

**CHAPTER 10-06. LANDSCAPE AND BUFFERYARD STANDARDS**

***DIVISION 10-06-001. PURPOSE***

**10-06-001-0001. PURPOSE:**

The intent of this Chapter is to provide standards for the provision of the placement of landscape plant materials in such a fashion so as to preserve and promote the character of Flagstaff as a unique community in Arizona and to minimize the potential adverse impacts associated with adjacent or abutting land uses of varying intensities. The standards are intended to provide the landowner, developer, or designer with maximum flexibility while ensuring that the public interests are protected.

***DIVISION 10-06-002. LANDSCAPING STANDARDS***

**10-06-002-0001. LANDSCAPING STANDARDS:**

Landscaping is required in bufferyards, on lots, in parking areas, and in areas that are disturbed. A “bufferyard” is a combination of a setback and a visual buffer (landscaping) or barrier (fence), and is further defined in Chapter 10-14. See also Division 10-06-003 for information on bufferyards and their requirements. Illustration 10-06-002-0002 shows how a property is divided into areas for peripheral bufferyards, street bufferyards, on-lot landscaping, and parking lot landscaping. The area of each must be measured in order to determine the amount of landscaping required. (Ord. 1997, 6-15-99)

**10-06-002-0002. APPLICABILITY:**

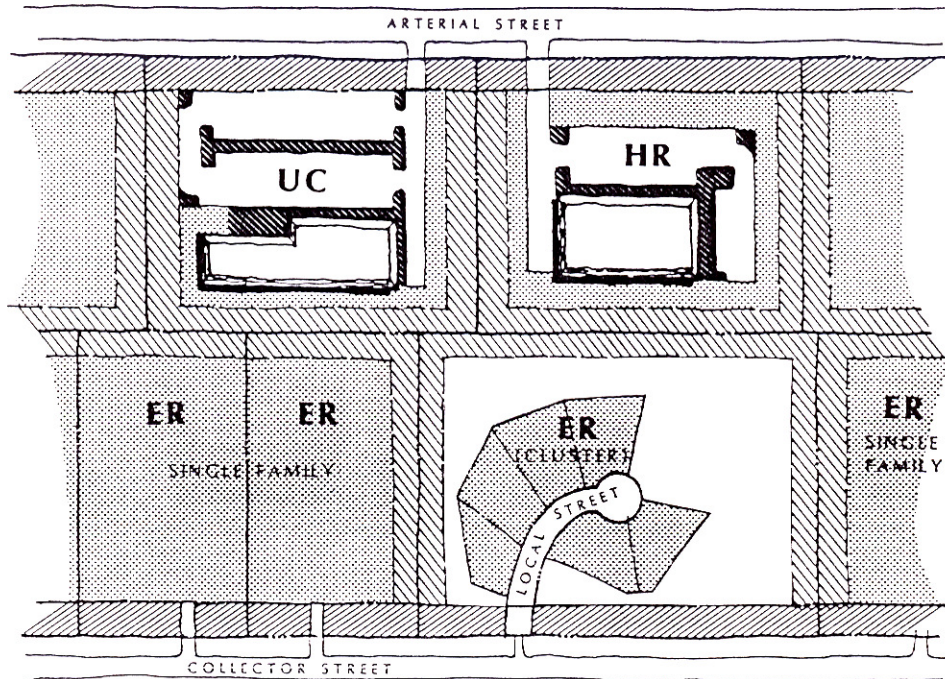
The following Sections describe required standards for on-site landscaping and bufferyards:


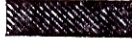


- A. **NEW USES, BUILDINGS AND ADDITIONS:** Unless excepted below, all proposed new land uses, developments, buildings, structures, and all additions to buildings, land uses, developments or structures of twenty-five (25) percent or more in terms of additional dwelling units, gross floor area, building perimeter, or other units of measurement specified herein for required landscaping and bufferyards, either with a single addition or cumulative additions subsequent to May 7, 1992 in all districts, including the established development “E” districts, shall meet the requirements of this Chapter as well as the pertinent Sections of Chapter 7, “Parking, Loading, Access, and Private Street Requirements”, to the maximum extent possible as determined by the Planning Director. This includes additions which increase the total number of required parking spaces by twenty-five (25) percent or more. The following exceptions are provided: (Ord. 1997, 6-15-99)
  - 1. Single-family detached residential development, whether on existing lots in existing single-family subdivisions or in new subdivisions where the landscaping installation and maintenance has been assured as part of a subdivision plat approved pursuant to this Ordinance, shall be exempt from the requirements of this Chapter. (Ord. 1997, 6-15-99)
  - 2. Single-family detached and cluster option residential development in the RR, Rural Residential District, and single-family development in the R-R-E, Single-Family Residential Rural District Established (five (5) acre option), shall be exempt from the requirements of this Chapter. (Ord. 1997, 6-15-99)
  - 3. All additions to existing single-family detached dwellings, regardless of size or percent increase, are exempt from the requirements of this Chapter so long as additional dwellings are not created; and second single-family detached dwellings on the same lot, where permitted, are also exempt from the requirements of this Chapter. Construction of a duplex, a second (attached) dwelling, or a third dwelling (attached or detached) on the same lot as an existing dwelling, where permitted, shall be subject to the requirements of this Chapter, as well as the pertinent Sections of Chapter 7, for the entire property. (Ord. 1997, 6-15-99)
  - 4. All other building additions of less than twenty-five (25) percent cumulative, shall be exempt from

the requirements of this Chapter so long as additional parking is not required. If additional parking is required, then landscaping is only required for the new spaces, in accordance with Section 10-06-004-0001 of this Chapter. (Ord. 1997, 6-15-99)

