, calling for development in the Comprehensive Plan; and

WHEREAS, SH Development Co. submitted an application requesting a Special Use Permit (SUP) to allow a convenience store with fueling facilities on Tax Map Parcel Nos. 13A-4-A and 13A-4-B; and

WHEREAS, the Town Council carefully considered the testimony at the Public Hearing and recommendations of the Planning Commission, and finds that the request meets the standards of the Zoning Ordinance for issuance of the SUP;

NOW, THEREFORE, BE IT RESOLVED by the Port Royal Town Council on this the 26th day of April, 2016, that the Special Use Permit is hereby approved with the following conditions:

1. The development of the Property will be in substantial conformance with the Generalized Development Plan (GDP) entitled "Generalized Development Plan – Convenience Store with Fueling, Parcels 13A-4-A & 13A-4-B, Caroline County, Virginia," by Fairbanks & Franklin, dated March 29, 2016.
2. The development of the Property will be in substantial conformance with the architectural renderings of the facility.
3. The Tenant will construct a streetscape landscaping along the Route 17 and Route 301 frontage in general conformance with the GDP.
4. The Tenant will construct a vegetated buffer along the property boundary with the existing residential parcel, Tax Parcel 13A-A-6.
5. The Applicant will reserve a sign easement on the corner of Route 17 and Route 301 for the benefit of the Town of Port Royal for a future gateway/entrance sign.
6. Site lighting for the proposed use shall be dark-sky compliant and directed away from adjacent residential properties. Fixtures shall include shielding to reduce light pollution onto adjacent properties.
7. The proposed use is permitted only so long as it continues without an interruption lasting for more than 24 months.

James T. Heimbach, Mayor — Date: 4/26/2016

ATTESTED: M. Therese Harrison, Town Clerk

2016 Zoning Regulations
Auto Oriented Uses and Landscaping Standards Applied

Application

These regulations are applied to the geography of the entire Town of Port Royal, Virginia. These regulations are applied to all Auto Oriented Uses, which include, but are not limited to: vehicle sales and/or service, garages, fuel sales for vehicles and/or establishments relying upon a heavy flow of traffic into and out of the place of business, which focuses upon auto oriented uses.

Article 1
Standards for all Motor Vehicle and Transportation Related Uses

(a) All off-street parking and loading space for motor vehicle and transportation related uses shall be located not less than twenty-five feet (25') from any property zoned Rural Preservation or Residential property line and shall be effectively screened from view from adjacent Residential, or zoned Rural Preservation properties by landscaping, supplemental, as necessary, with appropriate fencing materials. This setback/screening requirement shall also apply to all circulation drives and stacking spaces.

(b) Outdoor lighting shall be sufficient to protect public safety; however, it shall be directed away from property lines and rights-of-way and shall not cast unreasonable or objectionable glare on adjacent properties and streets. All site lighting fixtures shall be full-cutoff, as defined by the Illuminating Engineering Society of North America, and shall have fully shielded and/or recessed luminaries with horizontal-mount flat lenses. Lighting shall be designed and used in such a manner that light pollution from a property to Fort AP Hill, and/or aircraft from Fort AP Hill training missions shall not be negatively impacted.

(c) Outdoor speaker or paging systems shall be directed away from property lines and shall be designed to prevent objectionable noise levels on adjacent properties or streets. The playing of music on any outdoor speaker systems at a volume in excess of 80 decibels that can be heard at the property line shall be prohibited.

(d) The minimum setback for structures such as fuel dispensing pumps, pump islands, canopies, customer service kiosks, and similar uses shall be forty feet (40') unless the district in which located allows a lesser setback for the principal structure. Setback shall be measured from the property line or right-of-way, whichever is greater. All lighting mounted on or under canopies shall be full-cutoff or recessed fixtures.

(e) Garage bay doors and semi-enclosed vehicles bays shall be screened from direct view from public streets to the extent practical by a combination of landscaping and earth-

forms. Any berms used shall comply with the requirements for providing sight triangles contained in Article III, LANDSCAPING REGULATIONS.

(f) Landscape plans for motor vehicle and transportation related uses shall be prepared and certified by a landscape architect or other landscape-design professional to comply with this ordinance, the Highway Corridor Overlay District and other ordinances and regulations of the Town of Port Royal.

(g) A hazardous materials management and storm-water runoff control plan detailing the methods to be employed to ensure that no hazardous or petroleum-based products are permitted to infiltrate into groundwater or surface water resources shall be prepared, submitted to, and approved by the Town of Port Royal prior to receiving site plan approval for such uses.

(h) No vehicle parking, storage or display associated with such uses shall be permitted to occur on adjacent public rights-of-way.

Article II

Standards for Auto Fuel Dispensing Establishments, Service Stations and Auto Repair

Automobile fuel dispensing establishments, service stations, and auto repair garages shall comply with the following standards:

(a) Automobile service and minor repairs shall be deemed to include engine tune-ups, oil changes and lubrication, and the repair or installation of mufflers, tailpipes, exhaust pipes, catalytic converters, brakes, shock absorbers, tires, batteries, and similar automotive components as determined by the zoning administrator. Repairs specifically shall not include body work and painting.

(b) All repair or installation work shall be conducted indoors. Used or damaged equipment removed from vehicles during the repair process shall be stored indoors or shall be deposited in an approved covered outdoor collection receptacle for appropriate off-site disposal.

