

CHAPTER 5 DESIGN STANDARDS

Sections:

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 - 14.502. Applicability
 - 14.503. Supplemental Bulk Regulations
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 - 14.505. Open Space
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 - 14.510. Conservation Subdivision Design Standards
 - 14.511. Off-Street Parking and Loading Requirements
 - 14.512. Mail Kiosk (Cluster Box)
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14.501. Intent

The purpose of the Design Standards is to shape the City's physical form and to promote the quality, character, and compatibility of new development within the City. The Standards are intended:

- A.** To guide the expansion and renovation of existing structures and the construction of new buildings and parking within the City; and
- B.** To permit new development, while preserving and enhancing Lebanon's character, as described in the City's Future Land Use Plan; and
- C.** To assist the City in reviewing development proposals.

14.502. Applicability

A. Standards

Standards within this Chapter shall apply to all zoning districts within the City of Lebanon, unless specifically stated otherwise. Standards that are specific to individual zoning districts are presented in Chapter 3 Districts. Where a zoning district is overlaid by an Overlay or Special District, the standards set forth within that district shall also apply. The standards in this section apply to all subdivisions, final site plans, and building permit requests in the City that are submitted after the effective date of this ordinance, unless otherwise specified within this section. Final plats and site plans based upon previously approved plats shall conform with the regulations applicable at the time of their approval.

B. Applicability of Other Articles

1. Unless exemptions or alternate standards are explicitly established in this Ordinance, all standards and provisions of this Chapter shall apply to development within any zoning district.
2. If conflicts exist between the requirements of this Chapter and other Chapters of this Ordinance, the requirements of this Chapter shall supersede, unless otherwise stated.

14.503. Supplemental Bulk Regulations

A. Accessory Buildings

1. No accessory building or structure shall be erected between the front lot line and the front wall of the principal building. In addition, accessory buildings shall (this section is not intended to regulate agricultural uses):
 - a. Be customarily incidental and smaller, in size (area of the footprint) and height to the principal building established on the same lot.
 - b. Be subordinate to and serve the principal building.
2. No accessory building(s) or structure(s) shall exceed the maximum accessory building size as specified in each district.
 - a. The setbacks for accessory buildings are specified in each district.
 - b. No accessory use or structure shall be constructed or established on any lot prior to the time of construction of the principal structure to which it is an accessory. This section shall not be construed to govern the sequencing or phasing of a construction project in which both the principal and accessory structures are to be built simultaneously.
 - c. Not be located within required buffer yards.

B. Minimum Spacing of Buildings on a Single Zone Lot

1. In districts where permitted, the minimum distance between any two (2) buildings on any single zone lot shall be as provided in this section, except that these provisions do not apply to space between a building enclosing a principal permitted use and a garage or other unoccupied building accessory thereto.
 - a. Minimum Distance Between Buildings
 - i. Within the districts as permitted, two (2) or more buildings may be constructed on a single zone lot if they are separated by at least 10 ft
 - ii. Principal Building Limitations: In single family residential districts, not more than one (1) principal building shall be erected on any lot. This provision shall not apply to schools and churches, approved as a part of a site plan.
 - b. Minimum Required Yard Area: Regardless of the orientation of buildings, no less than the minimum yards required by the district regulations in which the development is located shall be maintained along the outer boundaries of the zone lot, with the exception of Accessory Buildings, as permitted under the district regulations.
 - c. Subdivision of Zone Lot After Development: In all districts, after any portion of a zone lot has been developed under the provisions of this section, the zone lot may be subdivided into smaller zone lots only if each resulting zone lot and building or buildings thereon comply with all of the appropriate regulations pertaining to bulk, yards, open space, and parking and loading requirements of the district in which they are located, unless a hardship is

encroach on required yards as provided in 14-503.

G. Portable Building Regulations

1. A portable building is defined as any structure enclosed by walls and a roof designed to be transported on its own wheels or on a flatbed truck or trailer and delivered to a site ready for occupancy or use. This definition shall not include mobile homes as defined elsewhere herein or factory manufactured modular units that comply with the adopted building code.
2. In any residential zone, a portable building shall be an accessory use and used only for storage of materials commonly incidental to the occupancy of the principal residential use. The portable buildings shall meet all requirements for building coverage. The use of a movable trailer or a metal storage structure brought into an area by truck shall not be allowed as an accessory portable building included in this section. The movable trailers or metal storage structures may be utilized for temporary storage during remodeling or for household moves but shall be located on the premises no longer than sixty (60) days. One permit extension for no more than sixty (60) additional days may be requested and granted.
3. In all districts other than residential districts, a portable building shall be an accessory use. Portable buildings shall be used for storage only in zoning districts that permit outside storage as otherwise permitted herein, provided that all site planning standards are met. Portable buildings shall be located on the premises no longer than (60) days.
4. In the event of damage or destruction of an existing building caused by fire, explosion, or natural disaster that results in the building being unusable, the Chief Building Official may issue a temporary building permit for a portable building to be used as emergency quarters while the permanent building is being reconstructed. The purpose of the placement temporarily shall be to provide shelter for only the residents of the principal structure during the period of reconstruction and to prevent exceptional hardship on the same. Water supply and appropriate sewage disposal must be available. The permit shall expire, and the portable building removed when the certificate of occupancy is issued for the reconstructed building. Regardless of the timing of the issue of the temporary building permit, all portable buildings used for temporary residential occupation shall be removed within a three (3) year period.
5. In any district, the Chief Building Official may issue a temporary building permit for a contractor's temporary office and equipment sheds that are incidental to a construction project. The buildings or sheds shall be removed when the certificate of occupancy is issued for the reconstructed building or when the certificate of occupancy is issued for the last house in a new housing development.
6. In any district, the Chief Building Official may issue a temporary building permit for a temporary real estate sales office on site at a real estate development project. The buildings or sheds shall be removed when the last unit is sold or leased. In any case the period of occupation of the temporary

building shall not exceed one (1) year.

H. Rear Setback lines

1. On any lot only one side shall be considered the rear.
2. If the line jogs or is broken in any way, multiple segments facing or roughly facing the same direction will be considered the rear property line for determining setback requirements.
3. On a lot shaped like a triangle, the rear property line will be the point of the triangle opposite of the primary frontage. The rear setback shall be measured from that point.

I. Setback and Build-to modification due to existing utilities.

Where setback lines are otherwise established at distances less than 20 feet from the property line and existing utility lines are present the setback line may be instead measured 10 from the existing utility line; AND where build-to lines are otherwise established the build-to lines may be measured 15 feet from the existing utility line. These cases will be reviewed on a case-by-case basis by the Planning Department and Utilities Department and modifications in keeping with this section may be approved by Staff.

14.504. Landscaping, Screening, and Buffering

A. Intent

The intent of this section is to establish a set of minimum landscape standards in order to promote the health, safety, and welfare of the general public; to improve the overall appearance of the community; to reduce storm water runoff, noise, heat, and chemical pollution through the preservation and installation of canopy trees; and to reduce the impact of adjacent land-uses through requirements for buffer yards along zoning boundaries which will minimize potential harmful effects of one use on another. Waivers may be granted from these standards, as indicated in the various subsections.

B. Applicability

The standards in this section apply to all residential subdivisions, as well as final site plans for multifamily of more than four (4) units and non-residential development in the City that are submitted after the effective date of this ordinance, unless otherwise specified within this section. Final plats and site plans based upon previously approved plats shall conform with the regulations applicable at the time of their approval.

C. Waiver or Modification of Standards for Special Situations

Variations may be granted to the requirements of this section based on consideration of the following factors:

1. The extent that existing natural vegetation provides desired screening;
2. Steep changes in topography that may limit the benefits of required landscaping;
3. The presence of existing wetlands or environmentally sensitive areas that

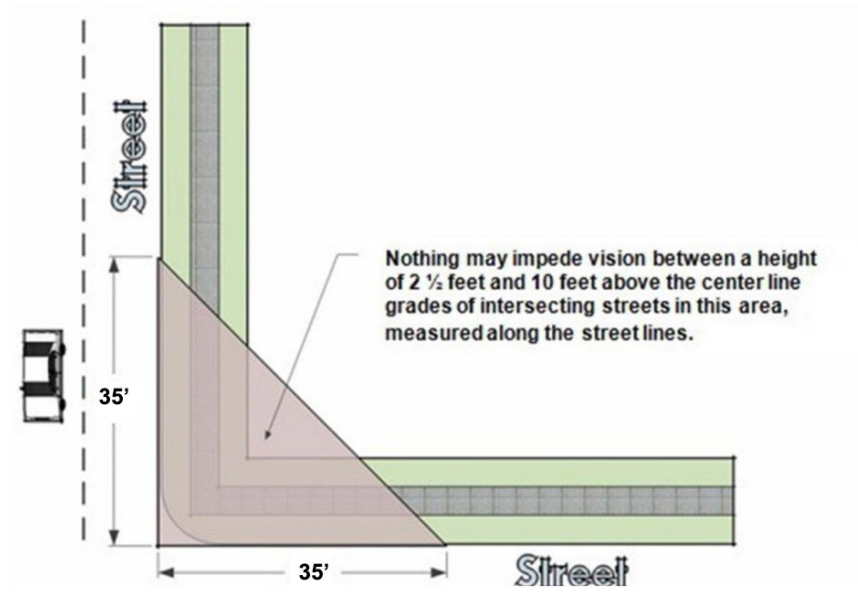
- would preclude the required installation;
4. Existing and proposed building placement, as long as proposed placement does not render difficult an appropriate landscaping solution;
 5. Abutting or adjacent land is planned for a future use that is different from its underlying zoning;
 6. Building heights and views;
 7. Existing and proposed utility placement; and
 8. Similar conditions to the above exist such that no good purpose would be served by providing the landscaping or screening required.

Modifications to the landscaping placement requirements in this section and those in Chapter 3 may be permitted at the discretion of the Planning Department when the intent of the relevant standard is otherwise achieved.

D. General Landscape Standards

1. Credit for Existing Vegetation: Existing healthy, well-formed canopy and understory trees as well as healthy shrubs may be credited toward the requirements of this section, provided the vegetation is: identified and protected before and during development of the site; located in areas suitable to meet the standards of this section; and maintained after development of the site is complete.
2. Clear Zone Requirements for Landscape Materials
 - a. At any public or private street intersection and at the access point for private driveways to public or private streets, a clear zone shall be maintained. Nothing may impede vision between a height of 30 inches and 10 feet above the center line grades of intersecting streets as indicated in Figure 14.504-1.
 - b. In order to protect safe sight visibility lines for street intersections, landscape buffers and shrubs shall not be located within thirty-five (35) feet of a street corner.

Figure 14.504-1 Visibility at Intersections

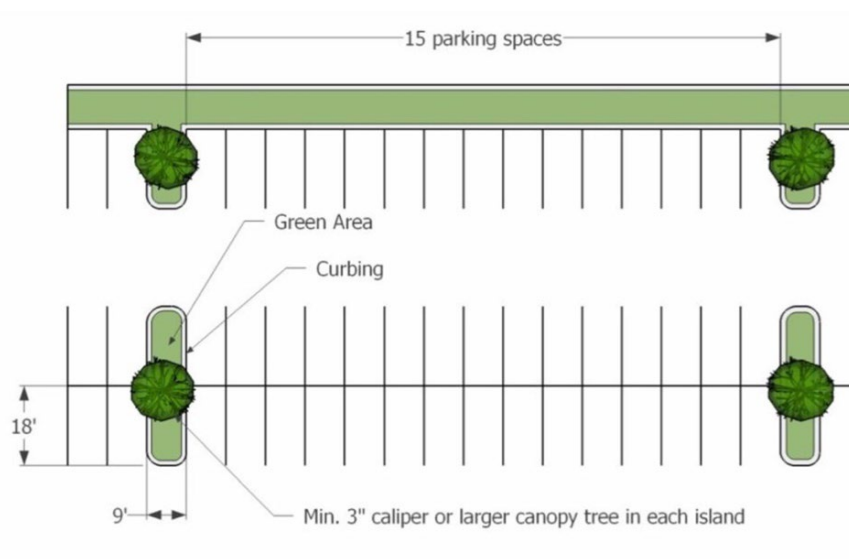


3. Parking Landscaping

a. Islands

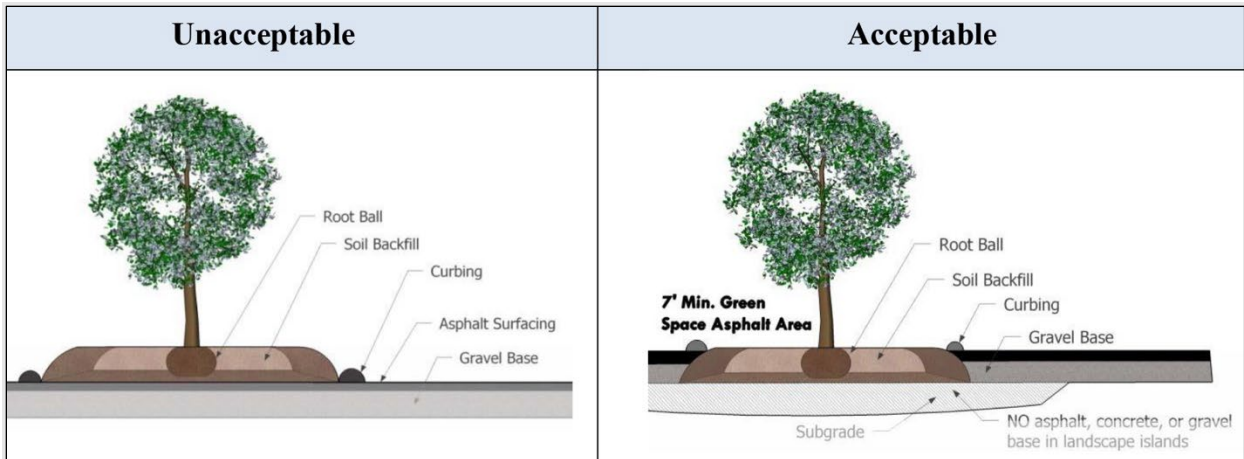
- i. One (1) landscape island with a minimum size of nine (9) feet x eighteen (18) feet (see Figure 14.504-2) measured from face of curb to face of curb shall be placed at a minimum of every fifteen (15) spaces in any proposed row of parking.
- ii. A minimum of one (1) two and a half (2 1/2)-inch caliper or larger canopy tree is to be placed in each proposed island. Said canopy trees can be used toward the overall tree requirements but not toward any existing tree replacement.

Figure 14.504-2 Landscape Islands



- iii. The islands are to be free of all asphaltic, construction, and/or trash materials. (see Figure 14.504-3)

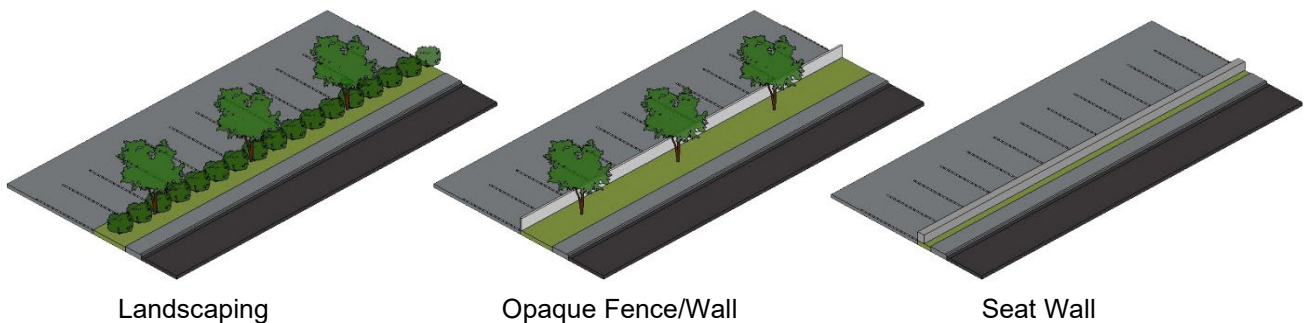
Figure 14.504-3 Tree Planting for Parking Lot Islands



b. Screening

- i. Landscape screening shall be required between those portions of an off-street parking area containing five (5) or more parking spaces and a public street where the separation between the parking area and public street edge of pavement is forty (40) feet or less.
- ii. Standards
 - (a). Parking lot screening must be provided within ten (10) feet of the perimeter of the parking lot to be screened.
 - (b). Parking lot screening must be a minimum of three (3) feet in height, at the time of planting, as measured from the adjacent finished surface of the parking area.
 - (c). Evergreen Shrubs shall be used to provide the screen. Such shrubs must be at least two (2) feet tall at planting and anticipated to grow to at least four (4) feet tall at maturity.
 - (d). Parking lot screening, at a minimum, must consist of: a compact hedge of evergreen shrubs spaced to ensure closure into a solid hedge at maturity; an architecturally compatible opaque wall or fence; a seat wall at seating height; or a combination of the aforementioned.