5. An Accessory Dwelling Unit as defined in Section 10-03-005-0001F shall be exempt from the requirements of this Chapter. (Ord. 2007-20, 3-20-07)
  
- B. **CHANGE OF USE/INTENSITY:** Except as provided in subsection C below, whenever the use of any existing building, structure, or premises is changed to a new use, or the intensity of use is increased through the incorporation of additional dwelling units, gross floor area, seating capacity, or other units of measurement specified herein for required landscaping and bufferyards, and which change of use or intensification of use creates a need for an increase in the total number of required parking spaces of twenty-five (25) percent or more, either with a single change or cumulative changes subsequent to May 7, 1992; then landscaping and bufferyards as required herein shall be provided for the entire building, structure or premises, to the maximum extent possible as determined by the Planning Director. When such an increase in intensity and required parking is less than twenty-five (25) percent cumulatively, then landscaping is only required for the new parking spaces, in accordance with Section 10-06-004-0001 of this Chapter. (Ord. 1997, 6-15-99)
  
- C. **NONCONFORMING USES, STRUCTURES OR LOTS:** Whenever a nonconforming use, structure or lot is abandoned for a period of one hundred eighty (180) consecutive days and then changed to a new use according to the requirements of Sections 10-10-005-0003 and 0004 of this Code, then landscaping and bufferyards shall be provided for the entire building, structure or premises, to the maximum extent possible as determined by the Planning Director. (Ord. 1997, 6-15-99)

**ILLUSTRATION 10-06-002-0002**  
**AREAS FOR ON-LOT LANDSCAPING, PARKING LOT LANDSCAPING,**  
**PERIPHERAL BUFFERYARDS, AND STREET BUFFERYARDS**

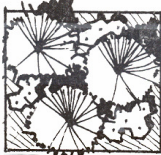
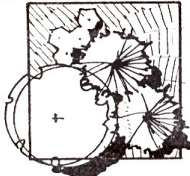
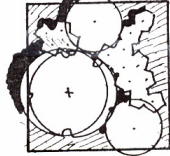


-  ON LOT LANDSCAPING: SECTION 10-06-004-0002
-  PARKING LOT LANDSCAPING: SECTION 10-06-004-0001
-  PERIPHERAL BUFFERYARD: SUBSECTIONS 10-06-003-0003, 10-06-003-C
-  STREET BUFFERYARD: SUBSECTIONS 10-06-003-0003, 10-06-003-0004

**10-06-002-0003. STANDARD PLANT UNITS:**

- A. All landscaping requirements are stated in terms of the number of standard plant units required. This Section defines the standard plant unit and its alternatives. All landscaping shall conform to one or more of the plant unit alternatives of this Section.
- B. The following Table 10-06-002-0003 specifies the plant unit alternatives. In general, the three alternative plant mixes are interchangeable. In other cases, where a year-round screen is required, alternative unit A is preferred and may even be specified by the City. Plant species selected shall be from the City of Flagstaff Plant List, available from the Planning Division. (Ord. 2002-15, 11-05-02)

**TABLE 10-06-002-0003  
PLANT UNIT ALTERNATIVES**

ILLUSTRATIONS	PLANT UNIT ALTERNATIVE	QUANTITY REQUIRED	TYPE AND SIZE OF PLANT AT TIME OF INSTALLATION
	ALTERNATIVE UNIT A	3  10	8' high Evergreen Trees  2' high Shrubs (or 5 gallon minimum)
	ALTERNATIVE UNIT B	2  1  4	6' high Evergreen Trees  4" caliper Deciduous Tree (min. 10-12' height)  2' high Shrubs (or 5 gallon minimum)
	ALTERNATIVE UNIT C	1  2  14	3" caliper Deciduous Trees (min. 8-10' height)  1-1/2" caliper Deciduous Trees (min. 6'-8' height)  2' high Shrubs (or 5 gallon minimum)

**10-06-002-0004. CREDIT FOR EXISTING PLANT MATERIALS:**

Credit for retaining existing plant material within bufferyards, parking lots or on-lot building area landscaping will be allowed to offset required plant unit landscaping in those areas as follows: (Ord. 1997, 6-15-99)

Where bufferyards, on-lot building areas or parking lot areas are to be left in a natural state because of existing trees and shrubs, and as a further incentive to preserve trees in these areas beyond those preserved under Division 10-04-003, Natural Resource Protection Standards (Section 10-04-003-0006), existing trees and shrubs may be counted toward landscaping plant units. If there are three (3) or more trees of four (4) inch DBH or ten (10) feet in height, or larger, in appropriate locations within one hundred (100) lineal feet of bufferyard or on-lot building area, or within a designated parking lot landscape area, one (1) plant unit may be credited toward the landscaping requirement for each three (3)

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such trees, with no new shrubs required whether or not there are any existing shrubs in the same area. For parking lot areas, individual trees of four (4) or five (5) inches DBH or ten (10) feet in height, minimum, shall be credited as a tree of six (6) inches DBH, or fifty-four (54) square feet, per Table 10-04-003-0006, "Tree Drip Line Area by DBH"; trees of a greater DBH shall also be credited per the table. Limited encroachment into these drip line areas shall be permitted per Section 10-04-003-0006.B.3 (parking lots only).