(c) Temporary overnight outdoor storage and parking of vehicles waiting for repair or pickup shall be permitted. Appropriate and adequate parking areas shall be provided and set aside on the site for such vehicles. No long-term (thirty [30] days or more) storage and parking of vehicles which require major repair work shall be permitted.

(d) Landscaping supplemented by fencing if necessary shall be utilized to fully screen vehicular storage areas and to partially screen direct views of fuel islands, structures, and service bays from adjacent properties. The plan to accomplish this shall be designed and

prepared by a landscape architect or other landscape-design professional to comply with this ordinance, the Highway Corridor Overlay District and other ordinances and regulations of the Town of Port Royal.

(e) A traffic impact analysis must be performed in accordance with the requirements established by the Virginia Department of Transportation regarding safe traffic movements, curb-cuts, and traffic flows. The recommended improvements must be fully implemented as shown on the site plan, as well as any additional improvements or traffic restrictions as may be necessary to ensure traffic safety and preserve roadway capacity.

(f) Site lighting shall be provided by fixtures which are compatible in style and illumination levels with the architecture of the principal building on the site and are not greater than twenty-five feet (25') in height.

(g) In the event the fuel dispensing activity ceases at the automobile fuel supply establishment, written notice shall be provided by the owner/operator to the Zoning Administrator within fourteen (14) days after such fuel dispensing activity ceases. The owner/operator shall be responsible for performing the following, in the event the fuel dispensing activity remains inactive for a period in excess of one year (with a possible extension up to two years if, in the sole discretion of the Port Royal Town Council, satisfactory evidence is provided of active effort to sell or an executed contract of sale for a fuel-dispensing use, with actual conveyance and re-establishment of the use within an additional six (6) months:

1. the tanks, tanklines, fueling equipment (including the gas pumps and fueling islands) shall be removed; all applicable state and federal environmental protection and mitigation requirements shall be observed in the removal and site restoration process;
2. the canopy shall be removed;
3. any inactive accessory car wash equipment associated with the fuel dispensing activity and the structure surrounding same shall be removed;
4. the real property in or on which the improvements listed in subsection (1), (2), and (3) above, are placed or constructed shall be restored to the same grade or condition as the remainder of the parking lot and maintained either as landscaped green area or as paved area until a new site plan for same has been approved by the Town. Except in the restored area that is established as landscaped green area, the paved area shall be re-striped to match the remainder of the parking lot. The requirement to remove the above-noted equipment may be stayed for a maximum of six (6) months in the event the property owner provides documentation to the zoning administrator of the existence of an executed and pending contract for sale or lease of the property for the same use. If such an extension is granted, the actual conveyance, and the re-establishment of the use, must occur within said six

(6) month period. In the event such contract lapses, the removal requirement shall be immediately reinstated.

(h) The requirement to remove pumps, tanks, canopies and other appurtenances listed in the preceding subsection shall be ensured by the property owner/operator through a maintenance agreement, approved as to form by the Town attorney, whereby the property owner/operator shall covenant to perform the required removal of any such tanks, pumps, canopies and other prescribed appurtenances within ninety (90) days of notice by the Town and grant authority to the Town to perform such work at the property owner's cost if the owner/operator should default on his obligations. The owner/operator shall cause such agreement to be recorded by the clerk of the circuit court and provide evidence of such recordation to the zoning administrator prior to issuance of any building permits for the proposed development.

Article III
LANDSCAPING REGULATIONS

Intent

The following regulations are intended to establish minimum standards for landscape design and for the preservation of trees in order to better control soil erosion and the transport of sediment, protect and improve the quality of surface and groundwaters, screen noise and dust, and preserve, protect and enhance the natural and built environment. The transitional buffer regulations established herein are intended to minimize potential conflicts between development on properties located in abutting zoning districts of differing intensities. The purpose of transitional buffers is to ensure that a natural area of appropriate size and density of plantings is located between potentially incompatible land uses.

Landscape plan

(a) A landscape plan shall be:

(1) Required in conjunction with any development project requiring site plan or development plan approval;

(2) Prepared and/or certified by a landscape architect, landscape nursery person, horticulturalist, or other design professional practicing within their area of competence; provided, however, that in the case of development proposals involving sites located on a secondary system roadway, the landscaping plan may be prepared by the property owner;

(3) Shall cover the entire project area included in the overall site plan or development plan for which approval is sought.

(b) A landscape plan submitted to meet the requirements established by the provisions of this chapter shall include the following information and existing and proposed site landscape features:

(1) Location and identification by size and name, both common and botanical, of all heritage, memorial or specimen trees in open areas on the site which are proposed to be disturbed. In wooded areas, the woodline before site preparation, average size, and predominant species of trees shall be noted, except that any heritage or memorial, within a wooded area proposed for clearing shall be individually located and identified by size and name, both botanical and common.

(2) Existing vegetation to be saved shall be indicated and noted accurately if credits for tree preservation are being proposed or claimed.

(3) Location, dimensions and area of all required buffer and landscape yards, including transitional areas between differing land uses such as residential to business uses.

(4) Location and description of other proposed landscape improvements such as earth berms, walls, fences, or paved areas including notes and details to describe fully the methods and materials proposed.

(5) Plant list or schedule to include common and botanical name, quantity, spacing and size at time of planting of all proposed plants.

(6) Locations and labels of all proposed plants.