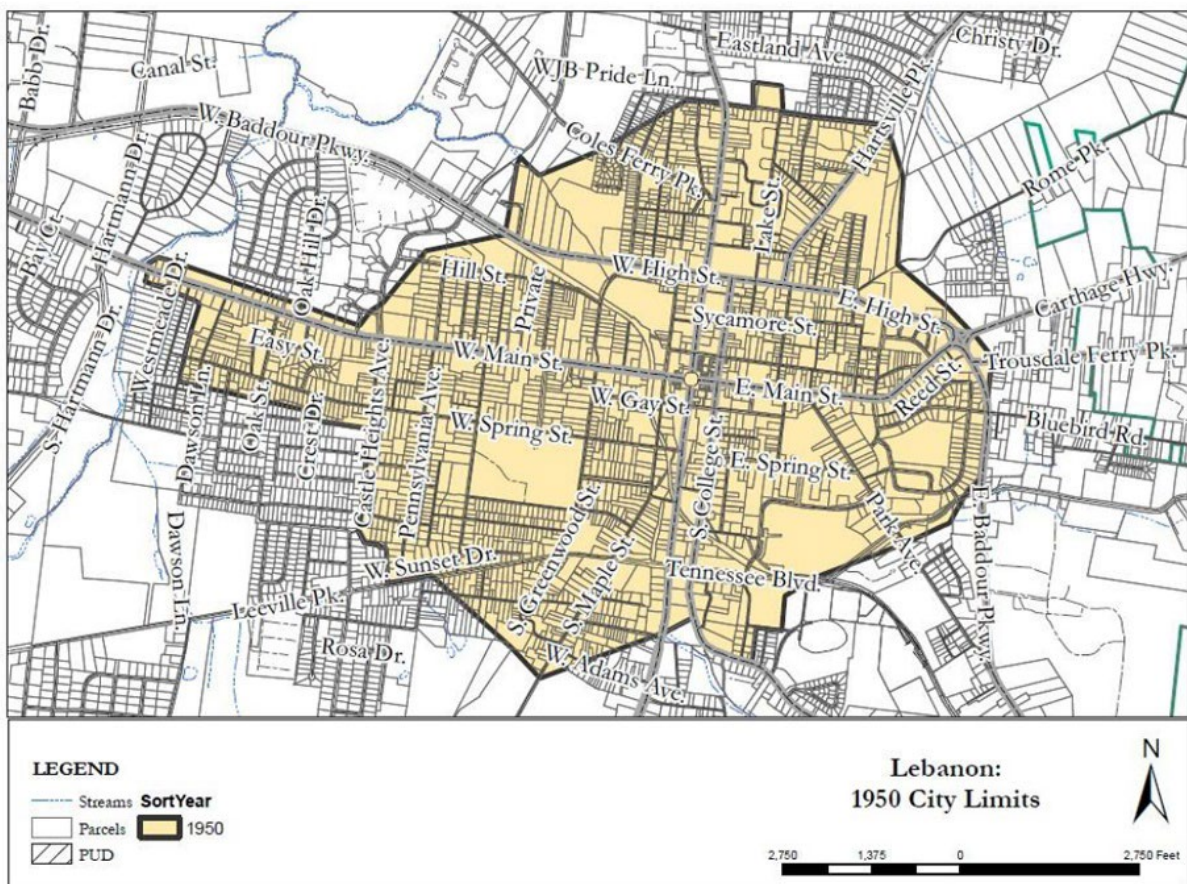
Figure 14.504-4 Screening for Parking Lots



4. Landscape Buffers

- a. Intent: Landscape Buffers shall be required between different land uses and to screen less-intensive uses from more intensive uses. The buffer provides a transition between the incompatible uses by providing a landscape yard of a minimum specified depth along the shared property line with a year-round visual obstruction.
- b. Exemptions
 - i. No landscape buffer yard shall be required when a zoning boundary falls along a public street, along an elevated railroad bed, utility line easement of fifty feet wide or greater, or navigable river.
 - ii. No landscape buffer yard shall be required in the pre-1950 area of the City (see Figure 14.504-5).

Figure 14.504-5: Pre-1950 Area



- iii. Applicants may request a variance to buffer yard requirements when existing vegetation is deemed to satisfy the transition requirement or when a lack of existing or projected development exists along zoning district boundary lines. In order to waive the buffer yard requirements in favor of existing vegetation, the width of existing vegetation must be a minimum of ten (10) feet, measured from the adjoining property line.
- c. Procedure: Refer to the matrix in Table 14.504-6 below to determine

- d. Buffer Types: All buffer plantings shall meet the installation and planting size requirements specified below under "Permitted and Prohibited Plants."
- i. Type A: 10 feet deep Landscape Yard installed with the following:
 - (a). One (1) row of large evergreen shrubs spaced a maximum of ten (10) feet apart, or two (2) staggered rows of medium evergreen shrubs spaced a maximum of six (6) feet apart; and
 - (b). One (1) row of Class II Shade Trees spaced a maximum of thirty (30) feet on-center.
 - ii. Type B: 20 feet deep Landscape Yard installed with the following:
 - (a). Two (2) staggered rows of large evergreen shrubs spaced a maximum of ten (10) feet apart, or three (3) staggered rows of medium evergreen shrubs spaced a maximum of six (6) feet apart; and
 - (b). One (1) row of Class I Shade Trees spaced a maximum of fifty (50) feet on-center.
 - iii. Type C: 20 feet deep Landscape Yard installed with the following:
 - (a). Six (6) feet tall masonry wall, fence, or combination thereof along the property line;
 - (b). Two (2) staggered rows of large evergreen shrubs spaced a maximum of ten (10) feet apart, or three (3) staggered rows of medium evergreen shrubs spaced a maximum of six (6) feet apart; and
 - (c). One (1) row of Class I Shade Trees spaced a maximum of fifty (50) feet on-center.
 - iv. Type D: Thirty (30) Feet deep Landscape Yard installed with the following:
 - (a). Eight (8) feet masonry wall, fence, or combination thereof along the property line;
 - (b). One (1) row of small evergreen trees spaced a maximum of twenty (20) feet apart);
 - (c). One (1) row of large evergreen shrubs spaced a maximum of ten (10) feet apart, or two (2) staggered rows of medium evergreen shrubs spaced a maximum of six (6) feet apart; and
 - (d). One (1) row of Class I Shade Trees spaced a maximum of fifty (50) feet on-center.

Figure 14.504-7 Buffer Illustrations



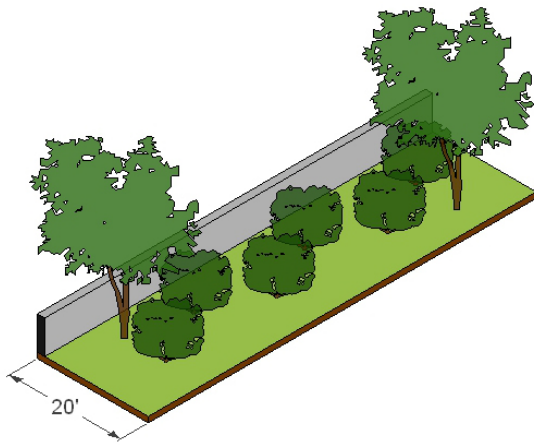
Buffer 'A'

Buffer 'A' (alternate)

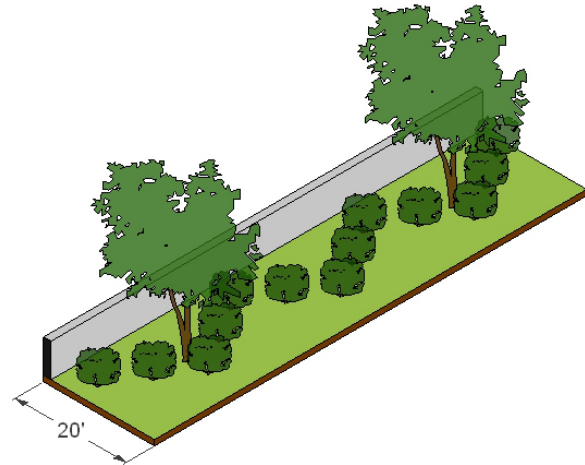


Buffer 'B'

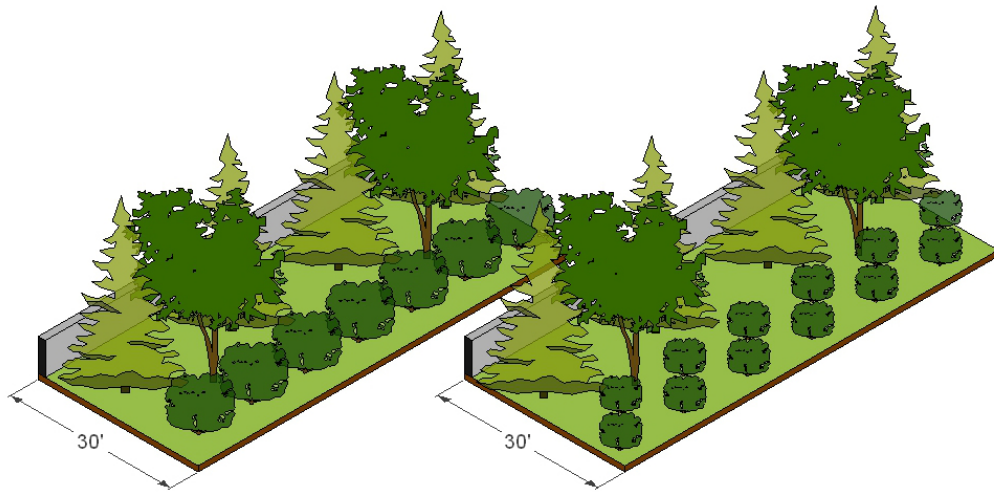
Buffer 'B' (alternate)



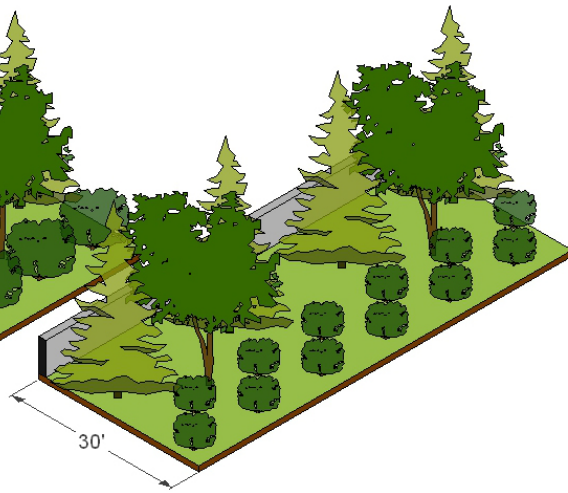
Buffer 'C'



Buffer 'C' (alternate)



Buffer 'D'



Buffer 'D' (alternate)

5. Landscape Screening, Fences, Walls, and Hedges

- a. Intent: The intent of this section is to establish requirements to screen specific unsightly elements, uses, or structures from public view.
- b. Fences, walls, and hedges may be permitted in any required yard, or along the edge of any yard, except as prohibited in specific circumstances as described in this ordinance.

6. Dumpsters and Trash Receptacles

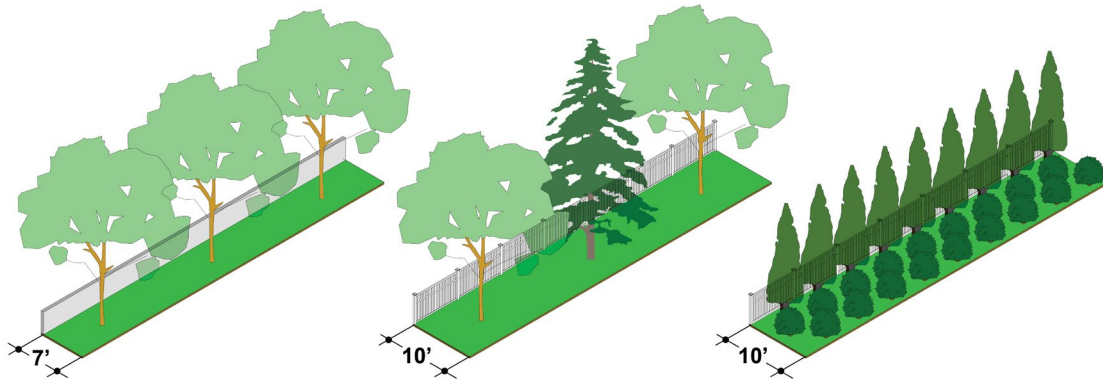
- a. All dumpsters, trash receptacles, and refuse storage containers shall be located within an enclosure providing screening, unless located adjacent to a loading dock at the rear of the building. Enclosure shall meet one of the following standards:
 - i. A decorative masonry wall (minimum six feet in height) on three sides and a gate on the fourth side. The gate shall be constructed with an

opaque, non-masonry material. The construction materials of the wall shall match materials used on the principal building located on the same lot.

- ii. Medium-sized evergreen shrubs shall be arranged, planted a maximum of 6 feet on-center, around the perimeter of the pad area except the side where the gate is located. This landscaping requirement does not apply when the enclosure is an architectural extension of a principal building.
 - b. Dumpster enclosures and trash receptacles should not be located in front of the principal building and should be subordinate to the principal building.
7. Ground-mounted equipment: When technically feasible, outdoor equipment should be placed underground. All proposed ground-mounted equipment (i.e., transformers, air conditioner units, etc.) within view from a public right-of-way shall be screened by evergreen shrubs. Medium-sized evergreen shrubs shall be arranged, planted a maximum of 6 feet on-center, around the boundary of the equipment.
8. Water/Wastewater Stations: Proposed water pump stations and wastewater lift stations shall be screened from public view. In order to screen these facilities, the following elements shall be incorporated: An eight-foot wide landscape area with one small evergreen tree per 12 linear feet, provided that said trees shall be planted no closer than eight feet and no farther apart than 16 feet.
9. Screening Standards
- a. Recycle Centers, Salvage Yards: Recycle centers and salvage yard facilities with outdoor storage shall be screened from the public right-of-way.
 - b. Outdoor Storage: facilities with outdoor storage of materials, products, or equipment shall be screened from the public right-of-way. This requirement does not apply to car dealerships on parcels less than 20 acres in area. As concerns Building Materials and Farm Equipment use, facilities can conform to the screening requirements described below or comply with the side and rear setbacks defined under commercial zoning districts in Chapter 3.
 - c. For other uses, solid screening must be located along the entire exterior perimeter of the property, except for the front side of a parcel occupied by a business involved in retail sales. The front side of such a business can use see-through fencing or no fencing. Only one side of the property can be considered the front side for screening purposes. The display merchandise may not extend above or be stacked higher than the confinement area enclosure.

These facilities shall accomplish the screening requirement by choosing and implementing one of the three perimeter screening options described below and illustrated in Figure 14.504-8.