In all three cases (bufferyards, on-lot, and parking lots), trees of less than four (4) inches DBH and ten (10) feet in height may be counted as shrubs, and existing shrubs may also be credited as plant unit shrubs on a one-to-one basis. Where existing trees and shrubs do not meet total plant unit requirements, individual trees of four (4) inches DBH or ten (10) feet in height, or larger, may be credited toward plant unit requirements on an individual basis, but other plant unit components may still be required at the discretion of the Planning Director or authorized representative. (Ord. 1997, 6-15-99)

**10-06-002-0005. GENERAL LANDSCAPING REQUIREMENTS:**

- A. **CONTAINMENT OF LANDSCAPE AREAS.** All landscaped areas located within or adjacent to a parking area, or adjacent to a public street or sidewalk, shall be designed to contain landscape materials and prevent vehicular encroachment (e.g. continuous concrete curbing, railroad ties, headers, or depressed construction).
- B. **ARTIFICIAL LANDSCAPE MATERIALS.** Artificial trees, shrubs, turf, or plants shall not be permitted as landscaping.
- C. **IRRIGATION.** A permanent, on-site, outdoor water supply (underground or drip irrigation, hose bibs, etc.) that provides complete coverage to all new living landscaped areas is required. An automatic, underground watering system is required on sites of one (1) acre or more. Water systems shall be designed to water landscaped areas efficiently and avoid irrigation of adjacent parking areas and access drives, sidewalks, buildings, and public streets. If hose bibs are used, they must be located within one hundred (100) feet of any landscaped area.
- D. **LOCATION.** New vegetation shall be selected, planted, and maintained so that at maturity it will not interfere with utility lines, snow storage areas, vehicular parking, pedestrian circulation, traffic sight visibility at driveways and street intersections, and will not cause damage and upheaval of sidewalks and pavement. Flowering vegetation is recommended for high visibility areas.
- E. **INSTALLATION.**
  1. **TIMING OF INSTALLATION.** Landscaping and watering devices shall be installed in accordance with the approved landscape plan prior to issuance of a Certificate of Occupancy or commencement of operations. The City will have the right to refuse approval of any project not meeting the provisions of this Chapter.
  2. **FINANCIAL SURETY.** If approved landscaping and watering devices cannot be installed prior to occupancy or commencement of operations, a Conditional Certificate of Occupancy may be issued by the City of Flagstaff. The applicant shall provide:
    - a. An acceptable form of surety for one hundred twenty (120) percent of the estimated cost, accompanied by a complete estimate of the total cost of the approved landscaping and watering system improvements;
    - b. A Conditional Certificate of Occupancy agreement signed by the property owner.
  3. **RETURN OF FINANCIAL SURETY.** When it is determined that the landscaping and watering systems have been installed in accordance with the approved plans, the City of Flagstaff will return the surety to the applicant within thirty (30) days of said determination.

**10-06-002-0005**

F. MAINTENANCE.

1. RESPONSIBILITY FOR MAINTENANCE.

- a. Maintenance of all landscaping shall be the responsibility of the owner, lessee, heirs, assigns, agent, homeowners' association, or other liable entity of the property and shall consist of regular watering, pruning, mowing, fertilizing, weed removal, the removal and replacement of irrigation systems, and architectural features. This shall include maintenance of approved landscaping in the public right-of-way. (Ord. 1997, 6-15-99)
- b. The owner or liable entity in control of any private premises shall at all times maintain the premises free of litter and weeds in accordance with Title 6 of the Flagstaff City Code, and with these regulations. (Ord. 1997, 6-15-99)

2. LANDSCAPE PHASING. Unless such vegetation is already fully established, future building pads within a phased development shall be maintained in a dust-free condition by applying mulch or native ground materials, seeding with lawn, or by providing other organic or inorganic ground cover material. (Ord. 1741, 3-17-92)

3. PLANT REPLACEMENT. Any plant materials included in an approved landscaping plan that do not survive after installation shall be replaced with plant material(s) of the same or like species of equal size within the next planting season but, in any event, within six (6) months of the plant's demise. Failure to replace said plant materials within the specified time period shall constitute a zoning violation.

***DIVISION 10-06-003. BUFFERYARD PERFORMANCE STANDARDS***

**10-06-003-0001. BUFFERYARD PERFORMANCE STANDARDS:**

- A. A bufferyard is a combination of a setback and a visual (landscaping) buffer or barrier (fence), and is further defined in Chapter 10-14. The bufferyard requirement of this Ordinance is intended to separate zoning districts from each other and to ameliorate nuisances between certain adjacent land uses within the same zoning district (see Division 10-04-002) or Conditional Uses (see Chapter 10-03). Bufferyards function to eliminate or minimize potential nuisances such as dirt, litter, noise, glare of lights, signs, and unsightly buildings or parking areas. Bufferyards are also designed to ensure a desired character along public streets and roads.
- B. The type of plants, and the amount of land and planting specified for each bufferyard requirement of this Ordinance (as shown in Tables 10-06-003-0004.A and 10-06-003-0004.B), have been calculated to ensure that they do, in fact, function as "buffers."

COMMENTARY: One of zoning's most important functions is the division of land uses into districts which have similar character and contain compatible uses. All uses permitted under the same development option (as listed in Tables 10-04-002-0003 and 10-04-002-0004) within the same zoning district have generally similar nuisance characteristics. In theory, the location of districts is supposed to provide protection from incompatible uses. In Flagstaff, it is often difficult to have gradual transitions of land use intensity due to the topographic character of the City area. Consequently, residential districts are often next to nonresidential districts. The bufferyard is thus an important device for avoiding adverse impacts along district boundaries and certain adjacent land uses. Bufferyards will operate to minimize the negative impact of any future use on neighboring uses.