(7) Planting, installation details and tree protection details as necessary to ensure conformance with the standards in ordinances of the Town of Port Royal (Town).

(8) Schedules or lists showing required and proposed quantities for landscape items required

(c) In preparing landscape plans the following factors shall be considered:

(1) Location of trees, shrubs, groundcovers and other landscaping to utilize effectively the natural capacities of plant materials to intercept and absorb airborne and runoff-related pollutants and to reduce runoff volume, velocity and peak flow increases caused by development.

(2) Preservation and protection of existing viable and mature trees to the maximum extent feasible.

(3) Appropriateness of plants and locations for the specific characteristics of the site and the purpose for installation.

(4) A preference to designs and plant materials with reduced water needs.

(5) An emphasis on landscaping in front of the principal building on the site and on providing appropriate breaks in parking and vehicular areas.

(d) No site or development plan required under the terms of this chapter shall receive final approval unless a landscaping plan has been submitted and approved.

(e) No certificate of zoning compliance or certificate of occupancy may be issued unless the following criteria are fully satisfied with regard to the approved landscape plan:

(1) Such plan has been implemented on the site; or

(2) Such plan, because of seasonal conditions, cannot be implemented immediately, but has been guaranteed by a postponed improvement

agreement between the developer and the Town in a form acceptable to the Town attorney, and secured by a letter of credit, cash escrow or other instrument acceptable to the Town attorney in an amount equal to the cost of such installation plus a reasonable allowance for estimated administrative costs, inflation and potential damage to existing vegetation or improvements An irrevocable fully executed contract with a landscape contractor or nursery providing for such installation shall be deemed to be a sufficient guarantee for the purposes of this section.

Landscaping standards.

(a) ***Maintenance of landscaping and screening.*** The property owner, or the owner's successors, shall be responsible for the maintenance of all landscaping, fencing, and screening materials required by this chapter or under the terms of other development approvals and shown on an approved landscape plan. Failure to maintain such landscaping, fencing and screening shall be deemed a violation of this chapter.

(1) All plant material and planting areas required by this chapter or other development approval shall be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse, litter, and debris. The replacement provision for landscaping shall apply only to plants that were required to be installed or that were awarded preservation credits as part of the site plan approval process.

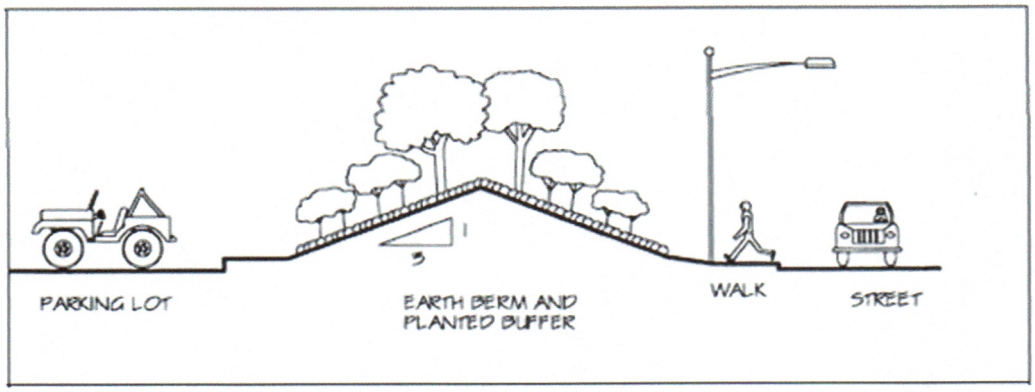
(2) All fences, walls, and screening required by this chapter shall be maintained in good repair.

(3) In the event that any *required* landscaping material shown on the plan is subsequently replaced, the new material shall conform to the original approved landscape plan, or an approved amended plan, with respect to size and characteristics of the plantings. In meeting the terms of this section, the replacement of mature trees which were counted toward the original landscape compliance shall be with trees of a similar species and of a size that meets the standards for new installations.

(b) ***Source standards.*** All plant materials installed on a site shall have been grown in conformance with the American Standard for Nursery Stock, provided however that the zoning administrator may approve, in writing, the transplanting of trees or shrubs when such transplanting is done in accordance with accepted horticultural and silvicultural practices.

(c) ***Standards for berms and earth forms***. All berms and earth forms required or otherwise proposed for use shall conform to the standards; as shown at Figure 1.

Figure 1. Illustration of berm function and design.



(1) Design should include physical variations in height and alignment

(2) Landscape plant material installed on berms and earth forms should be arranged in an irregular pattern to accentuate variation and achieve a natural appearance.

(3) Location and design shall minimize disturbance to existing trees located on the site or adjacent thereto.

(4) Sight triangle provisions contained in this chapter and the subdivision ordinance shall be observed.

(d) ***Layout and design standards***. Except as may be otherwise required by this article, the following layout and design standards shall apply to all landscape plans:

(1) All trees installed to meet the requirements of this chapter shall be comprised of a combination of tree types (e.g., deciduous shade, evergreen, flowering ornamental) unless otherwise specified. No more than fifty percent (50%) of the required trees shall be of one type (i.e., deciduous, evergreen), nor shall more than twenty-five percent (25%) of the required trees be of a single species.

(2) All trees installed to meet the requirements of this chapter should be dispersed throughout the required planting areas, should be planted with a combination of single and groups of trees in a staggered, clustered or other pattern designed to complement the building and site design and promote appropriate views and sight lines. Trees shall not be installed in a continuous single row except where necessary and appropriate to meet screening or transitional buffer requirements.