Figure 14.504-8 Screening Illustrations for Recycle Centers, Salvage Yards and Outdoor Storage



- a. Type 1: 7 feet deep Landscape Yard installed with the following:
 - i. One (1) wall meeting the height and material requirements for perimeter walls as defined in this chapter; and
 - ii. One (1) row of Class II Shade Trees spaced a maximum of thirty (30) feet on-center. The trees shall be planted between the wall and the property line.
 - b. Type 2: 10 feet deep Landscape Yard installed with the following:
 - i. One (1) sight-proof fence meeting the height and material requirements for perimeter fencing as defined in this chapter; and
 - ii. One (1) row of Class II Shade Trees or ever green trees spaced a maximum of thirty (30) feet on-center. The trees shall be planted between the fence and the property line.
 - c. Type 3: 10 feet deep Landscape Yard installed with the following:
 - i. One (1) sight-proof fence meeting the height and material requirements for perimeter fencing as defined in this chapter; and
 - ii. Two (2) staggered rows of large evergreen shrubs spaced a maximum of ten (10) feet apart, or three (3) staggered rows of medium evergreen shrubs spaced a maximum of six (6) feet apart. The shrubs shall be planted between the fence and the property line.
10. Permitted Wall and Fence Materials: The following wall and fence construction materials are permitted: stone, brick, wood, concrete, metal (for metal-frame construction), and decorative metal (for screening panels or for cladding). Prohibited materials include plastic (including vinyl), unfinished metal (including corrugated and non-corrugated metal sheeting), unfinished concrete block, chain link, wire mesh, and fabric. All fences shall have the finished side facing outward away from the property. The structural rails and posts should be placed inside the fenced area, except in cases of hardship or special circumstances, which can be reviewed by the Planning

Department.

a. Dimensions of Walls and Fences:

- i. In any residential district or mixed use district, no fence or wall shall exceed eight (8) feet in height, nor shall it extend past the front of the principal building. Between the principal building and the street right-of-way, no fence or wall shall exceed four (4) feet in height. On corner lots or double frontage lots, a fence in the second front yard, may exceed four (4) feet in height, so long as it does not extend past the front façade of the primary building and is setback at least fifteen (15) feet from the edge of pavement.
- ii. In commercial or industrial districts, no fence or wall shall exceed fifteen (15) feet in height and shall not extend past the front of the principal building. Between the principal building and the street right-of-way, no fence or wall shall exceed six (6) feet in height. On corner lots or double frontage lots, a fence in the second front yard, may exceed six (6) feet in height, so long as it does not extend past the front façade of the primary building and is setback at least fifteen (15) feet from the edge of pavement.
- iii. The height of the fences and walls shall be measured from the finished grade to top of the individual section's berm. The sections may be measured separately and averaged. The finished grade shall not include measurements from the top of a berm.
- iv. For properties located partially or wholly within the 100-year floodplain (as defined by the Federal Emergency Management Agency), screening must allow flow of stormwater across the property. To that end, fences are not allowed. Any screening must be accomplished with landscaping. A landscape plan shall be submitted for approval.

11. Loading areas: Loading areas and truck delivery stalls shall be located to the side or rear of the building. All loading areas and truck delivery stalls visible from public view shall be screened from the public right-of-way as described below.

- a. Installation of a minimum six (6) feet wall or fence. If the wall includes a gate, it shall be constructed with an opaque, non-masonry material. The construction materials of the wall shall match material used on the principal building located on the same lot; and
- b. A landscaped area that is a minimum of six (6) feet deep, adjacent to the constructed screen with one small evergreen tree or one large evergreen shrub per twelve (12) linear feet of wall constructed, provided that said trees shall be planted no closer than six (6) feet and no farther than eight (8) feet apart.

Figure 14.504-9 Fences and Walls – Residential and Mixed Use Districts

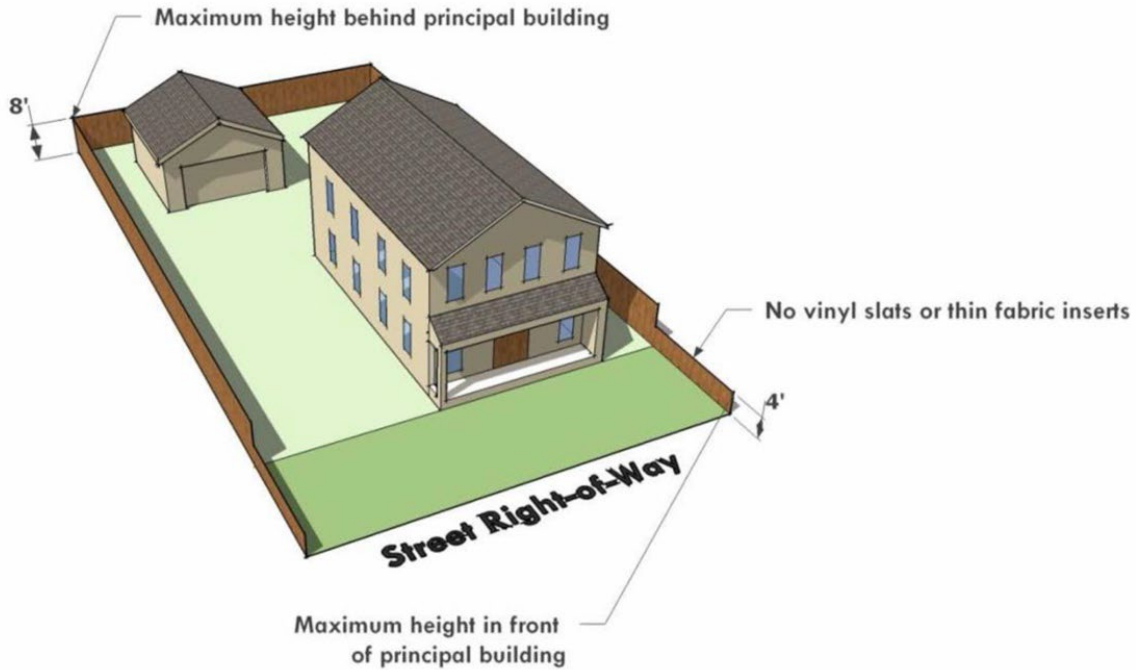
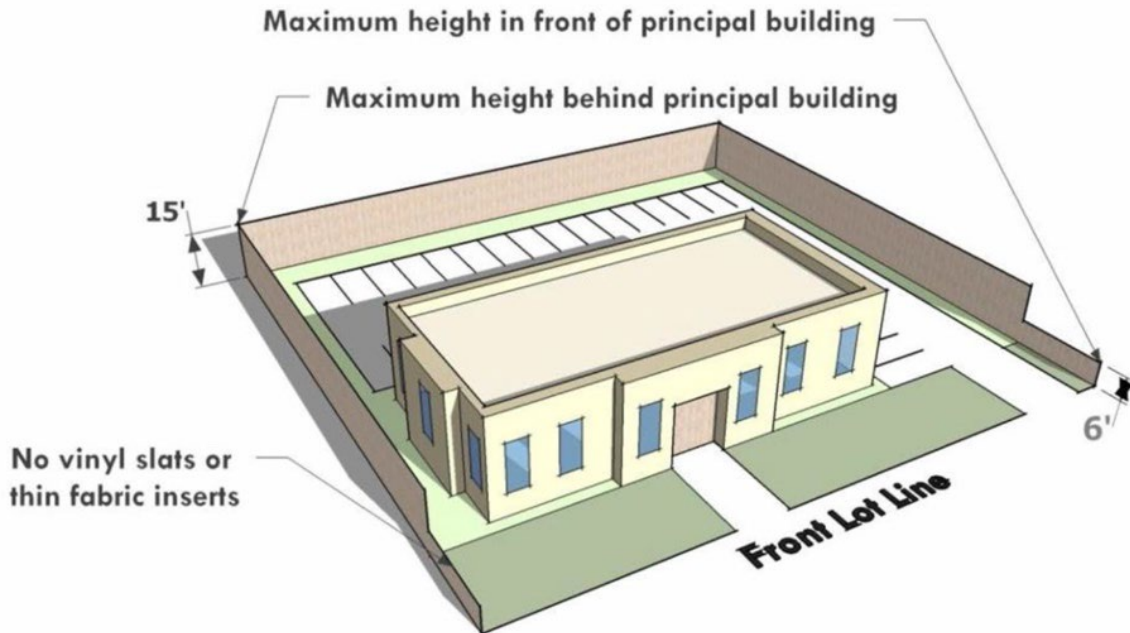


Figure 14.504-10 Fences and Walls – Commercial



12. Infill Development: Landscape buffer and screening should be reduced or waived for infill single-family, multifamily, mixed-use, or commercial development where the design, height, location of uses, massing, and landscaping of the infill project mitigates potential adverse effects and promotes compatibility with surrounding structures and the character of the neighborhood.

13. Plant Material Standards

- a. Intent: All landscaping materials shall be consistent with the current edition of American Standard for Nursery Stock (ANSI Z60.1) and installed in a professional manner. It is the intent of this Section that a diverse mixture of plantings be provided within the City of Lebanon. Therefore, all required landscaping shall comply with the following minimum plant material standards.
- b. Native Vegetation, Drought Resistance / Xeriscape and Irrigation.
 - i. Native vegetation and drought resistant plant material shall be used wherever possible.
 - ii. If native vegetation or drought resistant plant materials are not used, then a temporary or permanent irrigation system shall be installed to provide water to the landscape for a minimum twelve (12) month establishment period.
 - iii. Xeriscape landscape practices are allowed as a way to minimize the need for supplemental watering. The following techniques shall be used where possible:
 - (a). Use plant materials with lower moisture requirements;
 - (b). Select plants on the basis of specific slope, aspect, soil and microclimate conditions;
 - (c). Plant native and adapted plant species;
 - (d). Minimize the amount of irrigated turf area;
 - (e). Design slopes to minimize runoff, using terracing in lieu of a consistent slope, where possible;
 - (f). Separate irrigation zones according to plant water requirements to reduce evaporation;
 - (g). Amend topsoil by deeply loosening soil and incorporating organic matter and amendments based on soil tests; and
 - (h). Use mulch in planting areas to reduce weed growth, promote soil cooling, and reduce evaporation.
- c. Plant Quality: Plant materials permitted in required landscaped areas shall be hardy to the climate of Middle Tennessee, long-lived, resistant to disease and insect attack, and shall have orderly growth characteristics. All plant materials shall be well-formed, sound, vigorous, healthy and free from disease, sun scald, wind burn, abrasion, and harmful insects at the time of planting.
- d. Plant Size Specifications: All required plant materials shall be of the following sizes at the time of planting, unless otherwise stated in this Section.
 - i. Class I Shade Trees: All Class I Shade Trees shall be installed at a minimum caliper of two and a half (2 ½) inches as measured from six

- (6) inches above grade level. Class I Shade Trees shall also have a minimum expected maturity height of at least fifty (50) feet and a minimum canopy spread of at least thirty (30) feet. Evergreen trees can be treated as Class I Shade Trees provided they meet the minimum maturity height and canopy spread criteria.
- ii. Class II Shade Trees: All Class II Shade Trees shall be installed at a minimum caliper of two (2) inches as measured at six (6) inches above grade level from the base of the tree. Class II trees shall have a maximum expected maturity height of forty (40) feet and a minimum canopy spread of twenty (20) feet.
 - iii. Ornamental Trees: All Ornamental Trees shall be installed at a minimum caliper of one and a half (1 ½) inches as measured at six (6) inches above grade level from the base of the tree. Ornamental trees shall have a maximum expected maturity height of thirty (30) feet and a maximum canopy spread of thirty (30) feet.
 - iv. Small Evergreen Trees: Small Evergreen trees are used to meet the tree planting requirements of the Landscape Buffering and Screening Sections. All evergreen trees shall be installed at a minimum height of eight (8) feet and have a minimum expected mature spread of eight (8) feet.
 - v. Large Evergreen Shrubs: All Large Evergreen shrubs shall be installed at a minimum size of seven (7) gallons and have an expected mature height of at least eight (8) feet and a mature spread of at least six (6) feet.
 - vi. Medium Evergreen Shrubs: All Medium Evergreen shrubs shall be installed at a minimum size of five (5) gallons and have an expected mature height of at least four (4) feet and a mature spread of at least four (4) feet.
 - vii. Small Evergreen and Deciduous Shrubs: All Small Evergreen and Deciduous shrubs shall be installed at a minimum size of three (3) gallons and have an expected mature height of at least two (2) feet and a mature spread of at least two (2) feet.
- e. Mulch Material: All mulch materials shall be installed at a minimum depth of three (3) inches for planted trees and shrubs and shall be installed in a manner as to present a finished appearance.
14. Maintenance: The developer, its successor and/or subsequent owners and their agents, shall maintain landscaping on the property on a continuing basis for the life of the development.
- a. All landscaping is subject to periodic inspection by the Planning Director or Designee. The City may cause removal of any dead or diseased trees, plants and shrubs on private property within the City, when those trees, plants and shrubs constitute a hazard to life and/or property or harbor insects or disease which constitutes a potential threat to other trees, plants or shrubs within the City. If the Planning Department determines that

removal of any diseased tree, plants or shrubs are necessary, the Planning Official shall provide the property owner written notice of the required maintenance or removal.

- b. All required landscaping shall be provided with a readily available and acceptable water supply. Underground sprinkler systems are encouraged for all required street yard landscaping, parking lot landscaping, landscape buffer yards, and landscape screening. If underground sprinklers are not provided, an outside hose attachment within two hundred (200) feet of all landscaping required by this ordinance shall be required.
- c. Warranty Period
 - i. Completed landscaping shall comply with the approved landscape plan, including the quantities, location, species, and size of plants and other landscape materials, and that such landscaping will remain in good condition free from defects in material and/or workmanship during the warranty period.
 - ii. For the purpose of this subsection "warranty period" means a period of one year beginning when the City accepts the landscaping as complete.
 - iii. During the warranty period, defective materials, equipment, and workmanship shall be repaired, corrected, or replaced without charge or cost to the City. The City may at any time during the warranty period inspect, photograph, or televise such landscaping and shall notify the developer of any necessary repair, correction, or replacement.

E. Specific Landscape Standards

District-specific Landscape Standards are specified in the district regulations (Chapter 3).

The specific landscaping requirements for the use Automotive Repair and Cleaning are as follows. Landscaping and screening plan shall be required. The facilities must be screened along front, side and rear lot lines. The landscaping and screening plan shall include trees that are at least 7 feet tall. At least 50% of the trees need to be evergreens. Bushes or shrubs that are at least 3 feet in height at time of planting and must be planted linearly every three feet on center.

F. Permitted and Prohibited Plants

Permitted Plants

The plants in the following table have been identified as species that are suitable in this geographic region and are permitted in the City of Lebanon.