**10-06-003-0002. BUFFERYARD USE:**

A bufferyard may be used for passive recreation. It may contain pedestrian, bike, or equestrian trails provided that no plant material is eliminated, the total width of the bufferyard is maintained, and all other regulations of this Ordinance are met. In no event, however, shall swimming pools, tennis courts, sports fields, golf courses, parking lots, or other such uses requiring structures or removal of vegetation be permitted in bufferyards.

**10-06-003-0003. GENERAL BUFFERYARD REQUIREMENTS:****A. GENERAL.**

1. Bufferyard standards are listed in this Section for peripheral bufferyards and for street bufferyards.
2. Peripheral and street bufferyard standards are based on a required opacity value. A variety of combinations of bufferyard width, planting intensity, and structural options (such as fences or berms) may be selected from Table 10-06-003-0004.C to reach the required opacity value.
3. Peripheral bufferyards shall be located along the outer perimeter of a lot or parcel and shall extend to the lot or parcel boundary line. Peripheral and street bufferyards may include resource protection areas identified by Section 10-04-004-0004, but fences and berms may be restricted or prohibited in flood plain areas. Street bufferyards may be located in public street rights-of-way by approval of the Planning Director, provided that:
  - a. The subject public street right-of-way is in excess of that needed for full street improvements, as determined by the City Engineer.
  - b. The City must approve a landscaping plan.
4. Where detention basins are constructed partially or entirely within bufferyards or other high-visibility areas on sites, they must be adequately landscaped. A minimum of two (2) plant units shall be required for every one hundred (100) feet of the perimeter of the basin, measured at the top of the basin. All detention basin surfaces shall be treated with a native groundcover seed mix or lawn mix as required by Section 10-06-004-0003, and the design of such basins shall be incorporated into the site plan. Detention basins shall not determine bufferyard widths. (Ord. 2000-08, 6/6/00)

**B. PLANT MATERIALS.**

1. For each bufferyard listed, a specific combination of deciduous or evergreen trees and shrubs is required. A listing of plant unit alternatives is noted in Section 10-06-002-0003.
2. All bufferyard areas shall be seeded with lawn or native groundcover unless such vegetation is already fully established, or an organic or inorganic ground cover shall be provided to prevent soil erosion and discourage weed growth.
3. The exact placement of required plant materials in bufferyards shall be the decision of the property developer, as long as they are within one hundred (100) foot increments. Placement of structures (fences) shall be determined by the property owners.

**C. FENCES.** Fences shall be constructed of rock, masonry, or wood; chain link fences and chain link with slats shall be prohibited from use in bufferyards, and prohibited in the C-5-E District. Fences shall be placed behind street bufferyard areas.

**D. LOCATION.** Height of vegetation and/or fences selected for required bufferyard shall be measured from the highest finished adjacent grade of the element to be screened.

**10-06-003-0003**

- E. **BERMING.** Berms shall be designed to transition to existing grades, not to exceed a slope ratio of two to one (2:1), and shall be covered with plant material, groundcover, or partially rip-rapped to prevent erosion. Berms with vegetative cover shall be designed to retain irrigation water rather than encourage run-off.

**10-06-003-0004. REQUIRED PERIPHERAL BUFFERYARDS AND STREET BUFFERYARDS:****A. CALCULATION OF BUFFERYARD REQUIREMENTS.**

1. Bufferyard requirements are calculated using the standards listed in this Section as specified in Tables 10-06-003-0004.A through C.
2. Bufferyard standards listed in this Section are for every one hundred (100) lineal feet of peripheral lot line boundary and/or street frontage present on a given lot, exclusive of driveways. Peripheral bufferyard landscaping requirements shall not apply when an alley is to serve as aisle way for required parking. (Ord. 1741, 3-17-92)
3. In instances where the zoning district boundary and/or street frontage is less than one hundred (100) feet, but more than twenty (20) feet, the required bufferyard planting shall be one (1) plant unit. (Ord. 1741, 3-17-92)

To determine the type of bufferyard required on a parcel, between two (2) parcels, or between a parcel and a street, the following procedures shall be used:

**B. PERIPHERAL BUFFERYARDS.**

1. Identify whether any portion or property line of the site coincides with a zoning district boundary (as presented in Tables 10-04-002-0003 and 10-04-002-0004), or a boundary between development options within the same zoning district, or certain Conditional Use Permits (Chapter 10-03). If it does, determine the zoning district on both sides of the property line.
2. Refer to Table 10-06-003-0004.A to determine the required level of opacity.

Example. Based upon Table 10-06-003-0004.A, a combined opacity of 0.5 would result between the zoning district of the proposed development (the MH District) and the zoning district of the adjoining property (the UR District). The MH District would have an opacity requirement of 0.3, and the UR District would have an opacity requirement of 0.2. These opacity requirements may be reached at different times.

3. Refer to Table 10-06-003-0004.C and select plant unit, bufferyard width, and structure combination desired by selecting the desired alternative.
4. Calculate the number of plants required by selecting the plant unit alternative from Table 10-06-002-0003, multiply by plant units needed in the buffer alternative selected, and multiply by the lineal distance (in hundreds of feet) of bufferyard to be planted.