(3) Shrubs, perennials and ornamental grasses installed to meet the requirements of this chapter should be installed in groupings and integrated with trees.

(4) Existing vegetation which is suitable for use in the landscape shall be preserved and used as required plantings to the maximum extent reasonably practicable.

(5) Impervious surface area should be limited to the minimum amount necessary to accommodate the desired development and ensure appropriate levels of parking, traffic safety, and on-site circulation.

(6) Modifications of the layout and design standards contained herein may be approved by the zoning administrator upon a determination that all of the following conditions exist.

a. The proposed layout and design furthers a readily discernible theme or complements the architectural style of the structures on site. The lining of an entrance road or driveway with trees of the same species in straight lines parallel to the road or driveway in an attempt to further a colonial or antebellum theme expressed in the architecture of the buildings or the use of massed ornamental plantings to highlight or complement a unique architectural or natural feature are examples.

b. The proposed layout and design provides landscaping which will have the same or similar screening impact, intensity, or variation throughout the year when viewed from adjacent properties or rights-of-way as that which would be required by strict interpretation of the standards contained in this subsection.

c. The proposed layout and design fully integrates and complements the existing
trees to be preserved on the site.

(7) Any trees or shrubs installed or preserved on the site which exceed the minimum numerical requirements of this chapter shall not be subject to the species mixture, locational, maintenance or replacement requirements contained herein.

(e) ***Tree protection standards.***

(1) Trees and groups of trees which are to be preserved on site shall be protected before, during and after the development process utilizing accepted practices. At minimum, the tree protection practices set out in the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992 shall be utilized.

(2) Trees selected for preservation in order to obtain landscaping credits shall be shown on the landscape plan and clearly marked in the field. In woodland areas, groups of trees shall be selected for preservation rather than single trees wherever possible.

(3) The developer shall be responsible for notifying all construction personnel of the presence and purpose of clearing limits and protective fences or barriers and for ensuring that they are observed.

(4) Where grade changes in excess of six inches (6") from the existing natural grade level are necessary, permanent protective structures such as tree wells or walls shall be properly installed.

(f) ***Selection of trees for preservation***. In determining which trees shall be preserved during the development process, consideration shall be given to preserving trees which:

(1) Are heritage, memorial, significant and specimen trees

(2) Complement the project design including the enhancement of the architecture and
streetscape appearance

(3) Can tolerate environmental changes to be caused by development (i.e., increased sunlight, heat, wind and alteration of water regime)

(4) Have strong branching and rooting patterns

(5) Are disease and insect resistant

(6) Complement or do not conflict with stormwater management and Best Management Practice designs

(7) Are located in required buffer areas

(8) Exist in natural groupings, including islands of trees

(9) Do not conflict with necessary utility, structure, parking area, roadway or sidewalk placements

(10) Have been recommended by the Virginia Department of Forestry or a qualified arborist or urban forester for preservation.

(g) ***Species standards***. All required landscape plant material proposed to be installed on the site shall be selected from the appropriate plant material; however, alternative species may be used, upon certification by a certified landscape architect, landscape nurseryman or horticulturalist that said species have a rated hardiness and growth habit appropriate for the intended location. Particular attention shall be given to selecting trees and shrubs based on the area in which they will be installed (e.g., landscaped yards, parking areas, adjacent to buildings, etc.) and the lists contained in Appendix A will assist in the selection and review of a landscaping design. In addition, landscaping shall be selected and arranged with appropriate attention to future growth and maturity in order to accommodate visibility, safety and aesthetic considerations without need for future severe pruning or removal. All landscaping required within this chapter shall conform to the following minimum size standards unless specifically modified by other provisions contained herein:

(h) ***Numerical standards:***

(1) Unless a greater or lesser number or ratio is specified elsewhere in this chapter as it pertains to specific development types and forms, the following planting ratios shall be required (all fractional calculations shall be rounded up to the next highest whole number):

Planting Calculations

Planting Calculations	
Location	**Landscape Credit Unit (LCU) Requirement** (required credits per 100 linear feet measured at lot line or building face)
Front Yard	40 credits per 100 feet
Side Yard(s)	10 credits per 100 feet
Building Perimeter	15 credits per 100 feet
Parking Lot	15 credits per 10 spaces

In the case of front yards, side yards and parking lots, a minimum of 50% and a maximum of 75% of the landscaping credits must be earned from trees. In the case of building perimeters, a minimum of 25% and a maximum of 50% of the landscaping credits must be earned from trees. Ornamental grasses and perennials may be incorporated into the landscape design and shall be eligible for achieving up to 25% of the required/proposed shrubs credits.

(2) Landscaping credits shall be awarded/earned based on the values established in the following table:

Landscape Credit Unit (LCU) Values			
New Planting	Deciduous (Minimum Caliper)	Evergreen or Ornamental (Minimum Height)	LCU value
Trees	3 inches	10 feet	9
	2.5 inches	9 feet	6
	2 inches	8 feet	5
	1.5 inches	6 feet	3
Shrub	*18 inches height or spread*		2
Ornamental Grasses or Perennial Beds	1 gallon size		1
Existing Tree	Minimum Caliper		LCU value
Mature	> 13 inches		15
Large	11 to 13 inches		12
Medium	6 to 10 inches		8
Small	3 to 5 inches		5

Transitional buffers.