Table 14.504-11: Permitted Plants

CANOPY TREES – A tree that normally achieves an overall height at maturity of 30 feet or more	
Deciduous Canopy Trees	
Acer rubrum	Red Maple and cultivars
Acer saccharum	Sugar Maple and cultivars
Betula nigra	River Birch
Cercidiphyllum japonicum	Katsura Tree
Cladrastis kentukea	American Yellowwood
Gingko biloba	Gingko, Maidenhair – male only
Gymnocladus dioicus	Kentucky Coffeetree – fruitless
Liquidambar styraciflua	Sweetgum – fruitless varieties only
Liriodendron tulipifera	Yellow Poplar, Tulip Tree
Metasequoia glyptostroboides	Dawn Redwood
Nyssa sylvaticaU	Black Gum, Tupelo
Platanus occidentali	Sycamore
Quercus acutissima	Sawtooth Oak
Quercus alba	White Oak
Quercus coccinea	Scarlet Oak
Quercus imbricaria	Shingle Oak
Quercus palustris	Pin Oak
Quercus phellos	Willow Oak
Quercus prinus	Chestnut Oak
Quercus rubra	Red Oak
Quercus shumardii	Shumard Oak
Taxodium distichum	Bald Cypress
Evergreen Tall Growing Trees	
Ilex opaca	American Holly and cultivars
Juniperus virginiana	Eastern Redcedar
Magnolia grandiflora	Southern Magnolia
Picea abies	Norway Spruce
Pinus sylvestris	Scots Pine
Pinus virginiana	Virginia Pine
Tsuga canadensis	Canadian (Eastern) Hemlock
UNDERSTORY TREES – Trees that normally achieve an overall height at maturity of 15 to 30 feet, and can grow under canopy trees	
Deciduous Understory Trees	
Acer buergeranum	Trident Maple
Acer campestre	Hedge Maple

Acer ginnala	Amur Maple and cultivars
Acer griseum	Paper Bark Maple
Acer palmatum	Japanese Maple and cultivars
Aesculus pavia	Red Buckeye
Amelanchier arborea	Serviceberry
Carpinus caroliniana	American Hornbeam
Cercis canadensis	Eastern Redbud and cultivars
Chioanthus retusus	Chinese Fringetree
Chioanthus virginicus	White Fringetree
Cornus florida	Flowering Dogwood and cultivars
Cornus kousa	Kousa Dogwood and cultivars
Crataegus phaenopyrum	Washington Hawthorn
Crataegus viridis	Green Hawthorn
Franklinia alatamaha	Franklin Tree
Ilex decidua	Possumhaw
Lagerstroemia indica	Crepe Myrtle – Tree forms only
Magnolia Ux Usoulangiana	Saucer Magnolia
Magnolia stellata	Star Magnolia
Magnolia virginiana	Sweetbay Magnolia
Malus Ucultivars/varieties	Crabapples - disease resistant only
Ostrya virginiana	American Hophornbeam
Oxydendron arboreum	Sourwood
Prunus serrulata	Flowering Cherry
Styrax japonica	Japanese Snowball
Syringa reticulata	Japanese Tree Lilac
Evergreen Low Growing Trees	
Ilex cornuta 'Burfordi'	Burford Holly
Ilex x attenuata 'Fosteri'	Foster's Hybrid Hollies
Ilex x 'Nellie R. Stevens'	Nellie R. Stevens Holly
Prunus caroliniana	Cherry Laurel
Magnolia grandiflora 'Little Gem'	Little Gem Magnolia
SHRUBS – a woody plant with multiple stems capable of growing to a height of no more than 15 feet.	
Shrubs for Buffer Yards: One half of the required shrubs should reach a height of 5 feet within 5 years of planting. One half of shrubs must be an evergreen species.	
Deciduous and Semi-Evergreen Shrubs	
Abelia x grandiflora and cultivars	Glossy Abelia
Aronia arbutifolia and cultivars	Red Chokecherry

Chaenomeles speciosa	Flowering Quince
Clethra alnifolia	Sweet Pepperbush
Forsythia x intermedia	Flowering Forsythia
Hamamelis	Witch Hazel
Hydrangea quercifolia and cultivars	Oakleaf Hydrangea
Ilex serrata	Finetooth Holly
Ilex verticillata	Winterberry
Itea virginica	Virginia Sweetspire
Kolkwitzia amabilis	Beautybush
Lagerstroemia cultivars	Shrub Crepe myrtles
Viburnum species and cultivars	Viburnum
Evergreen Shrubs	
Ilex cornuta cultivars	Chinese Hollies
Ilex crenata	Japanese Holly
Ilex glabra	Inkberry
Ilex x meserveae	Meserveae Hybrid Hollies
Juniperus chinensis cultivars	Chinese Juniper
Prunus laurocerasus 'Otto Luyken' and 'Schipkaensis'	Otto Luyken and Skip Laurel
Viburnum pragense	Prague Viburnum
Viburnum rhytidophyllum	Leatherleaf Viburnum
Shrubs for perimeter: Evergreen shrubs should be maintained at between 2 feet and 3 feet in height.	
Buxus sempervirens	American Boxwood
Juniperus chinensis	Chinese Juniper
Nandina domestica	Dwarf Nandina 'Fire Power', 'Harbour Dwarf'
Prunus laurocerasus 'Otto Luyken'	Otto Luyken Laurel
Taxus x media 'Densifomis'	Densifomis Yew

Prohibited Plants

The plants in the following table shall not be used in any landscape plan required by this ordinance or in any supplemental planting on any site:

Severe Threat	
Ailanthus Altissima (Mill.) Swingle	Tree of Heaven
Albizia Julibrissin Durz.	Mimosa
Alliaria Petiolata (Bieb.) Cavara and Grande	Garlic Mustard
Celastrus Orbiculata Thunb.	Asian Bittersweet
Dioscorea Oppositifolia L.	Air-Potato
Elaeagnus Umbellata Thunb.	Autumn Olive

<i>Elaeagnus Pungens</i> Thunb.	Thorny Olive
<i>Euonymus Fortunei</i> (Turcz.) Hand.-Mazz	Winter Creeper
<i>Hedera Hilix</i> L.	English Ivy
<i>Lespedeza Cuneata</i> (Dum.-Cours.) G. Don	Sericea Lespedeza
<i>Ligustrum Sinense</i> Lour.	Chinese Privet
<i>Ligustrum Vulgare</i> L.	Common Privet
<i>Lonicera Fragrantissima</i> Lindl. and Paxton	January Jasmine
<i>Lonicera Japonica</i> Thunb.	Japanese Honeysuckle
<i>Lonicera Maackii</i> (Rupr.) Maxim.	Amur Bush Honeysuckle
<i>Lonicera Morrowii</i> A. Gray	Morrow's Bush Honeysuckle
<i>Lonicera Tatarica</i> L.	Tartarian Honeysuckle, Twinsisters
<i>Lonicera X Bella Zabel</i>	Bush Honeysuckle
<i>Lythrum Salicaria</i> L. (all varieties and cultivars)	Purple Loosestrife
<i>Microstegium Vimineum</i> (Trin.) A.	Camus Nepal Grass, Japanese Grass
<i>Myriophyllum Spicatum</i> L.	Eurasian Water Milfoil
<i>Paulownia Tomentosa</i> (Thunb.) Sieb. and Zucc. Ex Steud	Princess Tree
<i>Phragmites Australis</i> (Cav.) Trin. Ex Steud.	Common Reed
<i>Polygonum Cuspidatum</i> Seib. and Zucc	Japanese Knotweed, Japanese Bamboo
<i>Pueraria Montana</i> (Lour.) Merr.	Kudzu
<i>Rosa Multiflora</i> Thunb.	Multiflora Rose
<i>Solanum Viarum</i> Dunal	Tropical Soda Apple
<i>Sorghum Halepense</i> (L.) Pers.	Johnson Grass
<i>Spiraea Japonica</i> L. f.	Japanese Spirea
Significant Threat	
<i>Alternanthera Philoxeroides</i> (Mart.) Griseb.	Alligatorweed
<i>Artemisia Vulgaris</i> L.	Mugwort, Common Wormwood
<i>Arthraxon Hispidus</i> (Thunb.) Makino	Hairy Jointgrass
<i>Berberis Thunbergii</i> DC.	Japanese Barberry
<i>Bromus Commutatus</i> Schrad.	Meadow Brome
<i>Bromus Japonicus</i> Thunb. Ex Murray	Japanese Bromegrass
<i>Bromus Secalinus</i> L.	Rye Brome
<i>Bromus Tectorum</i> L.	Thatch Bromegrass, Cheat Grass
<i>Carduus Nutans</i> L.	Musk Thistle, Nodding Thistle
<i>Centaurea Biebersteinii</i> DC.	Spotted Knapweed
<i>Cirsium Arvense</i> L. (Scop.)	Canada Thistle
<i>Cirsium Vulagre</i> (Savi) Ten.	Bull Thistle
<i>Clematis Terniflora</i> DC.	Leatherleaf Clematis
<i>Conium Maculatum</i> L.	Poison Hemlock
<i>Coronilla Varia</i> L.	Crown Vetch
<i>Daucus Carota</i> L.	Wild Carrot, Queen Anne's Lace
<i>Dipsacus Fullonim</i> L.	Fuller's Teasel
<i>Dipsacus Laciniatus</i> L.	Cutleaf Teasel
<i>Euonymus Alatus</i> (Thunb.) Sieb.	Burning Bush
<i>Festuca Arundinacea</i> Schreb.	Tall Fescue

<i>Festuca Pratensis</i> Huds.	Meadow Fescue
<i>Hesperis Matronalis</i> L.	Dame's Rocket
<i>Hydrilla Verticillata</i> (L.f.) Royle	Hydrilla, Water Thyme
<i>Lespedeza Bicolor</i> Turcz.	Bicolor Lespedeza, Shrubby Bushclover
<i>Ligustrum Japonicum</i> Thunb.	Japanese Privet
<i>Lysimachia Nummularia</i> L.	Moneywort, Creeping Jenny
<i>Mahonia Bealei</i> (Fortune) Carriere	Oregon Grape
<i>Melilotus Alba</i> Medik.	White Sweet Clover
<i>Melilotus Officinalis</i> (L.) Lam.	Yellow Sweet Clover
<i>Miscanthus Sinensis</i> Andersson	Zebra Grass, Chinese Silver Grass
<i>Murdannia Keisak</i> (Hassk.) Hand. Mass.	Asian Spiderwort
<i>Myriophyllum Aquaticum</i> (Vell.) Verdc.	Parrot's Feather, Water Milfoil
<i>Nandina Domestica</i> Thunb.	Nandina, Sacred-Bamboo
<i>Rorippa Nasturtium-Aquaticum</i>	Hayek Watercress
<i>Polygonum Caespitosum</i> Blume	Bunchy Knotweed, Oriental Lady's Thumb
<i>Populus Alba</i> L.	White Poplar
<i>Potamogeton Crispus</i> L.	Curly Pondweed
<i>Setaria Faberi</i> R.A.W. Herrm.	Nodding Foxtail-Grass, Japanese Bristle Grass
<i>Setaria Italica</i> (L.) P. Beauv.	Foxtail-Millet
<i>Setaria Pumila</i> (Poir.) Riem. and Schult.	Yellow Foxtail, Smooth Millet
<i>Setaria Viridis</i> (L.) B. Beauv.	Green Millet
<i>Torilis Arvensis</i> (Huds.) Link	Spreading Hedge-Parsley
<i>Tussilage Farfara</i> L.	Coltsfoot
<i>Verbascum Thapsus</i> L.	Common Mullein
<i>Vicia Sativa</i> L.	Garden Vetch
<i>Vinca Minor</i> L.	Common Periwinkle
<i>Wisteria Sinensis</i> (Sims) DC.	Chinese Wisteria
<i>Wisteria Floribunda</i> (Wild.) DC.	Wisteria
<i>Xanthium Strumarium</i> L.	Common Cocklebur, Rough Cocklebur

G. Tree Cover and Protection

1. Applicability

The standard in this section shall apply to all grading plans, clearcutting, subdivisions and site plans, including residential, mixed use, and non-residential land uses.

2. Exemptions:

- a. Any development less than two (2) acres in land area is not required to follow tree retention requirement but will be required to follow future tree canopy requirements.
- b. When a forested area is determined to consist of mostly non-native, invasive species, the trees may be removed after determination by a Certified Arborist or Landscape Architect and approved by the Planning Department.

- c. When a forested area is determined to consist of unhealthy or nuisance trees that pose a threat to an existing structure, underground, utility, or public safety, trees may be removed after determination by an ISA Certified Arborist or Landscape Architect and approved by the Planning Department.
- d. All agricultural forestry is exempt from these standards.

3. Tree Preservation Plan

- a. Included with submittals for grading plans, site plans, and plats, a tree preservation plan containing the following information shall be submitted:
 - i. Most recent aerial photo or satellite image showing the current conditions of the property.
 - ii. Location of existing canopy on lot, include estimated percentage of site coverage.
 - iii. Estimated health of canopy by an ISA Certified Arborist or Landscape Architect.
 - iv. Area of existing canopy to be preserved and canopy to be removed.
 - v. Location of Heritage Trees.
- b. Heritage trees are granted the title when the diameter at breast height (DBH) is at least 20 inches for a canopy tree and 8 inches for an understory tree.

4. Location of Critical Root Zone of Heritage Trees.

Critical Root Zone (CRZ) is the area of tree roots needed for survival. The CRZ shall be protected to the maximum extent possible. Measured CRZ outward from the tree trunk at one foot of radial distance for every inch of tree diameter at breast height (DBH). The DBH is measured at 4.5 feet above ground.

5. Location of Tree Protection Fence.

Any additional tree protection measures: root pruning, branch or limb pruning, fertilization, root zone mulch during construction or trunk planking.

6. Tree Cover Requirements

- a. A percentage of the existing tree canopy on a site will be required to be maintained based on zoning, as described below:

Table 14.504-12: Minimum Existing Tree Canopy Retention

Existing Tree Canopy Cover by percentage	Minimum Existing Tree Canopy Retention (%)	
	Residential	Commercial
	RPO, RS20, RS12, RS9, RD9, RXH, RS6, RM6 When used residentially CS, COM	RPI, UC, CXU
80% - 100%	30%	15%

60% - 79%	35%	20%
40% - 59%	40%	22%
20% - 39%	45%	24%
19% or less	50%	25%

1. Commercial districts being used for residential uses will follow the same requirements as residential districts. Mixed use site plans will follow the commercial district standards.
2. Minimum tree canopy retained within developments will be noted on the plan and tree protection measures will be put in place during construction.
 - a. Locations of Preserved Canopies will be determined by tree rows, existing tree stands, riparian buffers, forests over 5 acres, endangered species present, and heritage trees.
 - b. Proposed Preserved Canopy locations will be required to be approved by City Staff.
3. If a Preserved Canopy falls within a single-family lot, an agreement will be required to be recorded with the plat to leave the forested area unless a tree is determined to be a threat to an existing structure, utilities, or public safety.
4. Tree replacement is possible in the event of inability to maintain canopy. Possible 2:1 replacement in other location of the property, as determined by Staff.
5. If little to no tree canopy exists on the site, the development will be required to plant trees to create a canopy based on zoning (lot size exemptions do not apply) as described below:

Table 14.504-13: Minimum Future Tree Canopy Requirements

Minimum Future Tree Canopy Required	
Residential	Commercial
RPO, RS20, RS12, RS9, RD9, RXH, RS6, RM6 When used residentially CS, COM	RPI, UC, CXU
10%	7%

6. Commercial districts being used for residential uses will follow the same requirements as a residential district. Mixed Use site plans will follow the Commercial standards.

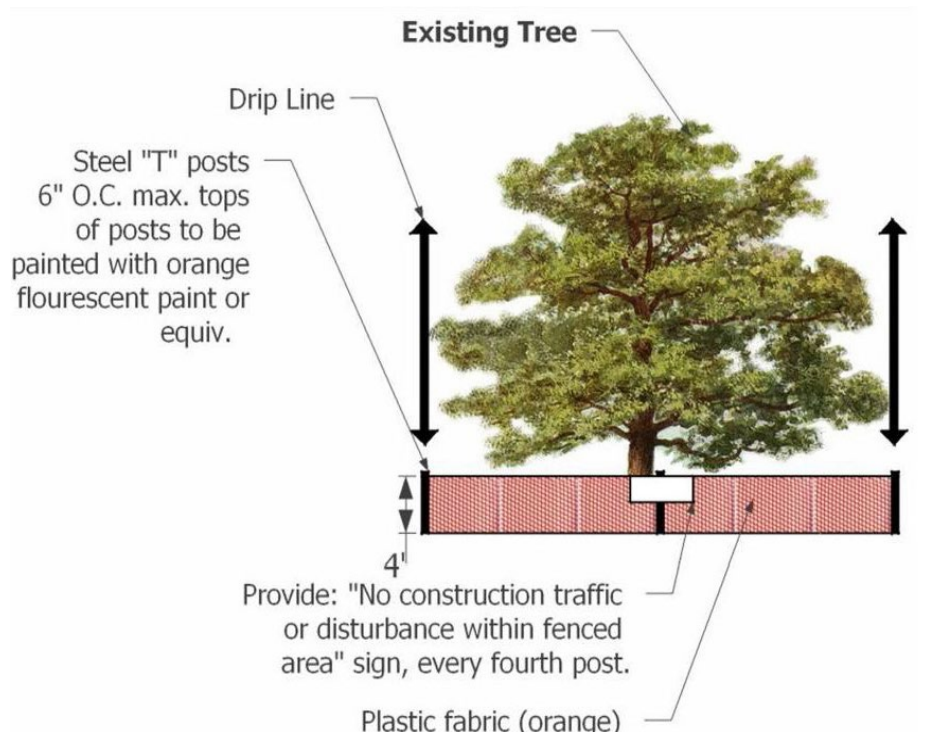
H. Tree Protection

1. Prior to the construction and grading process, a tree protection zone will be

established and required to remain until work is complete.

- a. An area extending to at least the drip line, the furthest point of the canopy on a horizontal plane, of the tree will require fencing at least four feet in height (see Figure 14.504-14) or as shown on the Tree Protection Plan.
- b. Signs placed every fourth post will be required stating "Tree Protection Zone. Keep Out."
- c. No storage, grading, construction, equipment, or any other related activity will be allowed within the fenced area.
- d. When work is complete, the fencing and signage may be removed.