Example: Select plant unit B from Table 10-06-002-0003, an opacity of .10 and from alternative buffer 3 from Table 10-06-003-0004.C using the required .30 plant units per hundred feet, multiply by length of bufferyard in hundreds (350 feet, use 3.5); this number is multiplied by the number of plant units per 100 feet in buffer option number 3, and thus:  $.30 \times 3.5 = 1.05$ . (Where the resulting number of required plant units is expressed in a fraction, the required number of landscape plant units shall be rounded off to the next nearest whole number, e.g., rounding off follows the normal mathematical rules of rounding down for decimals less than 0.5 and up for 0.5 and greater. Rounding is done at the end of the calculations.) (Ord. 1741, 3-17-92)



## 10-06-003-0004

## TOTAL PLANTS REQUIRED (Example)

<u>Method</u>	<u>Deciduous Trees</u>	<u>Evergreen Trees</u>	<u>Evergreen Shrubs</u>
calculated	1.05	2.10	4.20
rounded	1	2	4

5. Refer to plant list referenced in Section 10-06-002-0003 to select species.
6. Review Sections 10-06-002-0004 and 10-06-002-0005 for rules for responsibility for installation of peripheral bufferyards.

## C. REQUIRED OPACITY VALUES FOR PERIPHERAL BUFFERYARDS.

The opacity values contained in Table 10-06-003-0004.A refer to the bufferyard requirements and standards contained in the Table of Bufferyard Standards (Table 10-06-003-0004.C). These bufferyards are required between adjacent zoning districts or within the same zoning district between different development options and certain C.U.P. uses (Chapter 10-03, Division 10-03-003).

**TABLE 10-06-003-0004 A  
PERIPHERAL BUFFERYARDS: REQUIRED OPACITY VALUES**

Zoning District of Proposed Development	Zoning District of Adjoining Property													
	PLO-E PL PLF	RR ER	SR	R1 RE	UR	MR	HR	MH MH-E	RB	SC	UC,CE IE	BP BPI	LI	HI
PLO-E														
PL,PLF	.1	.1	.1	.2	.2	.2	.2	.2	.2	.1	.1	.1	.2	.2
RR,ER	.2	.1	.2	.2	.2	.2	.2	.3	.2	.2	.3	.2	.3	.4
SR	.3	.3	.1	.1	.2	.2	.2	.3	.2	.2	.3	.2	.3	.4
R1,RE	.3	.4	.3	.1	.2	.2	.2	.2	.1	.2	.3	.2	.3	.4
UR	.3	.5	.4	.3	.1	.1	.1	.2	.2	.1	.2	.2	.3	.3
MR	.3	.5	.5	.3	.3	.2	.3	.2	.1	.1	.2	.1	.2	.3
HR	.3	.5	.4	.3	.1	.1	.1	.2	.1	.1	.2	.2	.3	.3
MH,MHE <sup>1</sup>	.3	.5	.5	.5	.3	.3	.3	.3	.2	.1	.2	.2	.3	.3
RB	.3	.4	.3	.3	.3	.3	.3	.5	.1	.2	.3	.2	.2	.3
SC	.3	.4	.5	.3	.3	.3	.3	.3	.3	.1	.1	.1	.2	.2
UC,CE & IE	.3	.7	.6	.5	.4	.3	.4	.4	.5	.2	.0*	.2	.1	.2
BP, BPI	.5	.5	.5	.5	.4	.3	.4	.4	.4	.1	.3	.1	.2	.3
LI	.3	.7	.7	.7	.5	.5	.5	.6	.5	.4	.3	.5	.0*	.1
HI	.3	.8	.8	.8	.7	.7	.7	.7	.6	.5	.4	.5	.3	.0*

<sup>1</sup>Manufactured Home development may count the required peripheral and street bufferyard areas as part of their open space requirement (See Table 10-04-002-0003, Minimum OSR). In these cases, the bufferyard shall be deed restricted with a bufferyard/open space easement to protect the bufferyard plant units.

\*In these districts, if the proposed development site adjoins a residential or institutional use or site, the required opacity value shall be 0.1.

Key to Zoning District Abbreviations:

RR:	Rural Residential	MH	Manufactured Homes
PL:	Public Lands	RB:	Residential Business
PLF:	Public Lands Forest	PLO-E:	Public Lands-Open Space Established
ER:	Estate Residential	UC:	Urban Commercial
SR:	Suburban Residential	SC:	Suburban Commercial
R1:	Residential	BP:	Business Park
BPI:	Business Park Intermediate	UR:	Urban Residential
LI:	Light Industry	MR:	Medium-Density Residential
HI:	Heavy Industry	HR:	High-Density Residential
CE:	Commercial Established	RE:	Residential Established
IE:	Industrial Established		(Ord. 2002-15, 11-05-02)

**D. STREET BUFFERYARDS.**

The numbers given in Table 10-06-003-0004.B refer to the required level of opacity described in the Table of Bufferyard Standards (Table 10-06-003-0004.C). Any combination of vegetation, structure and width given in Table 10-06-003-0004.C may be selected. Also, the number of plant units and bufferyard widths listed in Table 10-06-003-0004.C may be prorated; e.g., a bufferyard width of 7.5 feet may be selected instead of 5 feet or 10 feet, with the number of plant units adjusted accordingly. (Ord. 1997, 6-15-99)

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Follow the calculations and procedures outlined on the preceding pages to determine street bufferyards.