(a) ***Buffer types***. Transitional buffers of the following types shall be provided in the situations identified by a conflict in differing land use zoning districts adjacent to each other. Plants shall be positioned to achieve the greatest benefit in terms of buffering the views of adjacent and potentially incompatible uses. The use of staggered double rows of plant materials is encouraged as a technique to achieve maximum screening benefits. Shrubs planted in the transitional buffer shall be of a type that will have a mature height of at least three (3) feet and when located within an existing or newly planted wooded area, shall be selected based on their suitability for shaded areas and any other growth-inhibiting characteristics of the subject area.

(1) *Transitional Buffer Type 25*: shall consist of a strip of open space, a minimum of twenty-five feet (25') wide, landscaped with evergreen trees and shrubs to achieve a minimum of 0.75 landscape credits for every linear foot measured along the outside edge of the transitional buffer. A maximum of 70% of the landscape credits may be earned from shrubs.

(2) *Transitional Buffer Type 35*: shall consist of a strip of open space, a minimum of thirty-five feet (35') wide, landscaped with evergreen trees and shrubs to achieve a minimum of (1) landscape credit for every linear foot measured along the outside edge of the transitional buffer. A maximum of 70% of the landscape credits may be earned from shrubs.

(3) *Transitional Buffer Type 50:* shall consist of a strip of open space, a minimum of fifty feet (50') wide, landscaped with evergreen trees and shrubs to achieve a minimum of 1.25 landscape credits for every linear foot measured along the outside edge of the transitional buffer. A maximum of 50% of the landscape credits may be earned from shrubs.

(4) Upon specific written request, the zoning administrator may modify the landscaping requirements for transitional buffers which have been designed by a certified landscape architect in order to preserve mature trees, facilitate a clearly discernible development and planting theme, or complement the arrangement and type of surrounding landscaping provided, however, that the landscape architect must certify that the modified buffer will provide at least the equivalent buffering as would otherwise be required and that the buffering will be from landscape means (i.e., exclusive of fencing).

(5) The zoning administrator may require supplementary fencing either temporarily or permanently in order to ensure that the appropriate degree of visual buffering and noise attenuation is achieved.

LANDSCAPE
APPENDIX "A"

Evergreen Trees Botanical / Common Name	Projected 10-Year Cover Area (square feet) Height at Planting			Minimum Planting Area (square feet)	Uses / Placement					Environmental Tolerances						Problems				
	6'	8'	10'		Parking Lot	Screening	Small Areas	Overhead Utilities	Rights-of-Way	Restricted Root Z.	Poor Soil	Partial Shade	Full Shade	Wet Soil	Drought Tolerant	Disease	Insects	Weak Wood	Objectionable Fruit	Objectionable Roots
Cedrus deodora / Deodar Cedar	75	100	125	50		X														
Chamaecyparis obtuse / Hinoki Cypress	75	100	125	50			X	X		X		X								
Cunninghamia lanceolata / China Fir	75	100	125	50		X														
Cupressocyparis Leyland / Leyland Cypress	75	100	125	50		X						X								
Ilex 'Nellie Stevens' / Nellie Stevens Holly	75	100	125	50		X						X								
Ilex opaca / American Holly	75	100	125	50		X			X			X								
Ilex X attenuata / Foster's Holly	75	100	125	50		X			X			X								
Juniperus virginiana/ Eastern Red Cedar						X		X		X	X	X			X		X			
Juniperus chinensis 'Kaizuka'/ Hollywood Juniper						X	X	X		X					X		X			
Magnolia grandiflora/ Southern Magnolia	125	150	175	90		X						X								X
Magnolia grandiflora 'Little Gem'/ Little Gem Magnolia	75	100	125	50	X		X	X	X	X		X								
Myrica cerifera/ Bayberry or Wax Myrtle (multi-trunk)					X	X	X	X		X		X		X				X		
Pinus taeda / Loblolly Pine	150	200	250	130							X	X			X			X		
Pinus thunbergiana/ Japanese Black Pine	60	80	100	50		X	X	X	X	X	X				X					
Quercus virginiana/ Live Oak									X			X								
Thuja occidentalis / Arborvitae	75	100	125	50		X	X	X		X	X									
Thuja orientalis / Oriental Arbovitae	75	100	125	50		X	X	X		X	X									

This chart may be revised from time to time by the Zoning Administrator to add or delete species or to update other information based on consultation with the Cooperative Extension Agent and/or landscape professionals.