Figure 14.504-14 Tree Protection During Construction



2. Tree Replacement

- a. After construction completion, in the event of future removal of trees on a site, an equal replacement will be required to be planted on site.
- b. Any tree with a DBH over 20 inches will require at least 3 new trees with a maximum 2-inch caliper size. Every 10 inches in DBH will require an extra tree.
- c. Any tree with a DBH between 10 and 20 inches will require at least 2 new trees with a maximum 2-inch caliper size.
- d. Any tree with a DBH less than 10 inches will require at least 1 new tree with a maximum 2-inch caliper size.
- e. A tree replacement plan should be submitted for review and approval by city staff.

3. Review and Variance Process

Review – The review of the tree preservation plan will be included in the site plan review or construction plan review process for subdivisions, site plans, and grading plans.

Variance – If the applicant cannot meet the existing tree canopy preservation requirements justification presented to the City. The Engineering Director and the Planning Director, or their designees, will determine if any hardships justify not meeting the existing canopy preservation standards. If the Existing Tree Canopy preservation cannot be meet the Future Tree Canopy requirements would still be enforced. Any variances for tree protection would be required to be granted by the Board of Zoning Appeals unless a Tree Board is created. Once created, the Tree Board shall be the regulating authority for all tree protection variances.

14.505. Open Space

A. Intent

The intent of this section is to ensure that adequate, connected landscaped areas and usable open spaces are provided in all residential zoning districts. The ultimate goal is to have future growth and development take place within a high-quality, inviting, and vibrant public realm. Usable open spaces are intended to form the public face of each zoning district, providing strong links within the zoning districts and facilitating connections among zoning districts.

B. Applicability

The standards in this section apply to (i) subdivisions creating 20 or more lots and 500 linear feet or more of public/private road or (ii) final site plans containing 8 or more units and over 1 acre of total land area, unless otherwise specified within this section.

Usable Open Space is defined as land on a developed site that is set aside, dedicated, designated, or reserved for active or passive recreation for the use and enjoyment of owners, occupants, and visitors.

- a. Active Recreation: Outdoor recreational activities, such as organized sports and playground activities.
- b. Passive Recreation: Outdoor recreational activities that involve a lower level of activity such as walking, running, cycling, nature observation and picnicking.

C. Purpose

The purpose of usable open space is to provide outdoor areas for passive and active uses to meet the needs of the anticipated residents, tenants, employees, customers and visitors of a property, and to enhance the environment of a development or building. This usable open space forms the basic public realm framework around which the district developments and buildings are formed.

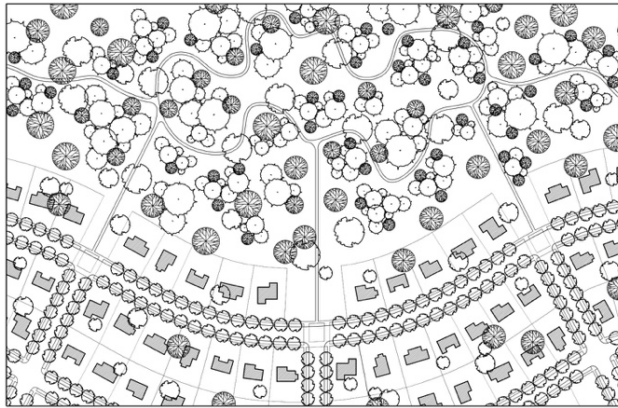
D. Types of Open Spaces

1. Parks, Greens, Greenway Trails and Squares

These usable open spaces are typically open to or dedicated for public use:

- a. A park is a natural preserve that provides both active and passive recreation. While it is available for unstructured recreation, it may also contain recreation facilities as individual programmatic elements.

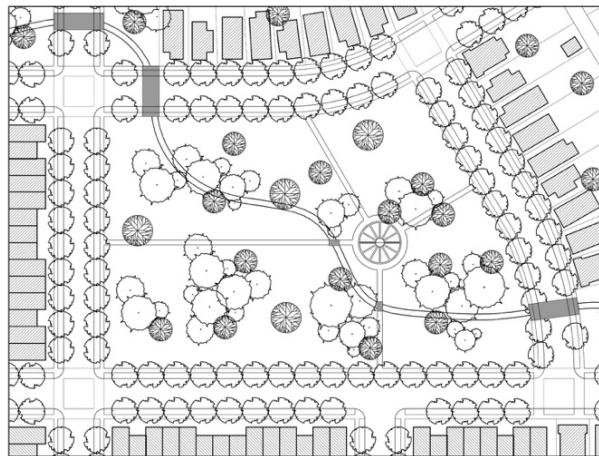
Figure 14.505-1: Park Illustration



Parks shall range in size from 5 acres to 10 acres.

- b. A green is an informal usable open space, available for unstructured recreation. A green may be spatially defined by landscaping or surrounded by buildings. This open space type should be centrally located in a development.

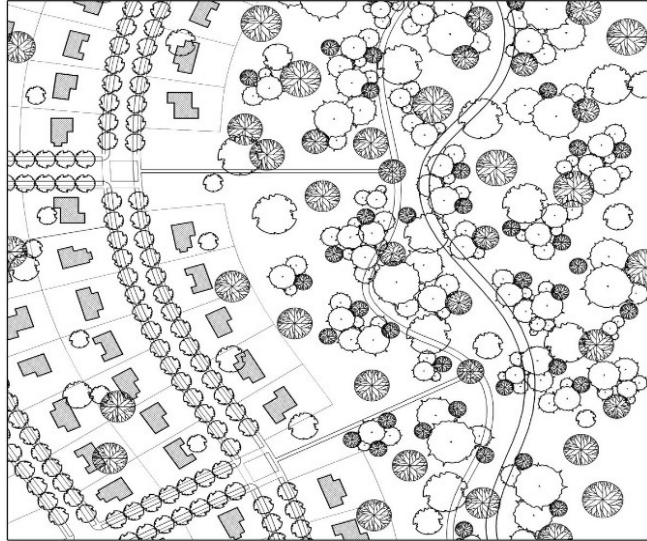
Figure 14.505-2: Green Illustration



Greens shall range in size from 1/8 acre to 5 acres.

- c. A greenway trail is a linear usable open space that connects parks, greens, and squares within and between districts. It may accommodate cyclists, or pedestrians or both and shall be built compliant to ADA standards.
- Trail segments indicated on adopted City Plans such as the City's Park and Trail master plan and Pedestrian Priorities Plan or near existing public trails shall coordinate with the City on providing public access to the new greenway trail segments.

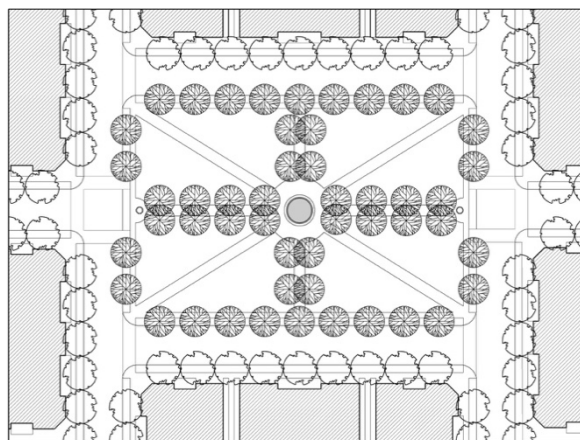
Figure 14.505-3 Greenway Trail Illustration



Greenway trails shall consist of a minimum 10-foot-wide path within a minimum 20-foot wide access easement.

- d. Squares typically represent the “heart” of a community or development. Squares are formally arranged, spatially defined by buildings, and located at the intersection of important streets within a community. A square should feel like the core public social space in a neighborhood. It should offer space and amenities for social gatherings, crowds, and events as well as public spaces to facilitate brief social encounters between neighbors and friends. A square should tell the story of the surrounding neighborhood and feature unique civic services. This open space type should be centrally located in a development.

Figure 14.505-4: Square Illustration



Squares shall range in size from 1/2 acre to 3 acres.

- e. Pocket Parks are small parks, often located in compact, dense neighborhoods, that provide an opportunity for local residents to relax outdoors and connect with nature. This open space type shall be a

minimum of 2,000 square feet, be directly adjacent to a public right-of-way or other usable open space, and occupy space left between buildings and streets. Buildings shall not front on this open space type unless it is placed directly between the building and a street.

2. Recreation Facilities

For the purposes of this section, the term "recreation facilities" means:

- a. Active play facilities (including but not limited to tennis courts, basketball courts, swimming pools, playgrounds, baseball/softball diamonds or volleyball courts).
- b. Passive amenities (including but not limited to walking trails, picnic shelters, gazebos, and similar passive recreation amenities).
- c. Proposed recreation facilities shall be defined on the preliminary plat of a subdivision or site plan and shall be demonstrated appropriate to the intended demographics of the subdivision location.

3. Preserve

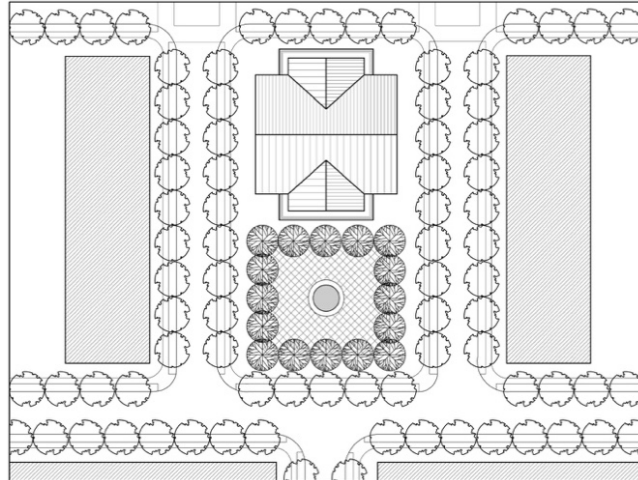
Open Space areas intended for preservation include riparian areas, wetlands, wildlife corridors, steep slopes, floodplains, cedar glades, lakes, natural ponds, streams, rivers, etc. Preserve areas shall be visible, open, and accessible to visitors, residents, and occupants to the greatest extent practical to qualify as Usable Open Space.

4. Outdoor Garden, Landscape Courtyard, or Plaza

These spaces shall be designed for the use of the occupants of a building or group of buildings. Seating and other elements encouraging use and occupation shall be included in its design, and it should form an integral part of the circulation pattern within the overall project. Outdoor dining or similar elements associated with retail uses shall be considered within this open space type.

- a. Outdoor Garden: A landscaped open space, located in the interior of a single block or consolidated block with limited direct street frontage.
- b. Landscaped Courtyard: A mostly landscaped usable open space of intimate scale, open to a public street and located to provide maximum sunlight during the day.
- c. Plaza: A predominantly hard-surfaced public gathering place with usable open space infrastructure including shading, lighting, seating, cycling racks and waste receptacles.

Figure 14.505-5: Outdoor Garden, Landscaped Courtyard, or Plaza



Outdoor Gardens, Landscaped Courtyards, and Plazas vary greatly in size based on function, but are generally between 1/8 acre and 2 acres.

E. Minimum Requirements for Usable Open Space

CHAPTER 6 TABLE 14.806-1: OPEN SPACE MATRIX

Zoning District	Total Usable Open Space Requirement	Parks, Greens, or Squares Minims
	(% of gross land area/sq. ft.)	
RPO, DXU, TOD	no requirement	no requirement
RS20	10%	2%
RS12, RS9, RD9	15%	4%
All other districts when being used for residential	20%	6%

F. Design Standards for Privately Owned Usable Open Spaces

Open spaces support district building goals such as creating landmarks, providing a civic setting for public life, framing view corridors, and marking important locations. These usable open spaces are places of retreat, relaxation and recreation that contribute to the health and well-being of residents and visitors. They also help form district urban character, create a sense of place, and become a setting for a variety of uses. Fulfillment of these objectives should become the design framework for developing usable open space.

Usable Open Space areas shall meet the following design standards:

1. Visibility: Visibility into and throughout usable open space creates a sense of openness and safety. Usable open space shall be at a minimum 50% visible

when viewed from any adjacent street frontage or greenway trail.

2. Location: Where location is not dictated by site geography, usable open space shall be located in a location that is readily accessible and usable by residents and other users. Where possible, a portion of the usable open space should provide a focal point for the development. Developments containing 50 acres or more shall locate a park, green, or square at or near the centers of every 50 acres developed for residential use. These usable open spaces should be designed to serve as central gathering points for residents within the development.
3. Hours of Access: By default, all privately owned public plazas are open to the public 24 hours throughout the year. Nighttime closing of public plazas is only permitted via municipal authorization. Where a nighttime closing has been authorized, the minimum hours of public access are generally:
 - a. April 15 to October 31: 7:00 a.m. – 10:00 p.m.
 - b. November 1 to April 14: 7:00 a.m. – 8:00 p.m.
4. Balanced Geographic Distribution: Every residential unit shall have easy access to usable open spaces and should be within a 0.25 mile walk of a usable open space unless the intent of this section is otherwise met as determined by the Planning Department.
5. Protection from the Elements: Usable Open Spaces must offer adequate shelter and shade. Integrate trees into the edges of the usable open spaces to add visual interest and to offer shade to the visitors and residents.
6. Configuration: Usable Open Spaces shall be compact and contiguous unless the land is used as a continuation of an existing trail, or specific natural or topographic features require a different configuration.
7. Adjacent to Existing or Planned Usable Open Space: Where open areas, trails, parks, or other public spaces are planned or exist adjacent to the development parcel, the usable open space shall, to the maximum extent practicable, be located to adjoin, extend, and enlarge the presently existing trail, park, or other usable open space area.
8. Prioritization: To the maximum extent practicable, the Usable Open Space should be located and organized to include, protect, or enhance as many of the following open areas and features as possible:
 - a. Natural features such as riparian areas, wetlands, wildlife corridors, steep slopes, and mature trees;
 - b. Water features such as streams, creeks, rivers, natural drainage areas, lakes, and natural ponds;
 - c. Landscaped buffers or visual transitions between different types or intensities of uses;
 - d. Natural or geologic hazard areas or soil conditions, such as wetlands and floodplains;
 - e. Habitat for endangered species; and areas that accommodate multiple

compatible usable open space uses rather than a single use.

9. Boundaries

- a. Help define boundaries of usable open space by providing clear transitions between Usable Open Spaces typologies.
- b. Use benches, seating, plazas, or other amenities to attract people and establish clear edges.
- c. Place trees and associated landscaping to define the transitions to and from Usable Open Space typologies.
- d. Design the Usable Open Space typologies so that they are easily maintained and that they clearly indicate their intended purpose.

10. Cultural Heritage

- a. Ensure compatibility of both design and function for Usable Open Space that is on, or adjacent to heritage properties.
- b. Ensure heritage resources are visible from usable open spaces.
- c. Highlight the uniqueness of local characteristics in terms of historical landforms, lost rivers, landscape characteristics, cultural landscapes, and landmarks.
- d. Where the history of the site is of public interest, locate amenities in the usable open space that refers to this history. This may include plaques, public art, or natural features.
- e. Where there is an advantage to locating a usable public space close to a heritage structure or resource, sightlines and pedestrian access should be key considerations.

11. Seating: The provision of abundant, well-designed, and comfortable seating is one of the most critical elements of usable open space design. Designers should carefully consider the variety, dimensions, location, and configuration of seating with the intent to maximize opportunities for comfortable and convenient seating that emphasizes social interaction.

12. Other Amenities: High-quality, durable amenities such as benches, movable chairs, lighting, bicycle racks and waste receptacles, can help strengthen the social role of usable open spaces. Usable Open spaces should incorporate elements that make the space comfortable:

- a. Include soft landscaping.
- b. Retain and incorporate existing trees and other natural features, where possible.
- c. Use trees and other plantings to create a comfortable microclimate, by providing shade and mitigating wind impacts.
- d. Ensure that trees and other plantings do not obstruct sightlines or impede the perception of safety.
- e. Arrange trees and other plantings to provide maximum effect and

efficiencies in maintenance and watering and consider methods to capture stormwater.

13. Provide well-designed lighting as it is an important feature that can enhance the safety of all usable open spaces and can help to deter unwanted activities while extending the usable hours of the usable open spaces.

a. Provide other amenities based on the following criteria:

1. The scale and program of the usable open space. For example, a small forecourt would not warrant the same provision of amenities that a large plaza would.
2. Design and location of amenities should ensure that the usable open spaces are not unnecessarily cluttered and do not obstruct pedestrian circulation.
3. Ensure amenities are of high-quality and durable materials, so that minimal maintenance is required.
4. Identify where additional amenities may be appropriate for the planned program of the space. The need for specific items such as play structures or dog fountains, will be dictated by the usable open space and building development programs.