**TABLE 10-06-003-0004 B  
STREET BUFFERYARDS**

Zoning District	Required Level of Opacity			
	Interstates, Arterial Streets <sup>1</sup>	Collector Streets <sup>1,2</sup>	Local Streets <sup>1,2</sup>	Private Streets/ Drives
<b>Rural/Open Space and Residential Districts:</b>				
PLO-E,				
RR,PL,PLF	.30	.10	.00	.00
ER,SR,R1	.30	.20	.10	.00
UR,MR,HR	.30	.20	.10	.00
RE,RB	.30	.10	.10	.00
MH,MHE <sup>3</sup>	.30	.20	.10	.00
<b>Nonresidential Districts:</b>				
SC,BP, BPI	.30	.20	.30	.10
CE <sup>4</sup> ,UC	.30	.20	.40	.20
LI	.50	.50*	.80	.00
HI	.70	.70*	.90	.00
IE	.60	.60*	.90	.00

<sup>1</sup>Refer to the City of Flagstaff Engineering Design and Construction Standards to determine street types; e.g. Types I, II, and V are classified as “arterial streets.”

<sup>2</sup>All single-family residential detached and cluster options in new and 'E' Districts are exempted from the requirements of the collector and local street bufferyard requirements of this table. This includes manufactured home developments in the MH and M-H-E Districts.

<sup>3</sup>Manufactured Home development may count the required peripheral and street bufferyard areas as part of their open space requirement (See Table 10-04-002-0003, Minimum OSR). In these cases, the bufferyard shall be deed restricted with a bufferyard/open space easement to protect the bufferyard plant units.

<sup>4</sup>Street bufferyards not required in C-5-E District. (Ord. 1741, 3/17/92)

\*For the LI, HI, and IE Districts, the opacity value listed for collector streets may be reduced to .20 if the property directly across the street has the same zoning category as the proposed development. Otherwise use the values in the table.

**TABLE 10-06-003-0004 C  
BUFFERYARD OPACITY STANDARDS\***

<b>Opacity</b>	<b>Buffer Alternative</b>	<b>Number of Plant Units per/100 lin.ft.</b>	<b>Bufferyard Width</b>	<b>Required Structure Type</b>
0.10	1	0.50	5'	--
	2	0.40	10'	--
	3	0.30	15'	--
	4	0.25	20'	--
	5	0.20	25'	--
0.20	1	1.00	5'	--
	2	0.90	10'	--
	3	0.85	15'	--
	4	0.75	20'	--
	5	0.70	25'	--
	6	0.65	30'	--
0.30	1	1.55	10'	--
	2	1.45	15'	--
	3	1.40	20'	--
	4	1.30	25'	--
	5	1.10	10'	4' fence (100% opaque)
	6	0.30	5'	6' fence (100% opaque)
0.40	1	2.15	15'	--
	2	2.05	20'	--
	3	1.95	25'	--
	4	1.90	30'	--
	5	2.50	10'	--
	6	1.20	10'	4' fence (100% opaque)
	7	0.80	5'	6' fence (100% opaque)
0.50	1	2.75	20'	--
	2	2.55	30'	--
	3	2.40	40'	--
	4	1.35	10'	6' fence (100% opaque)
	5	2.00	20'	3' berm or fence

**TABLE 10-06-003-0004 C (continued)**  
**BUFFERYARD OPACITY STANDARDS\***

<b>Opacity</b>	<b>Buffer Alternative</b>	<b>Number of Plant Units per/100 lin.ft.</b>	<b>Bufferyard Width</b>	<b>Required Structure Type</b>
0.60	1	3.50	20'	--
	2	3.30	30'	--
	3	3.15	40'	--
	4	1.50	10'	8' fence (100% opaque)
	5	2.30	25'	4' berm or fence
0.70	1	4.15	25'	--
	2	3.95	35'	--
	3	3.80	45'	--
	4	2.15	15'	8' fence (100% opaque)
	5	3.00	30'	4' berm or fence
0.80	1	4.85	30'	--
	2	4.65	40'	--
	3	4.50	50'	--
	4	2.80	20'	8' fence (100% opaque)
	5	3.30	40'	5' berm or fence
0.90	1	5.45	40'	--
	2	5.30	50'	--
	3	4.90	75'	--
	4	3.50	30'	8' fence (100% opaque)
	5	3.75	45'	6' berm or fence
1.00	1	6.20	50'	--
	2	5.80	75'	--
	3	5.50	100'	--
	4	4.90	30'	8' fence (100% opaque)
	5	4.50	45'	6' berm

\*Fences or walls up to six feet (6') in height are permitted in residential districts as part of the street bufferyard option in addition to the bufferyard requirements listed in the above table, so long as the fence is placed at the rear (interior) of the bufferyard.

(Ord. 1997, 6-15-99)

**DIVISION 10-06-004. LANDSCAPING FOR PARKING AREAS AND LOTS****10-06-004-0001. LANDSCAPING STANDARDS FOR PARKING AREAS:**

- A. This Section requires that each residential and nonresidential parking lot contain a minimum amount of landscaping within the parking lots and adjoining entrance and circulation drives. A specified number of landscape plant units shall be planted per the requirements on Table 10-06-004-0001. Where the resulting number of required plant units is expressed in a fraction, the required number of landscape plant units shall be rounded off to the nearest whole number, e.g., rounding off follows the normal mathematical rules of rounding down for decimals less than 0.5 and up for 0.5 and greater. Rounding is done at the end of the calculations.