Small Deciduous Trees (Up to 35 feet mature height) Botanical / Common Name	Projected 10-Year Cover Area (square feet) Caliper Size at Planting			Minimum Planting Area (square feet)	Uses / Placement					Environmental Tolerances						Problems				
	1.5"	2"	3"		Parking Lot	General Use	Small Areas	Overhead Utilities	Rights-of-Way	Restricted Root Z.	Poor Soil	Partial Shade	Full Shade	Wet Soil	Drought Tolerant	Disease	Insects	Weak Wood	Objectionable Fruit	Objectionable Roots
Acer ginnala/ Amur Maple	60	80	100	60	X	X	X	X		X	X	X		X						
Acer palmatum / Japanese Maple	60	80	100	60		X	X	X		X		X								
Amelanchier arborea / Serviceberry	100	125	150	60		X	X	X		X		X	X			X	X			
Cercis canadensis / Eastern Redbud	150	175	200	50		X	X	X		X	X	X	X			X				
Chionanthus virginicus / White Fringe Tree	80	100	120	60		X	X	X		X		X								
Crataegus viridis 'Winter King'/ Green Hawthorn	150	175	200	100	X	X	X	X	X	X					X	X	X			
Koelreturia paniculata / Goldenraintree	150	175	200	100	X	X	X	X	X	X					X					
Lagerstroemia indica / Crape Myrtle	150	175	200	100	X	X	X	X	X	X	X			X	X					
Magnolia stellata / Star Magnolia	100	120	150	60		X	X	X		X										
Magnolia x soulangeana / Saucer Magnolia	150	175	200	60		X	X	X		X										
Magnolia virginiana/ Sweetbay Magnolia	100	125	150	60		X	X	X		X		X		X						
Malus sp./ Crabapple	150	175	200	100		X	X	X	X	X					X	X	X	X		
Prunus cerasifera / Flowering Plum	100	125	150	100	X	X	X	X	X	X						X	X	X		
Prunus serrulata/ Kwanzan Cherry	150	175	200	100	X	X	X	X	X	X					X	X	X			
Prunus subhirtella/ Higan Cherry	150	175	200	100		X		X	X						X	X	X			
Prunus x yedoensis/ Yoshino Cherry	150	175	200	100	X	X	X	X	X	X					X	X	X			

This chart may be revised from time to time by the Zoning Administrator to add or delete species or to update other information based on consultation with the Cooperative Extension Agent and/or landscape professionals.

Medium Deciduous Trees (Up to 40 feet mature height) Botanical / Common Name	Projected 10-Year Cover Area (square feet) Caliper Size at Planting			Minimum Planting Area (square feet)	Uses / Placement					Environmental Tolerances						Problems				
	1.5"	2"	3"		Parking Lot	General Use	Small Areas	Overhead Utilities	Rights-of-Way	Restricted Root Z.	Poor Soil	Partial Shade	Full Shade	Wet Soil	Drought Tolerant	Disease	Insects	Weak Wood	Objectionable Fruit	Objectionable Roots
Betula nigra / River Birch		150	175	100	X	X								X						
Ginkgo biloba / Ginkgo (male variety)		150	175	100		X			X		X				X		X			
Pyrus calleryana / Callery Pear		150	175	100	X	X			X		X				X			X		

This chart may be revised from time to time by the Zoning Administrator to add or delete species or to update other information based on consultation with the Cooperative Extension Agent and/or landscape professionals.

Large Deciduous Trees (Over 50 feet mature height) Botanical / Common Name	Projected 10-Year Cover Area (square feet) Caliper Size at Planting			Minimum Planting Area (square feet)	Uses / Placement					Environmental Tolerances						Problems				
	1.5"	2"	3"		Parking Lot	General Use	Small Areas	Overhead Utilities	Right-of-Way	Restricted Root Z.	Poor Soil	Partial Shade	Full Shade	Wet Soil	Drought Tolerant	Disease	Insects	Weak Wood	Objectionable Fruit	Objectionable Roots
Acer platanoides / Norway Maple		275	300	180		X			X		X	X					X			X
Acer rubrum / Red Maple		275	300	180	X	X			X		X	X		X			X			X
Acer saccharum / Sugar Maple		275	300	180		X			X		X	X					X			X
Fraxinus pennsylvanica / Green Ash (Marshall's Seedless)		275	300	180	X	X			X		X				X					
Liquidambar styraciflua 'Rotundiloba'/ Fruitless Sweetgum		275	300	180	X	X			X		X			X			X			
Metasequoia glyptostroboides/ Dawn Redwood		275	300	180		X			X		X			X						X
Nyssa sylvatica/ Black Gum		275	300	180		X			X			X		X			X			
Platanus x acerifolia / London Planetree		275	300	180		X									X	X	X			
Quercus acutissima / Sawtooth Oak		275	300	180		X			X											
Quercus coccinea / Scarlet Oak		275	300	180	X	X			X			X								
Quercus phellos / Willow Oak		275	300	180	X	X			X		X				X					
Taxodium distichum/ Baldcypress		275	300	180		X			X		X			X						X
Tilia cordata / Littleleaf Linden		275	300	180	X	X			X			X					X			
Ulmus parvifolia / Chinese Elm		275	300	180		X			X		X	X								
Zelkova serrato / Zelkova		275	300	180	X	X			X		X				X					