14.506. Circulation and Mobility

A. Intent

The purpose of this section is to support the creation of a highly connected transportation system within the City that provides choice of transportation mode; promote walking and bicycling; connect neighborhoods to each other and to local destinations such as employment, schools, parks, and shopping centers; reduce vehicle miles of travel and travel times; improve air quality; reduce emergency response times; mitigate the traffic impacts of new development, and free up arterial capacity to better serve regional long-distance travel needs. These standards attempt to avoid the creation of large, isolated tracts without routes for through traffic or pedestrian and bicycle connections.

B. Applicability

The standards in this section apply to all subdivisions creating three or more lots, final site plans, or building permit requests in the City that are submitted after the effective date of this ordinance, unless otherwise specified within this section. Refer to Article III. of the Subdivision Regulations for additional street design standards.

C. Arrangement of Streets

New streets shall be arranged according to the following standards:

1. All streets shall be properly integrated with the existing and proposed system of streets and dedicated right-of-way as established in the Major Thoroughfare Plan;
2. All streets shall be properly designed to the context to population densities and to the pattern of existing and proposed land uses;

3. Local streets shall be laid out in a way that is compatible with the topography, provides for the efficient dispersal of internal traffic, facilitates stormwater drainage, meets engineering design standards and allows for integration of utility systems;
4. All private streets shall comply with all standards for public streets;
5. The use of an interconnected street system shall be used to broadly disperse internal traffic and provide maximum alternatives for access to property for both public and private movement; and
6. In non-residential and mixed-use developments, the streets and other access routes shall be planned in connection with the grouping of buildings, loading, and maneuvering areas, and location of walks and parking areas to minimize conflict of movement between the various types of traffic, including pedestrian traffic.

D. Transportation Network

All developments transportation networks shall provide sufficient level of connectivity within their sites and to adjacent properties to at least the minimum level required in the following sections. Modifications to these standards may be considered on a case-by-case basis at the sole discretion of the designated Planning and Engineering staff when hardships are demonstrated or when the intent of this section is otherwise met.

Internal Network

Within developments that are building public or private roads the following requirements shall be met.

Connectivity Coefficient

This section establishes the standards for a minimum level of vehicular connectivity in the roadway network design as determined by the connectivity coefficient.

This calculation assigns a numerical score in a range from 2 to 4 to determine the overall level of connectivity in the street network. Each intersection and terminus of a street being proposed within a plan shall receive one of the following scores.

- 4 – 4-way intersection
- 3 – 3-way intersection
- 1 – Dead-end street/cul-de-sac

The connectivity coefficient score for the development shall consist of the average score throughout.

The following may be factored in when determining the score of an individual intersection when these unique situations occur.

Alleys and rear parking areas: When either of these features access a roadway, they may be counted in the calculation only when they also provide access to another public street, private street, or access to the same street when the distance between the furthest access points is greater than 250 feet away, measured by the roadway centerline between the two access points. Intersections internal to an alley or parking network shall not be factored into

the calculation. A public access easement must be recorded to qualify.

Dead-end streets/cul-de-sacs with other connections: When a street segment ends but is otherwise connected to an alley or rear parking area as described above it will receive no score if one such connection is made or will be eligible for a score of 3 or 4 depending on the number of qualifying alleys or rear parking areas it connects to. A public access easement must be recorded for such connections to qualify.

One-way streets: When one-way streets are included in the calculation they shall count for half their typical value and be counted only at the intersection which provides access.

Special exceptions: When special exceptions are made due to the presence of any feature listed later in this section these may be factored into calculating a score.

Minimum Connectivity Coefficient

Development Type (District)	Min Coefficient
Residential (RS20, RS12, RS9, RS6, RD9)	3.00
Residential/Mixed-use/Commercial (RM6, RMH, RXH, CXU, RPI, CMO, CS)	3.25
Residential/Mixed-use/Commercial (DXU, TOD)	3.50
Commercial (CMO, CS, CI)	3.00
Industrial (IP, IL, IH)	2.75
<i>Exempt Districts (RPO, UC, CF)</i>	

Dead-end/cul-de-sac streets

Permanent dead-end/cul-de-sac streets shall not exceed 500 feet in length. Unless shown to be impractical, a bicycle and pedestrian path shall extend from all dead-end streets through the block to opposing street block face.

Temporary dead-end/cul-de-sac streets

When future connection stubs are made but the improved road segment exceeds 150 feet in length a fire truck turn around must be provided until the connection is made. This temporary turnaround shall be either on an open space lot, integrated into a community facility (such as a mail kiosk, trail head, or amenity area), or be removed prior to a building permit being issued for a buildable lot.

Bicycle and Pedestrian Connectivity

All blocks that exceed 600 feet in length along any block face shall provide a minimum 8 foot wide (10 foot wide if part of a greenway system) paved path for bicycle and pedestrian use that shall extend through to the opposing street block face at a rate not less than 1 per 600 feet.

All blocks that exceed 1,200 feet in length shall provide a mid-block street crossing except where prohibited by the City Traffic Engineer. Alternative solutions shall then

be required for review to meet the intent of this requirement.

See Bicycle Circulation and Pedestrian Circulation sections of this chapter for further requirements.

External Connections

All developments shall follow requirements for external connectivity as described in this section. Connectivity required in this section shall serve both vehicular and non-vehicular users. The approval of exact connection locations shall be at the sole discretion of the designated Planning and Engineering staff.

Frequency of External Connections

This section establishes the standards for a minimum level of connectivity in the transportation network design to adjacent properties, the existing and planned road network.

Road connections: When new public or private streets are being built as part of a development the network shall connect to adjacent properties and/or existing roadways at a rate of not less than 1 per ¼ mile of the development's boundaries.

Dispersion of connections: When 4 or more connections are required a minimum of one connection shall be placed generally in each cardinal direction unless a hardship is demonstrated.

External connections specific to residential development:

- Any residential development of greater than 75 units shall include at least two access points. The second access may consist of a future access or a stub street.
- Any residential development of greater than 124 units shall include at least two access points. Future access points or stub streets shall not be considered part of the two access points.
- Residential developments of 200 or more units shall provide three separate access points. An additional access point shall be provided for every 100 units over 200 units.
- Development(s) of over 200 units shall have at least two distinct paths to collector or arterial roads. If the connections are to the same collector or arterial road they shall be spaced no less than 400 feet apart, unless a further separation is required by the City Traffic Engineer.

Cross-access connections: When non-residential or residential developments of greater than 8 units are not building new roadways a minimum of 1 cross access connection to an adjacent property is needed. In addition, all adjacent properties zoned for or being used as commercial or mixed-use shall be provided a cross-access connection. Cross-access connections shall consist of a minimum 20-foot unobstructed paved drive in a dedicated public access easement. The public access easement shall be recorded prior to final plan approval.

- When cross-access for vehicles is deemed impractical by the Planning Department on the basis of topography, the presence of natural features, or vehicular safety factors, the requirement for cross-access may be waived. If a

waiver is granted, the Planning Commission should consider requiring bicycle and pedestrian connections between adjacent developments or land uses, either at the street frontage or internal within the site.

Existing connections: When public right of way, right of way stubs, or other points of connection (approved, dedicated, improved, or otherwise) adjoin the subject property all shall be connected to and extend throughout the site.

Planned connections: When connections of roadways, sidewalks, or trails to and through a property have been studied and included in an adopted transportation plan (including the Major Throughfare Plan, Pedestrian Priorities Plan, Parks Master Plan, or any other adopted transportation plan) shall be constructed meeting the intent of the included segment on the adopted plan.

Special exceptions

At the discretion of the Planning Department, exceptions to the standards in this section may be made when one of the following hardships prohibits compliance:

- A railroad track would need to be crossed.
- The Interstate would need to be crossed.
- The airport land would need to be crossed.
- A stream would need to be crossed that is an order number 4 stream or higher. A stream order map is available from the Planning Department. Crossing Order 4 stream requires 1/2 the number of external connections needed, and Order 5 require 1/3 the external connections needed for the length of that feature.
 - The Planning Commission can require stream crossings for any stream as required in the Major Thoroughfare Plan or as needed for a pressing transportation concern.
- A topographic feature that would cause the slope of a street to be greater than 10%.
- An existing development pattern (including cemeteries) prevents the reasonable extension of a road. If this is the case, additional pedestrian connections or a pocket park should be required based on the cost of the land. Development patterns will be reviewed on a case-by-case basis.
- Anywhere the Subdivision Regulations, South Hartmann Access Management Plan, SR 109 Access Management Plan, or on state routes where TDOT separation requirements otherwise limits access.

E. Pedestrian Circulation

Planning for safe, comfortable, and pleasant movement of pedestrians in and through sites on sidewalks is important for the health of the City of Lebanon. Sidewalks can add value to the city by connecting people in places where they can invest locally, share ideas, and build community. The value added by having sidewalks can be different from location to location. A context appropriate evaluation of sidewalk needs is an effective way to add value to the city. Circulation Plans shall address pedestrian

circulation in accordance with the following standards:

1. All commercial, industrial, multifamily, and mixed-use development shall provide a network of onsite pedestrian walkways to and between the following areas:
 - a. Entrances to each building on the site, including pad site buildings.
 - b. Public sidewalks or walkways on adjacent properties and along public right-of-way that extend to the boundaries shared with the subject development.
 - c. Adjacent public transit station areas, transit stops, park and ride facilities, or other transit facilities.
 - d. Adjacent parks, trails, schools, and recreation centers; and
 - e. Adjacent non-residential development.
2. Dimensional requirements for sidewalks are specified in the district regulations (see Chapter 3).
3. Sidewalks Required: Sidewalks or payment-in-lieu of sidewalk construction shall be required for all new developments.
 - a. All new sidewalks shall require separation from vehicle and bike traffic. The separation from vehicle traffic can be accomplished by parked cars, street trees, decorative poles or bollards. An alternative solution may be considered that accomplishes the same purpose. Separation from bike traffic may be accomplished by any of the means of separation for vehicles as well as a separate lane of at least 5 feet of width, plastic dividers or a grass or landscaped strip.
 - b. All new sidewalks shall require summertime shade. The shade shall be located on average every 40 feet. To be considered shade the area covered by shade shall be at least 10 feet wide at the sidewalk. This can be accomplished using street trees. If street trees are not used, then some other form of shade provided by a building, canopy or some other object will need to be provided. The structure shall be oriented so it will block the sun to the south.
4. Payment-in-Lieu of Sidewalks
 - a. All developments, all new residential units including single family homes, minor site plans, and developments in special overlays that allow for Staff approval, shall be evaluated for building sidewalks. An applicant may ask the Planning Commission for payment-in-lieu of sidewalks.
 - b. For all major plats or major site plans shall be evaluated for building sidewalks.
 - c. If the Planning Commission approves payment-in-lieu of sidewalk construction, the payment shall be at a rate per square foot equal to 1.1 times the most recent annual [TDOT Statewide Average Unit Price](#) for 4" concrete sidewalk (Item Number 701-01.01) for the required sidewalk width along the distance of the street frontage that would have otherwise required sidewalk construction. Neither the Planning Commission nor the Planning

Department are authorized to waive the payment-in-lieu of sidewalks. Waiving of the payment-in-lieu of sidewalk construction shall be approved only by action of the City Council. The money collected from payments in-lieu-of sidewalks shall go into a fund that can be used for sidewalks, sidewalk maintenance, or trails.

- d. The evaluation for building sidewalks will consider the following factors:
 - i. To determine if sidewalks are required. Is there an origin and a destination for a sidewalk if it is constructed?
 - (1) Is there an existing or eminent sidewalk network that connects to the subject project.
 - (2) Is there an existing or eminent trail system to the subject project.
 - (3) Is there an existing or eminent destination adjacent to the subject project (i.e. Schools, commercial or government buildings).
 - ii. Is the subject project in the current phase or in proposed future phases creating its own origins and destination (i.e. subdivisions or multi-phase commercial or industrial projects).
 - iii. Is the sidewalk required because of the development; is there a nexus between the sidewalk and the development.
 - iv. Is the sidewalk proportional to the development.
- e. The evaluation for granting payment-in-lieu of sidewalks will consider the following factors.
 - i. All the evaluations for building sidewalks listed in the previous section (d).
 - ii. Has another public or private project already built a sidewalk that benefits this project but does not provide a direct adjacent sidewalk. For example, if a property across the street is developed with sidewalks (benefit) but none of the adjacent properties on the same side of the street have sidewalks with no direct adjacent sidewalk.
 - iii. Has a public or private project already been approved or funded to build the sidewalk that would otherwise have been built with the subject project.
5. Circulation Plans for projects pursuing payment in-lieu-of sidewalk construction shall provide justification for not providing the sidewalk, such as:
 - a. Topography;
 - b. Absence of surrounding uses that may generate pedestrian activity, such as schools, major employers, transit stops, government offices, hotels, and public housing;
 - c. Lack of intensity of surrounding residential development; and
 - d. Lack of proximate sidewalk infrastructure to tie into.
6. Sidewalk Standards: Sidewalks shall comply with the following requirements:

- a. Shall be constructed in accordance with ADA requirements;
- b. Pedestrian paths or trails for internal use or connecting to a larger trail system shall be at least 5 feet wide. This is not intended to limit dirt paths or trails when and ADA required is provided elsewhere;
- c. All sidewalks shall be unobstructed, as defined by the Americans for Disabilities Act (1990, as amended).
- d. Standards for sidewalk layouts and width are set out in the district regulations.
- e. Shall be distinguishable from traffic lanes by painted markings, pavement material, texture, or raised in elevation (striped asphalt does not count). Bollards can also be used to separate pedestrian from vehicular circulation; and
- f. Shall have adequate lighting for security and safety.

F. Bicycle Circulation and Parking

- 1. General on-street bike facilitation:
 - a. Use of bicycles shall be promoted in mixed-use zoning districts and other compact areas of the City.
 - b. Community planning efforts will examine the desirability of integrating bicycle facilities such as dedicated bike lanes, multi-use paths and trails into their transportation planning components.
 - c. Greenfield developments that seek to promote transportation mode choice will examine the feasibility of providing bicycle infrastructure.
 - d. All greenfield projects or redevelopment projects greater than 20 acres in total area shall include bicycle networks. The extent and capacity of the network shall be sized to reflect the anticipated demand of future residents of the area and the feasibility of connecting to bicycle infrastructure in adjacent areas. The design options for bicycle facilities are addressed under article e. below.
 - e. Where bicycle circulation is appropriate and desired, a number of options can be used to accommodate cyclists safely. One of the following options shall be used for design of bicycle mobility networks. All the following options can be used in new subdivisions as well as retrofitting of existing public and private right-of-way, except the last one, which is generally considered appropriate for new development only:
 - i. New separated bicycle lane on a local street delineated by striping.
 - ii. New separated bicycle lane on a local or collector street delineated by striping, with a buffer strip between the bicycle lane and the motor vehicle lane that is delineated by a hatch striping.
 - iii. New separated bicycle lane on a local or collector street delineated by striping and located between the outside-most motor vehicle lane and the curb.

- iv. New separated bicycle lane on a local, collector or arterial street delineated by fixed or flexible bollards.
 - v. New separate bicycle lane or multi-use trail between the curb and the sidewalk, often with planting strip between the bicycle lane and the curb.
 6. New separate bicycle lane network that is located outside the street network (separate network through blocks, parks and other usable open spaces).
 7. Outside lane width (pavement shoulder) shall be incorporated into the design of all new and/or improved arterial streets. Bicycle lanes and/or wide outside lanes shall be incorporated in the design of all minor collectors. On local streets, low traffic speeds and volumes allow bicyclists and motorists to safely share the road. Sidewalks are not acceptable as substitutes for bike lanes.
8. Bicycle Parking Standards:
 - a. Bicycle parking facilities shall be provided as part of any new construction, changes of use, or substantial improvements for the following:
 - i. Multi-dwelling unit developments of four (4) dwelling units or more;
 - ii. Development within business, industrial, municipal community facilities, and any special use or special design districts;
 - iii. Transit oriented development, transit transfer stations, park-and-ride lots; and
 - iv. New development that are within 1,000 feet of a greenway, recreational trail, cross state bike route, or other regional bicycle route.
 - b. Bicycle parking facilities as part of any new construction, changes of use, or substantial improvements, shall be provided in the ratio of 1 bicycle parking place for every 25 parking spaces.
 - c. When provided, bicycle parking spaces shall:
 - i. Provide a convenient place to lock a bicycle, and shall be at least six (6) feet long, two (2) feet wide, and shall provide at least seven (7) feet of vertical clearance, unless a bicycle locker is provided;
 - ii. Provide a secure and appropriate bar or similar surface area to which most bicycle locks may be attached;
 - iii. Be capable of supporting the bicycle frame in an upright position and be securely anchored to a supporting surface;
 - iv. Not interfere with pedestrian circulation and shall be separated from automobile parking;
 - v. Located within view of building entrances or in view of windows (visible from the interior of the building), but in no case shall such parking be located greater than 50 feet from the building entrance;
 - vi. When provided, bicycle parking shall be accessible by safe and

- convenient connections to and from the street, sidewalk, trail or other public or private way which accommodates such traffic;
- vii. Be located at least three (3) feet from any wall or obstruction; and
- viii. Be illuminated for safety and nighttime use.
- ix. A garage can be counted as bike parking in a residential development.