Existing trees that can be preserved, where the grading does not cut them off from a reasonable supply of drainage and where the area under the canopy remains relatively undisturbed, shall count towards the plant and area requirements (See Tables 10-06-004-0001 and 10-04-003-0006 including Illustration 10-04-003-0006.B. and Section 10-06-002-0004.B.) Where detention basins are placed near parking areas, they shall be landscaped with a minimum of two (2) plant units for every one hundred (100) feet of the perimeter of the basin, measured at the top of the basin. All detention basin surfaces shall be treated with a native groundcover mix as required by Section 10-06-004-0003, and the design of such basins shall be incorporated into the site plan. (Ord. 1741, 3-17-92) (Ord. 2000-08, 6/6/00)

- B. The curb or barrier around landscaped areas may be utilized as a wheel-stop provided the area of vehicle overhang does not exceed two and one-half (2.5) feet and does not damage or interfere with the landscaping. A minimum five (5) foot wide planter is required for a single vehicle overhang and an eight (8) foot wide planter for a double vehicle overhang. Vehicle overhang into the public right-of-way is not permitted.
- C. Parking (except where vehicle overhang is permitted), buildings, and display or storage of equipment or vehicles are not permitted in required landscaped areas.
- D. To ensure that landscape materials do not constitute a driving hazard, trees used to landscape parking islands shall have a clear trunk height of six (6) feet from grade level; mature shrubs, groundcover, or other landscaping material shall not exceed three (3) feet in height from grade level.
- E. Planned Affordable residential projects may reduce the plant size requirements (not numbers) shown in Table 10-06-002-0003 by fifty (50) percent for parking lot landscaping, subject to nearest plant size availability at nurseries. (Ord. 2001-14, 09-04-01)

**TABLE 10-06-004-0001**  
**LANDSCAPED AREA REQUIRED PER NUMBER OF OFF-STREET PARKING SPACES**

DISTRICT AND USE PARKING SPACES REQUIRED	MINIMUM LANDSCAPED AREA REQUIRED	MINIMUM NO. OF PLANT UNITS
<b>ALL DISTRICTS (except as noted below) :</b> all uses (excluding agriculture) (0-5 spaces) (6-12 spaces) (13-23 spaces) (24+ spaces)	none 324 sq. ft. 27 sq. ft./space 27 sq. ft./space	none 1 unit 1 + units # 2 + units #
<b>SUBURBAN COMMERCIAL (SC)</b> <b>BUSINESS PARK (BP)</b> all uses (13-23 spaces) (24+ spaces) <sup>1</sup>	40 sq. ft./space 40 sq. ft./space	1 + units # 3 + units #

<sup>1</sup> For parking areas with fewer than 13 spaces see "All Districts" above. (Ord. 1741, 3/17/92)

<sup>#</sup>The number of plant units required shall be prorated for parking lots over 12 spaces at the rate of one (1) plant unit per 324 sq. ft. of landscape area. See examples.

(Ord. 1997, 6-15-99)

**10-06-004-0002. ON-LOT BUILDING LANDSCAPING STANDARDS:**

This Section requires that each residential and nonresidential lot in a new development contain a minimum amount of landscaping in close proximity to any building as indicated below;

- A. In most non-residential projects, for each one hundred (100) lineal feet of the perimeter of the building footprint, the number of any option of plant units, as described in Table 10-06-002-0003, shall be planted within fifty (50) feet of the perimeter of the building, exclusive of parking lot landscaping and bufferyard requirements. Certain uses or building designs which make planting within 50 feet impractical, such as mini-storage warehousing, may be permitted to place some or all of their on-lot building landscaping beyond the 50 foot limit described above, subject to approval by the Planning Director. (Ord. 1997, 6-15-99)
- B. In the case of residential buildings (planned option and manufactured housing only), the requirement shall be for every lot or dwelling unit, whichever is greater. All single-family residential detached and cluster options in new and 'E' Districts are exempt from the requirements of this Section.
- C. Building additions or other additions subject to the Applicability section of this Chapter, Section 10-06-002-0002, shall be required to meet on-lot building landscaping requirements at the rates indicated in Table 10-06-004-0002. Landscaping shall be located within fifty (50) feet of the perimeter of the buildings, unless excepted under "A" above, exclusive of parking lot landscaping and bufferyard requirements. In the established development "E" districts additions subject to the Applicability section of this Chapter shall conform to the landscaping standards specified to the maximum extent possible as determined by the Planning Director. No area that is undisturbed and designated as required open space, or is designated as an undisturbed resource protection area, shall be included in the calculation of the area to be planted. (See Table 10-06-004-0002.) (Ord. 1997, 6-15-99)
- D. Where the resulting number of required plant units is expressed in a fraction or a decimal other than a whole number, the required landscape material which makes up the selected plant units (see Table 10-06-002-0003) shall be prorated and then rounded off to the nearest whole number of trees and shrubs; i.e., partial plant units may be required for on-lot building landscape areas. All rounding off follows normal mathematical rules of rounding down for decimals less than 0.5 and up for 0.5 and greater. (Ord. 1741, 3-17-92) (Ord. 1997, 6-15-99)
- E. Planned Affordable residential projects may reduce the plant size requirements (not numbers) shown in Table 10-06-002-0003 by fifty (50) percent for on-lot landscaping, subject to nearest plant size availability at nurseries. (Ord. 2001-14, 09-04-01)





**10-06-004-0003. LANDSCAPING AND REVEGETATION OF DISTURBED AREAS:**

All disturbed areas shall be landscaped as follows:

- A. All disturbed areas shall, at a minimum, be provided with a native seed groundcover or seeded with lawn, unless such vegetation is already fully established, in accordance with City planting standards (refer to approved list available from the City). (Ord. 1741, 3-17-92)
- B. Areas that are to be protected pursuant to Division 10-04-003 that are accidentally or intentionally disturbed in violation of those standards or the approved site plan or development plan shall be landscaped with a minimum of fifteen (15) plant units per acre, in addition to violation procedures.