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Evergreen Shrubs Botanical / Common Name	Projected 10-Year Cover Area (square feet)			Minimum Planting Area (square feet)	Uses / Placement					Environmental Tolerances							Problems	
					Parking Lot Screen	General Uses	Small Areas	End Island	Screening/Buffering	Restricted Root Z.	Poor Soil	Partial Shade	Full Shade	Wet Soil	Drought Tolerant	Full Sun	Disease	Insects
	18"																	
Abelia grandiflora / Glossy Abelia	25			9	X	X					X	X			X	X	X	
Aucuba japonica / Japanese Aucuba	20			9	X	X						X	X					X
Berberis julianae / Wintergreen Barberry	20			9	X	X					X				X	X	X	
Buxus sempervirens / American Boxwood	6			4			X			X		X	X					
Buxus microphylla / Wintergreen Boxwood	6			4			X			X		X	X					
Camellia japonica / Spring Blooming Camellia	25			9								X	X					
Camellia sasanqua/ Fall Blooming Camellia	25			9								X	X					
Chamaecyparis pisifera / Cypress	16			6		X		X			X				X	X		
Cleyera japonica / Japanese Cleyera	25			9	X	X			X		X	X			X	X	X	
Cotoneaster salicifolius/ Willowleaf Cotoneaster	9			6		X	X			X	X	X			X	X	X	
Cytisus scoparius/ Scotchbroom	16			6		X					X	X			X	X	X	
Elaeagnus angustifolia/ Russian Olive	36			12	X	X			X		X				X	X	X	
Euonymus fortunei/ Wintercreeper Euonymous	6			3		X	X	X		X	X	X	X		X	X	X	X
Euonymus radicans/ Radicans Euonymus	6			3		X	X	X		X	X	X	X		X	X	X	X
Ilex cornuta 'Burfordii'/ Burford Holly	36			12	X	X			X		X	X	X		X	X	X	
Ilex cornuta 'Burfordii Nana'/ Dwarf Burford Holly	25			9	X	X			X		X	X	X		X	X	X	
Ilex cornuta 'Carissa'/ Carissa Holly	16			6		X	X	X		X	X	X	X		X	X	X	
Ilex crenata 'Compacta'/Compacta Holly	9			6		X	X	X		X		X			X	X		
Ilex crenata 'Helleri'/ Helleri Holly	9			6		X	X	X		X		X			X	X		
Ilex crenata 'Nigra'/ Nigra Holly	9			6	X	X				X		X			X	X		
Ilex glabra/ Inkberry	16			6	X	X				X		X	X		X	X		
Evergreen Shrubs - Continued																		
Ilex vomitoria 'Nana'/ Dwarf Yaupon Holly	9			6		X	X	X		X	X	X	X		X	X	X	
Ilex x aquipernyi/ Aquipern Hybrid Holly	16			6	X	X			X		X	X			X	X	X	
Juniperus chinensis/ Chinese Juniper	25			9	X	X			X		X				X	X	X	
Juniperus horizontalis/ Creeping Juniper	9			6		X	X	X		X	X				X	X	X	
Juniperus procumbens/ Japanese Garden Juniper	9			6		X	X	X		X	X				X	X	X	
Ligustrum lucidum	16			6	X	X			X		X							
Loropetalum chinense/ Chinese Fringeflower	16			6	X	X			X							X		
Mahonia bealei/ Leatherleaf Mahonia	16			6		X				X	X	X	X				X	
Myrica cerifera/ Bayberry or Wax Myrtle	36			12	X	X			X		X			X		X		
Nandina domestica/ Nandina	25			9	X	X					X			X	X	X		
Osmanthus heterophyllus/ Holly Osmanthus	25			9	X	X			X		X	X			X	X		
Picea glauca/ Alberta Spruce	6			4		X	X			X		X						X
Pieris japonica/ Japanese Pieris	9			6		X	X			X		X	X				X	
Pittosporum tobira/ Pittosporum	9			6		X	X	X		X		X	X		X	X		
Prunus laurocerasus/ Cherry Laurel	25			9	X	X			X			X			X	X		
Prunus laurocerasus 'Otto Luyken'/ Cherry Laurel	16			6	X	X	X					X			X	X		
Pyracantha coccinea/ Pyracantha	25			9	X	X									X	X		X
Rhaphiolepis indica/ Indian Hawthorn	9			6		X	X	X		X	X				X	X		
Rhododendron sp./ Azalea	16			6								X	X				X	X
Rosa sp./ Shrub Rose	16			6	X	X					X				X	X		
Thuja occidentalis/ American Arborvitae	16			6	X	X			X		X				X	X		
Viburnum tinus/ Laurustinus	16			6	X	X			X		X	X						
Yucca filamentosa or flaccida/ Yucca	6			4		X	X	X		X	X				X	X		

Deciduous Shrubs Botanical / Common Name	Projected 10-Year Cover Area (square feet)			Minimum Planting Area (square feet)	Uses / Placement					Environmental Tolerances							Problems	
					Parking Lot Screen	General Uses	Small Areas	End Island	Screening/Buffering	Restricted Root Z.	Poor Soil	Partial Shade	Full Shade	Wet Soil	Drought Tolerant	Full Sun	Disease	Insects
	18"																	
Azalea calendulaceae / Flame Azalea	16			9		X						X	X				X	X
Azalea nudiflorum / Pinxter Bloom	16			9		X						X	X				X	X
Berberis thunbergi / Japanese Barberry	25			12	X	X	X	X			X				X	X		
Buddleia davidii / Butterfly-Bush	25			12		X			X		X				X	X		
Chaenomeles lagenaria / Japanese Flowering Quince	25			12		X										X	X	
Clethra alnifolia / Sweet Pepperbush	25			12	X	X						X		X		X		
Cornus sericea / Redosier Dogwood	25			12	X	X			X		X	X				X		
Cotoneaster/ Cotoneaster	16			9		X	X	X		X	X	X				X		
Deutzia gracilis/ Slender Deutzia	9			4		X	X	X		X	X	X				X		
Euonymous alatus 'Compacta'/ Burning Bush	25			12	X	X			X		X	X				X		
Forsyhia intermedia / Forsythia	25			12	X	X			X		X					X		
Hamamelis mollis / Chinese Witch-Hazel	36			15	X				X		X	X				X		
Hamamelis vernalis / Vernal Witch-Hazel	36			15	X				X		X	X				X		
Hibiscus syriacus hybrids / Rose of Sharon	25			12	X				X		X					X		
Hydrangea macrophylla/ Bigleaf Hydrangea	16			9		X						X	X					
Hydrangea querifolia / Oakleaf Hydrangea	16			9		X						X	X					
Hypericum / St. Johnswort	9			4		X	X	X		X	X					X		
Ilex verticillata / Winter Berry	25			12		X			X		X					X		
Itea virginica/ Virginia Sweetspire	25			12	X	X			X		X	X		X		X		
Spiraea japonica/ Japanese Spirea	16			9		X	X	X		X	X					X		
Spiraea prunifolia / Double Bridal Wreath	25			12	X	X			X		X	X				X		
Spiraea x bumalda/ Bumald Spirea	16			9		X	X	X		X	X					X		
Deciduous Shrubs - Continued																		
Viburnum carlesii / Koreanspice Viburnum	25			12	X	X			X			X	X					
Viburnum plicatum / Doublelife Viburnum	36			15	X	X			X			X	X					
Viburnum tinus/ Tinus Viburnum	25			12	X	X			X			X	X					
Weigelia florida / Weigelia	25			12		X			X		X	X				X		