14.507. Building Design

A. Intent

The intent of this section is to establish building design standards to help shape the appearance and form of Lebanon and promote high quality development that will endure for future generations.

B. Applicability

The standards in this section apply to all subdivisions, as well as final site plans or building permit requests for single-family, two-family, multifamily, and non-residential development in the City that are submitted after the effective date of this ordinance. The standards in this section do not apply to development in the Historic Preservation Overlay District (HPD) or development otherwise exempted herein. Buildings in Specific Plan districts must comply with the building standards in effect at the time the development application is submitted.

C. Transitional Provisions

1. Existing Development: Any existing building or other structure legally established prior to the effective date of this ordinance that does not comply with any provision of these specific regulations is legally non-conforming pursuant to Chapter 7.
2. New Development: New buildings must be constructed or developed in accordance with the applicable provisions of this section.
3. Additions: An addition to an existing building or buildings, excluding single-family and two-family, must be constructed or developed in accordance with the applicable provisions of this section if any of the following criteria are met:
4. The addition fronts a public street, private street, or usable open space; or
 - a. The gross floor area of the addition exceeds 25% of the footprint of the existing building or structure being modified.
5. Modifications:
 - a. A modification to an existing element of a building or buildings, excluding single-family and two-family, must comply with the applicable provisions of this section if all the following criteria are met:
 - i. The building element is regulated by this section; and
6. The proposed modification fronts a public street, private street, or usable open space.
 - a. Only modifications that meet the above criteria are required to comply with

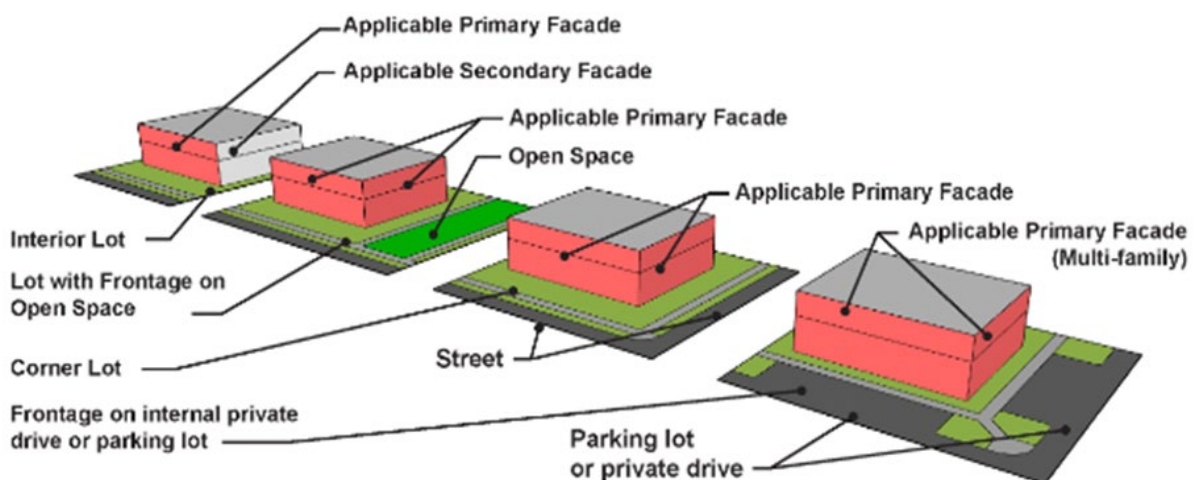
the provisions of this section. Modifications shall not force compliance of the whole building. The extent of the modification shall be taken into account as a factor in determining the requirement to meet the provisions of this section.

7. Repair and Maintenance: Routine repairs and maintenance of an existing building or site are permitted and are not required to comply with the provisions of this section. If elements have deteriorated beyond the point where they can be retained, they shall be replaced in kind. Elements that are not replaced in kind shall be considered Modifications and are subject to this section.
8. Previously Issued Permits and Pending Applications: Previously issued permits and pending applications will be processed in accordance with and decided pursuant to the law existing on the date the application was filed.

D. Building Materials

1. Applicability: Building material standards apply to the following:
2. Primary Façades, including façades of buildings that face a public street, private street, or usable open space. The standards also apply, in the case of some multifamily residential buildings, to the façades of buildings that face a parking lot or private drive, where those façades are the primary façades;
 - a. Side Façades of buildings (Secondary Façades); and
 - b. Any building façade that faces property with a residential zoning designation. For the purposes of this standard limited access highways shall not be considered a street.

Figure 14.507-1 Material Applicability



3. Material List: Materials for building Façades shall be selected from Table 14.507-2 according to the requirements relative to zoning designations in this section.

Table 14.507-2: Permitted Materials

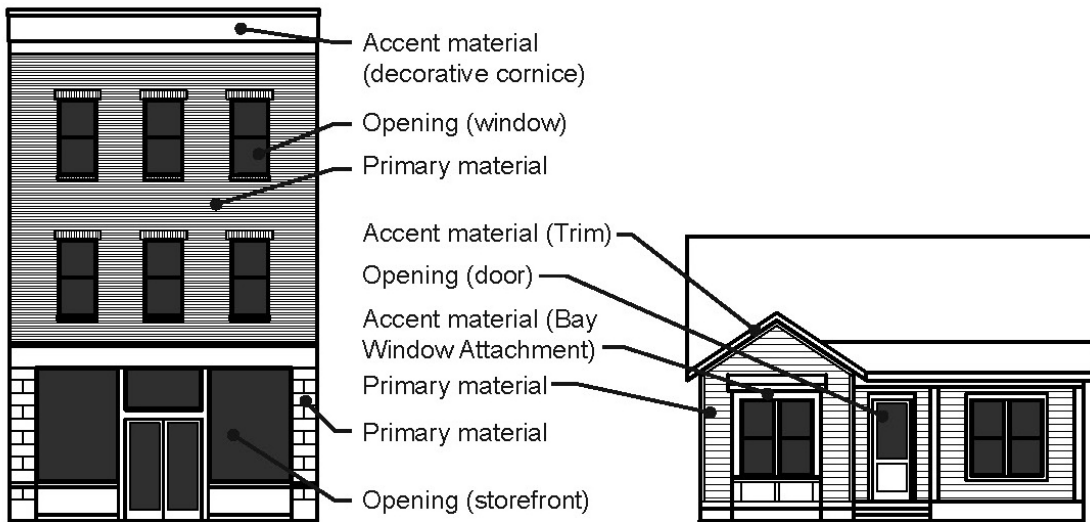
BUILDING MATERIALS	LIST 1	LIST 2	LIST 3	LIST 4
Masonry				
Brick	✓	✓	✓	✓
Stone	✓	✓	✓	✓
Concrete block, split-faced/fluted			✓	✓
Concrete block				✓
Cast stone	✓	✓	✓	✓
Manufactured stone veneer siding			✓	✓
Stucco (authentic)	✓	✓	✓	✓
Metals				
Architectural Metal Panels			✓	✓
Metal siding				✓
Wood				
Wood siding/shingles/trim		✓	✓	✓
Other Materials				
Concrete, finished			✓	✓
Concrete, unfinished				✓
Fiber cement siding/shingles/trim		✓	✓	✓
Fiber cement panels				✓
Composite siding		✓	✓	✓
Composite panels				✓
EIFS (2ft above finished grade)	✓	✓	✓	✓

Table 14.507-2b: Single-Family and Two-Family Residential Permitted Materials

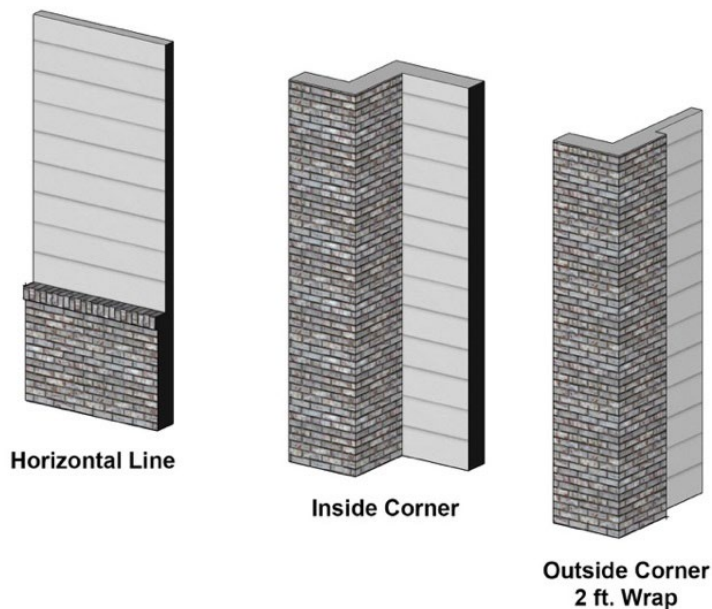
BUILDING MATERIALS	LISTS		
	1	2	3
Brick	✓	✓	✓
Stone	✓	✓	✓
Cast Stone	✓	✓	✓
Stucco (authentic)	✓	✓	✓
Wood siding/shingles/trim	✓	✓	✓
Fiber Cement siding/shingles/trim	✓	✓	✓
Composite siding	✓	✓	✓
EIFS (upper stories only)	✓	✓	✓
Manufactured stone veneer siding	✓	✓	✓
Architectural Metal panel		✓	✓
Concrete (finished)		✓	✓
Fiber cement panel		✓	✓
Composite panel			✓
Concrete block (split faced/fluted)			✓
Concrete block			✓
Concrete (unfinished)			✓
Metal siding			✓
<i>Any other legal building material</i>			✓

4. **Alternative Materials:** The Planning Commission may approve an alternative material not listed in Table 14.507-1 if it determines that the alternative material is similar to other permitted materials with regard to durability, quality, and appearance.
5. **Multiple Materials:** Building façades shall be built of no more than two primary materials (see Figure 14.507-3). Façades shall only change material along a horizontal line; at inside corners; or outside corners where the materials wrap the corner a minimum of two (2) feet (see Figure 14.507-4)
6. **Foundation Material:** Concrete block (split faced/fluted) and concrete block may be used if the building foundation.

14.507-3 Primary and Secondary Materials



14.507-4 Material Change Diagram



D. Deviations from Standards

1. Deviations from the design standards of this section may only be granted by the Planning Department as part of the building permit review process, when such deviations will enhance the appearance and design of development subject to review.
2. A request for deviations shall be submitted by the applicant in writing at the time of the initial filing of the application. The request shall state the deviation(s) requested; the grounds for the request; and the facts upon which the applicant is relying.
3. The Planning Department may approve the request if it determines the deviation(s) will not be detrimental to the health, safety, and welfare of the public; the grounds for the request are unique to the project; the deviations are necessary to achieve the design intent of the project; and the deviations are not contrary to the Comprehensive Plan.
4. The Planning Department may impose reasonable conditions or restrictions in granting deviation requests to protect the health, safety, and welfare of the public and meet the purposes of this ordinance.

14.508. Outdoor Lighting

A. Intent

The intent of these standards is to promote safety and security, to reduce off-site impacts of outdoor lighting, to prevent the reflection and glare of light in a manner which creates a nuisance or safety hazard to drivers, pedestrians, and neighboring land uses, and to promote energy efficiency, while preserving the character of the City of Lebanon.

B. Applicability

Except as provided in this section, all public and private outdoor lighting shall comply with the following standards.

C. Standards

1. Luminaire Shielding: Any luminaire emitting more than 1800 lumens shall be fully shielded so as to produce no light above a horizontal plane through the lowest direct light-emitting part of the luminaire.
2. Luminaire Height: Any luminaire shall have a maximum height of twenty-five (25) feet including pedestal. In Mixed Use Districts, the maximum height shall be fifteen (15) feet including pedestal.
3. All flood or spotlights and all wall pack lights shall be shielded at an angle so the light is not shining directly on any public right-of-way (including sidewalks), streets or residential property. The luminaire shall be redirected, or its light output reduced or shielded, as necessary to eliminate such conditions.
4. Lamp Type: Any luminaire used to illuminate a public area such as a street or walkway shall utilize an energy efficient lamp such as a low-pressure sodium lamp, high pressure sodium lamp metal halide lamp, solar powered,

or LED. Mercury vapor lamps are prohibited.

5. Luminaires in Public Areas: Luminaires used in public areas such as roadway lighting, parking lots and for exterior building illumination shall be designed to provide the minimum illumination recommended by the IESNA in the most current edition of the IESNA Lighting Handbook.
6. Parking Lot Lighting: Any lighting used to illuminate off-street parking areas shall be directed away from property in any residential district. The lighting shall not exceed 0.5-foot candle at or above any property boundary line.
7. Timers, Dimmers, Motion-sensors: Whenever practicable, outdoor lighting installations shall include timers, dimmers, and/or motion-sensors to reduce overall energy consumption and eliminate unneeded lighting, particularly after 11 p.m.
8. Special Lighting: Moving, fluttering, blinking, or flashing, neon or tubular lights or signs shall not be permitted, except in storefront displays and as temporary seasonal holiday decorations.
9. Signs: Signs may be illuminated only by continuous direct white light with illumination confined to the area of the sign and directed downward.
10. Gas Station Canopy-mounted Luminaires: Luminaires mounted on a gas station canopy shall be recessed in the ceiling of the canopy so that the lens cover is recessed or mounted flush with the ceiling of the canopy and fully shielded. Luminaires shall not be mounted on the sides or top of the canopy, and the sides or fascia of the canopy shall not be illuminated.
11. Rope lights and similar installations are prohibited.

D. Exemptions

The following luminaires are exempt from the standards in this section:

1. Luminaires used for public-roadway illumination may be installed at a maximum height of 25 feet and may be positioned at that height up to the edge of any bordering property.
2. All temporary emergency lighting needed by the police, fire or other emergency services, as well as all vehicular luminaires.
3. All hazard warning luminaires required by federal regulatory agencies.
4. Luminaires used primarily for signal illumination may be mounted at any height required to ensure roadway safety, regardless of lumen rating.
5. Seasonal holiday lighting and illumination of the American and state flags, providing that such lighting does not produce glare on roadways and neighboring residential properties.
6. The illumination of outdoor sports fields, courts, and performance areas, providing that the luminaires include a glare control package, are shielded or aimed to illuminate the field, court, or performance area, and illumination does not continue for longer than one (1) hour after the event has ended.
7. Installations existing prior to the effective date of this ordinance.

E. Temporary Lighting

Any temporary outdoor lighting for construction or other purposes that conforms to the requirements of this article shall be allowed. Non-conforming temporary outdoor lighting may be permitted by the Engineering and Planning Staff after considering:

1. The public and/or private benefits that will result from the temporary lighting.
2. Any annoyance or safety problems that may result from the use of the temporary lighting.
3. The duration of the temporary non-conforming lighting.

14.509. Wireless Telecommunications Towers and Antennas

Safety considerations concerning the citizens of the City of Lebanon dictate that any communication tower, mast, or aerial located within any residential zoning district or Special District shall be located so that the base of said communication tower, mast, or aerial is at least as far from the nearest property line as the communication tower, mast, or aerial is tall, plus ten (10) percent. In the residential and special zoning districts, communication towers, masts, and aerials shall in all cases be considered principal structures. Such structures shall be reviewed by the Planning Commission for compatibility.