***DIVISION 10-06-005. TREE PRESERVATION AND PROTECTION***

**10-06-005-0001 TREE PRESERVATION AND PROTECTION**

The purpose of this Division is to save existing, healthy trees whenever possible, as required by resource protection provisions of Chapter 10-04, and to design site plans to retain existing trees.

**10-06-005-0002. TREE CUTTING, REMOVAL, AND PROTECTION:**

- A. Existing live trees of a diameter at breast height (DBH) of six (6) inches or greater may not be felled or removed from a site; and no person, firm, or corporation shall clear-cut, excavate, grade, or otherwise remove topsoil from a site without:
  - 1. A site development plan approved by the City of Flagstaff that shall include, when applicable, a tree protection plan, a landscape plan, and a grading plan; and
  - 2. Issuance of a Building Permit when required, subsequent to approval by the Development Review Board.
  - 3. Permitted Exceptions
    - a. Thinning of trees which are predominantly within the drip lines of larger, healthy trees, or the removal of dead, dangerous, or diseased trees greater than six (6) inches DBH upon approval by the Planning Director or designated representative, pursuant to a forest stewardship plan approved by the City of Flagstaff under the authority of this Section (Ord. 2000-08, 6/6/00).
    - b. Clear-cutting, grading, or otherwise removing topsoil for installation of necessary road, drainage, or utility improvements as shown on Engineering Construction Plans in connection with an approved Final Subdivision Plat.
    - c. Thinning or removal of trees on lots within single-family subdivisions in the established "E" districts. (Ord. 2000-08, 6/6/00)
- B. TREE PROTECTION. Trees to be preserved on-site shall be protected before on-site construction commences so as to prevent root damage, trunk damage, and soil compaction. On-site construction includes grading, clear-cutting, trenching, and building construction. Tree protection shall consist of the following:
  - 1. Temporary tree fencing within fifty (50) feet of proposed land disturbance areas shall be a minimum of six (6) feet in height and consist of metal chain-link material attached to steel "T" posts or poles, which shall be securely embedded into the ground in such a way that neither the posts nor the fencing can be easily moved or pushed over. (Ord. 2000-08, 6/6/00)

**10-06-005-0002**

2. Passive forms of tree protection may be utilized to delineate tree protection areas which are remote (greater than 50 feet) from areas of land disturbance, or tree protection areas less than 50 feet from disturbance areas where it is determined by the Planning Division that such tree protection is adequate, on a case-by-case basis. Four (4)-foot high polyethylene laminar safety "snow fencing" or other forms of tree protection are acceptable, subject to the approval of the Planning Director or designee. (Ord. 2000-08, 6/6/00)
  3. Protective tree fencing shall be installed along the outer edge of and completely surrounding the drip lines of all trees, or tree protection zones, except for areas delineated under Subsection B.2. above, prior to any land disturbance. Such fencing shall not be attached to trees, and the areas within the tree protection fencing shall be kept free of construction materials, vehicles, equipment and debris. (Ord. 2000-08, 6/6/00)
  4. All tree fencing shall be installed prior to and maintained throughout the land disturbance process and building construction, and should not be removed until landscaping is installed, or financial assistance is posted for the required landscaping.
  5. Tree wells are required where grade changes are proposed which would affect tree preservation. Removal of tree protection fencing to construct tree wells is subject to review and approval by the Planning Director or designee. (Ord. 2000-08, 6/6/00)
  6. Arrangement of construction site activities, such as parking, material storage, concrete washout, slash placement, etc., so as to prevent disturbances within tree protection zones. (Ord. 1741, 3-17-92)
- C. **TREE PROTECTION PLAN.** When existing trees are retained, a tree protection plan shall be submitted. This plan may be separate or included as part of a landscape plan, and shall include the following information:
1. **Tree Protection Areas.** The protection of a stand of trees, or of a single tree to be retained, shall include no less than the total area beneath the tree canopy(ies) as defined by the farthest canopy drip line of the tree(s). See canopy drip line definition in Chapter 10-04. (See Section 10-04-003-0006. B.)
  2. **Limits of land disturbance, clear-cutting, grading, and trenching.** Layout of the project on-site utility and grading plans shall accommodate the required tree protection zones. Utilities shall be placed outside of tree protection zones.
  3. **Tree protection details**
    - a. Temporary tree fencing.
    - b. Tree protection signs.
    - c. Tree wells.
  4. **Procedure and schedule for the implementation, installation, and maintenance of tree protection measures.** (Ord. 1741, 3-17-92)
- D. **SURFACING.** A permeable area, equal to the area encircled by the drip line, shall be provided around those existing trees that qualify for required landscape material points to allow water absorption and growth.
- E. **PERMIT APPROVALS.** Issuance of grading and building or other permits is contingent upon approval of a tree protection plan.
- F. **INSPECTION.** The Planning Director or designated representative will conduct site inspections for the enforcement of the tree protection measures.

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