Perennials and Ornamental Grasses Botanical / Common Name	Projected 3-Year Cover Area (square feet)			Minimum Planting Area		Uses / Placement					Environmental Tolerances							Problems	
						Parking Lot Screen	General Uses	Small Areas	End Island		Restricted Root Z.	Poor Soil	Partial Shade	Full Shade	Wet Soil	Drought Tolerant	Full Sun	Disease	Insects
	1 gal.			S.F.	Height (feet)														
Perennials:																			
Achillea/ Yarrow	4			4	2		X	X	X		X					X	X		
Astilbe arendsii/ False Spirea	2			3	2		X	X			X		X	X					
Caryopteris x clandonensis/ Blue Mist Spirea	4			6	2		X	X	X		X					X	X		
Coreopsis grandiflora/ Coreopsis	2			4	1.5		X	X	X		X	X				X	X		
Coreopsis verticillata/ Coreopsis	2			4	1.5		X	X	X		X					X	X		
Dianthus gratianopolitanus 'Baths Pink'/ Bath's Cheddar Pink	3			4	1		X	X	X		X					X	X		
Dryopteris erythrosora/ Autumn Fern	2			3	2		X	X			X		X	X	X				
Echinacea purpurea/ Purple Coneflower	2			3	2		X	X	X		X		X				X		
Eupatorium/ Joe Pye Weed	4			6	5	X	X				X	X	X		X		X		
Gaillardia grandiflora/ Blanket Flower	3			4	1		X	X	X		X	X				X	X		
Heliopsis helianthoides/ False Sunflower	4			6	3		X				X	X					X		
Hemerocallis/ Daylily	2			4			X	X	X		X	X	X		X	X	X		
Hosta/ Hosta	3			4	3		X	X			X		X	X	X				
Iberis sempervirens/ Candytuft	2			3	1		X	X			X						X		
Iris ensata/ Japanese Iris	3			4	3		X	X			X		X		X		X		
Lavandula angustifolia/ Lavender	3			4	1.5		X	X	X		X					X	X		
Perovskia atriplicifolia/ Russian Sage	4			6	3		X	X	X		X					X	X		
Rudbeckia fulgida/ Black-eyed Susan	4			6	2.5		X	X	X		X	X	X		X	X	X		
Salvia x superba/ Perennial Salvia	3			4	2		X	X	X		X					X	X		

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Perennials - Continued																			
Scabiosa columbaria/ Pincushion Flower	2			4	1		X	X	X		X					X	X		
Sedum spectable 'Autumn Joy'/ Autumn Joy Sedum	4			6	3		X	X	X		X	X	X		X	X	X		
Stachys byzantina/ Lambs Ear	4			6	1		X	X	X		X	X				X	X		
Verbena canadensis/ Verbena	6			6	1		X	X	X		X	X				X	X		
Veronica spicata/ Speedwell	2			3	1		X	X	X		X					X	X		
Veronica x 'Sunny Border Blue'/ Veronica 'Sunny Border Blue'	2			3	2		X	X	X		X						X		
Ornamental Grasses:																			
Calamagrostis acutiflora/ Feather Reed Grass	6			9	5	X	X				X	X			X		X		
Chasmanthium latifolium/ Northern Sea Oats	6			9	4	X	X				X		X						
Cortaderia selloana/ Pampas Grass	9			12	6	X	X				X	X				X	X		
Liriope muscari/ Liriope	3			4	1		X	X	X		X	X	X	X	X	X	X		
Miscanthus sinensis / Maiden Grass	9			12	5	X	X				X	X				X	X		
Miscanthus purpurascens/ Miscanthus	9			12	5	X	X				X	X				X	X		
Muhlenbergia capillaris/ Pink Hair Grass	6			9	3		X		X		X						X		
Ophiopogon japonicus	2			3	.5		X	X	X		X	X	X	X			X		
Panicum virgatum/ Switch Grass	6			9	5	X	X				X	X					X		
Pennisetum alopecuroides/ Fountain Grass	6			9	3		X	X	X		X	X	X			X	X		
Phalaris arundinacea/ Ribbon Grass	4			6	3		X	X	X		X				X		X		

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