14.510. Conservation Subdivision Design Standards

Conservation Subdivisions shall comply with the following standards. Any design standard not covered here shall comply with the standards for the zoning district of the subject property.

A. Building Materials

1. Minimum of two materials but no more than three on any exterior façade.
2. No single building material may compose more than 75% of any exterior façade.

B. Underground Utilities Required

1. All private utilities, including service connections for cable TV and the like, shall be installed underground.
2. All electrical service connections shall be installed underground and shall be approved by Middle Tennessee Electric (or the electrical provider). Each housing unit shall be metered individually. If underground electric is not approved by Middle Tennessee Electric (or the electrical provider) alternates maybe considered.

C. Parking

Parking shall be reviewed on a case-by-case basis.

14.511. Off-Street Parking and Loading Requirements

A. Intent

It is the intent of this section to ensure the adequate provision of off-street parking

facilities for specific land uses within the City. These standards are also intended to ensure that parking areas are designed to be safe, accessible, convenient, and attractive. Off-street parking and loading areas should (1) reduce traffic congestion, hazards and pedestrian and vehicular conflicts and (2) protect neighborhoods from the effects of vehicular noise and traffic generated by more intense land uses and districts.

B. Applicability

1. Each use, including a change or expansion of a use or structure, except as otherwise provided for within this Ordinance shall have appropriately maintained off-street parking and loading areas in compliance with the provisions of this chapter.
2. In selected zoning districts, there are no off-street parking requirements for projects below a certain size threshold, as specified in the district regulations.

C. General Provisions

1. In all districts, accessory off-street parking, open or enclosed, shall be provided in conformity with the requirements set forth in this section for all uses. In addition, all other applicable requirements of this section shall apply as a condition precedent to the use of the development.
2. Parking requirement calculations that result in a fractional amount may be rounded down to the nearest whole number. For an enlargement or modification resulting in a net increase in the floor area or other applicable unit of measurement specified herein, the same requirements shall apply to the net increase in the floor area or other specified unit of measurement.
3. In the case of uses where the Board of Zoning Appeals is required to prescribe the number of parking spaces, it shall base its determination on recommendations from the Lebanon Planning Staff and such other factors as the traffic generation of the facilities, the time of operation of the facilities, their location, and other such factors that affect the need for off-street parking as required under the conditional use provisions.

D. Shared Parking

1. Planning Staff shall consider a shared parking plan for projects when uses are located near one another and have different peak parking demands and operating hours. The applicant shall submit a shared parking study and site plan. The Planning Department approval shall take into account the conclusions of the City's traffic engineer's review of the shared parking study and site plan.
2. In reviewing an application including shared parking, the following shall be considered:
3. Characteristics of each use and projected peak parking demand, including hours of operation; and
4. Potential reductions in vehicle movements afforded by multipurpose use of spaces by employees, customers or residents; and

5. Potential improvements in access, design, open space preservation and circulation afforded.

E. Off-Site Parking Requirements

1. Off-street parking space accessory to any permitted use may be located on a zone lot other than the same zone lot as the use to which the spaces are accessory, provided that:
 - a. The spaces are not located within a residential or agricultural district; and
 - b. The spaces are located to draw a minimum of vehicular traffic to and through streets having predominantly residential frontage; and
 - c. The spaces are located no farther than 1,000 feet from the main entrance of the use being served by the off-site parking; and
 - d. The spaces are in the same ownership as the use to which they are accessory, or a documented agreement has been executed with a third party to ensure the required number of spaces will remain available throughout the life of the use; and
 - e. The spaces conform to all applicable district regulations of the district in which they are located.

F. Off-Street Parking Requirements by Land Use Activity

Table 14.512-1. Off-Street Parking Requirements by Land Use Activity

Residential Activities	
<u>Permanent</u>	
Single-family detached dwellings	2 spaces per dwelling unit**
Two-family detached dwellings	2 spaces per dwelling unit**
Three-family detached dwellings	One space per dwelling unit
Semi-detached dwellings	One space per dwelling unit
Town Homes	One space per dwelling unit
Multifamily dwellings, one bedroom	0.75 spaces per unit
Multifamily dwellings, two or more bedrooms	One space per dwelling unit
Mobile Homes	1 space per mobile home
<u>Semi-Permanent</u>	
Boarding or rooming house, apartment hotel	0.5 space per unit
Dormitory	0.5 space for each 4 beds
<p>**The parking standard can be achieved by any one or combination of the following:</p> <ol style="list-style-type: none"> 1. Provide a driveway that is at least 35 feet long, from the back of sidewalk (or property line if no sidewalk is present or proposed), and at least 10 feet wide. 2. Place the garage entrance on the side or rear of the building (corner and double-loaded lots, excluding alley-loaded, shall also meet option 1). 3. Provide at least two parking spaces to the rear of the building. 	

4. Provide at least two dedicated off-site parking spaces within 300 feet of the subject property (measured by the shortest distance of sidewalk or paved trail).
 In addition, each unit needs to provide space for at least two additional parking spaces to be provided in the future on-site or built off-site upon development which shall be achieved by any one or combination of the following:

1. Designate space where two additional parking spaces to the side or rear of the building can be added on-site.
2. Provide at least two dedicated off-site parking spaces within 300 ft of the subject property (measured by the shortest distance of sidewalk or paved trail).

Community Facilities

Administrative	1 space for each 600 sq. ft. of gross floor area
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Community Assembly	1 space for each 10 seats or if no seats are used 5 for each 2000 sq. ft. Religious Activities
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Community Education

Kindergarten or Nursery	1 space for each 2 employees plus 1 space of overflow parking (unpaved) for each 8 students, teachers and employees
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Elementary and Middle Schools, grades 1-7	1 space for each 2 classrooms or 1 space for each 10 seats in the auditorium or 1 space of overflow parking (unpaved for each 8 students, teachers and employees, whichever is least
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High School, grades 8-12	4 spaces for each 2 classrooms or 1 space for each 10 seats in the auditorium or 1 space for each 8 students, teachers, and employees, whichever is least
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Vocational or Trade Schools	1 space for each 2,000 sq. ft. of gross floor area plus space for each 12 seats in any auditorium
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Cultural and Recreation Services

Art Galleries, libraries, museums, zoological and botanic gardens, planetariums and Aquariums	1 space for each 1600 sq. ft. of gross floor area
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Swimming pools	15 percent of capacity
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Parks, playgrounds and playfields	5 spaces for each acre of land devoted to recreation, plus 1 space for each 8 spectator seats
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Recreation centers and Gymnasiums	25 percent of the capacity, plus 1 space for each 4 employees Essential Services
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Extensive Impact

Airports, Air Cargo Terminals, Heliports or Aeronautical Devices	1 space for each 4 employees, plus 1 space for every 200 sq. ft. of gross floor area
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Correctional or Detention Institutions	1 space for each 40 employees, plus 1 space for each 2 patrol cars
--	--

Electricity Transmitting Facilities, Communication, Towers and Transmission Facilities	1 space minimum
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Railroad, Bus and Transit Terminals	1 space for each 200 sq. ft. of waiting room area
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Railroad Yards and Other Transportation Equipment, Marshalling and Storage Yards	1 space for each 4 employees
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Stadiums, Sports Arenas, Auditoriums and Bandstands	1 space for each 10 seats
Water and Sewage Treatment Plants	1 space for each 2 employees
All Other Activities	The board shall determine based upon the pertinent factors of the use
<u>Health Care Facilities</u>	
Centers for Observation, Rehabilitation, Convalescent Homes	1 space for each 8 beds, plus 1 space for each 2,000 sq. ft. of gross floor area
Hospitals	0.75 spaces for each bed
Medical or Dental Clinics	1 space for each 400 sq. ft.
Institutional Care	1 space for each 2 employees plus 1 space for each 6 occupants
<u>Intermediate Impact</u>	
Colleges, Universities and Junior Colleges	1 space for each 2,000 sq. ft. of gross floor area suited for academic purposes, plus 1 space for each 12 seats in an arena, auditorium or stadium on the same lot
All Other Activities	The board shall determine based upon the pertinent factors of the use
<u>Personal and Group Care Facilities</u>	
Associations for Physically or Mentally Disabled	1 space for each 2 employees, plus 1 space for each 3 beds
Day Care Centers	1 space for each 2 employees, plus 1 space for each 5 children
Nursing Homes	1 space for each 2 employees, plus 1 space for each 3 patients
<u>Senior Citizen Residential Centers</u>	
High-rise Apartments	0.375 spaces per unit
Detached or Low-rise Attached Units	0.5 spaces for each unit
Religious Facilities	1 space for each 12 seats in assembly rooms or halls
<u>Commercial Facilities</u>	
Adult Oriented Activities*	1 space for each 500 sq. ft. of gross floor area
Animal Care and Veterinarian Services*	1 space for each 500 sq. ft. of gross floor area
Automotive Services and Repair	1 space for each 2 employees, plus 2 spaces for each service bay
Oil Change Shops	1 space for the use, plus 1 space per oil change bay
Building Materials and Farm Equipment	1 space for each 2,000 sq. ft. of gross floor area, plus 1 space for each 2 employees
Consumer Repair Services*	1 space for each 500 sq. ft. of gross floor area
Construction Sales and Services*	1 space for each 2,000 sq. ft. of gross floor area
Convenience Commercial*	1 space for each 500 sq. ft. of gross floor area
<u>Minor Entertainment Services*</u>	

Art Galleries	1 space for each 1600 sq. ft. of gross floor area
Batting and Golf Ranges	To be determined by the Board
Bowling Alley	2.5 spaces for each alley or lane
Billiard Parlor	1 space for each 600 sq. ft. of gross floor area
Coin Operated Amusement Arcades	1 space for each 400 sq. ft. of gross floor area
Dance Halls, Studios, Schools and Skating Rinks	1 space for each 200 sq. ft. of gross floor area
Exhibition Halls and Auditoriums*	20 percent of capacity
Motion Picture and Legitimate Theater*	1 space for each 10 seats
Financial, Consultative and Administrative Services*	1 space for each 500 sq. ft. of gross floor area
Food and Beverage Services*	1 space for each 4 seats
Food Service Drive-in or Drive-Thru*	1 space for each 300 sq. ft. of gross floor area
General Business and Communications Services*	1 space for each 800 sq. ft. of gross floor area
<u>General Personal Services*</u>	
Funeral and Crematory Services	1 space for each 200 sq. ft. of gross floor area
With an Associated Chapel	1 space for each 8 seats
Health Club	1 space for each 300 sq. ft.
Self-Storage Facility	1 space for each 40 storage stalls, plus 1 space per managers residence
All Others	1 space for each 800 sq. ft. of gross floor area
General Retail Trade*	1 space for each 500 sq. ft. of gross floor area
Furniture Stores	1 space for each 1000 sq. ft. of gross floor area
Major Entertainment Services*	1 space for each 8 seats
Medical and Professional Services*	1 space for each 400 sq. ft. of gross floor area
Hotel and Motel*	1 space for each 2 rental rooms, plus 1 space for each 4 employees
Transportation and Warehousing	1 space for each 4,000 sq. ft., plus 1 space for each 10,000 sq. ft. of open storage area
Vehicular, Craft and Related Equipment	1 space for each 1,000 sq. ft. of gross floor area
Wholesale Sales	1 space for each 2,000 sq. ft. of gross floor area
<u>Commercial Shopping Centers, Complexes, and Malls</u>	
0 - 400,000 sq. ft.	4 spaces for each 2,000 sq. ft. of gross leasable area
400,001 - 1,000,000 sq. ft.	4.5 spaces for each 2,000 sq. ft. of gross leasable area
Over 1,000,000 sq. ft.	5.0 spaces for each 2,000 sq. ft. of gross leasable area
*The parking requirements for this Commercial use apply only to projects with a constructed commercial area less than or equal to 20,000 sq. ft. Please see Chapter 3 Districts, for details on off-street parking requirements in Mixed Use Districts.	

Manufacturing Facilities	
All Activities	1 space for each 3,000 sq. ft. of gross floor area or 1 space for 3 employees during the largest shift
Agricultural, Resource Production or Extractive Activities	
Agricultural Services	1 space for each 2 employees
Veterinary Services	1 space for each 600 sq. ft. of gross floor area
Confined Animal Feeding Operations	Determined by Board
Mining, Drilling and Quarrying	0.75 spaces for each 2 employees
Plant and Forest Nurseries	2.5 spaces, plus 1 space for each 2 employees and 1 space for each 10 acres

G. Variance from Required Parking

Providing adequate parking is important, but the City of Lebanon also has an interest in reducing the amount of unused impervious cover because of the City's history with flooding. To help limit the creation of unused parking areas, alternative parking solutions may be considered by the Planning Commission. The basis for an alternative parking solution could be (but are not limited to):

1. Parking demand on similar type developments
2. Availability of shared parking facilities
3. Availability of reasonable pedestrian and bicycle infrastructure
4. Proximity of mass transit (i.e., Music City Star Stations)
5. A general parking study
6. A site-specific parking study
7. The level of risk for a negative impact on the normal flow of traffic if the number of parking spaces is not adequate
8. The availability of an area where parking could be expanded if the demand increased

H. Special Provisions for Accessible Parking

1. All parking facilities shall make available accessible parking spaces in compliance with the requirements and standards of the federal Americans with Disabilities Act (1990 and as amended).
2. All parking facilities shall comply with the standards presented below. In case of discrepancy between the standards below and current ADA standards, the ADA standards will take precedence.
3. Number of Spaces Required

TOTAL SPACES PER LOT	MINIMUM NO. OF ACCESSIBLE SPACES
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4

TOTAL SPACES PER LOT	MINIMUM NO. OF ACCESSIBLE SPACES
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
More than 1000	20 plus 1 for each 100 over 1000

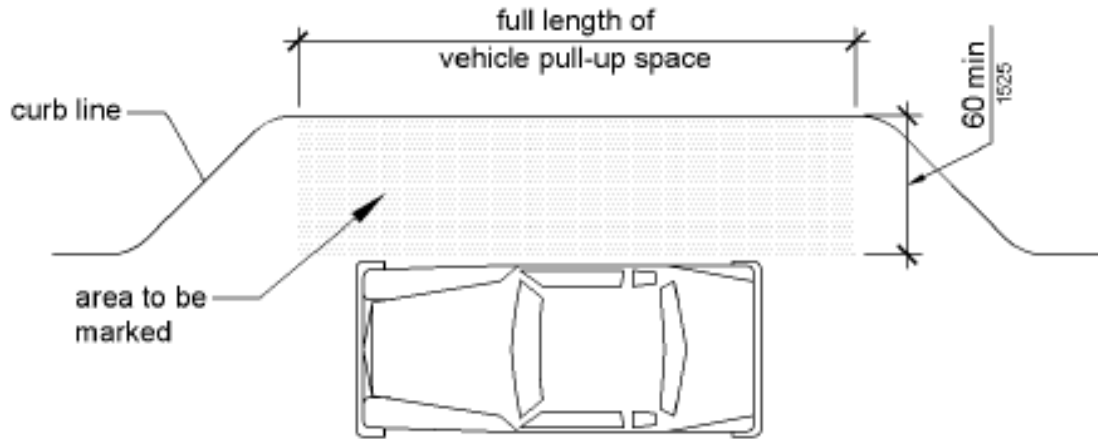
4. One in every eight accessible spaces, but not less than one, shall be served by an access aisle 8 feet wide minimum and shall be designated "van accessible."
5. At least one accessible route shall be provided within the site from accessible parking spaces and accessible passenger loading zones; public streets and public sidewalks; and public transportation stops to the accessible building or facility entrance they serve.
6. Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance.
7. Accessible parking must be 9 feet minimum in width for 90° parking stalls.
8. Wheel stops must be included such that the overhang from automobiles is not within the path of travel.
9. Parking spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2%) in all directions.
10. Accessible parking spaces shall be designated as reserved by a sign showing the international symbol of accessibility as shown in Figure 14,512-2. Van Accessible spaces shall have an additional sign "Van Accessible" mounted below the symbol of accessibility. Such signs shall be located so they cannot be obscured by a vehicle parked in the space. Signs designating parking places for disabled people can be seen from a driver's seat if the signs are mounted high enough above the ground (minimum of 5 feet above the finished grade to bottom of sign) and located at the front of a parking space. Pavement markings, although not required, may be used in conjunction with the mounted signs.

**Figure 14.512-2 International Symbol of Accessibility
(blue background white character)**



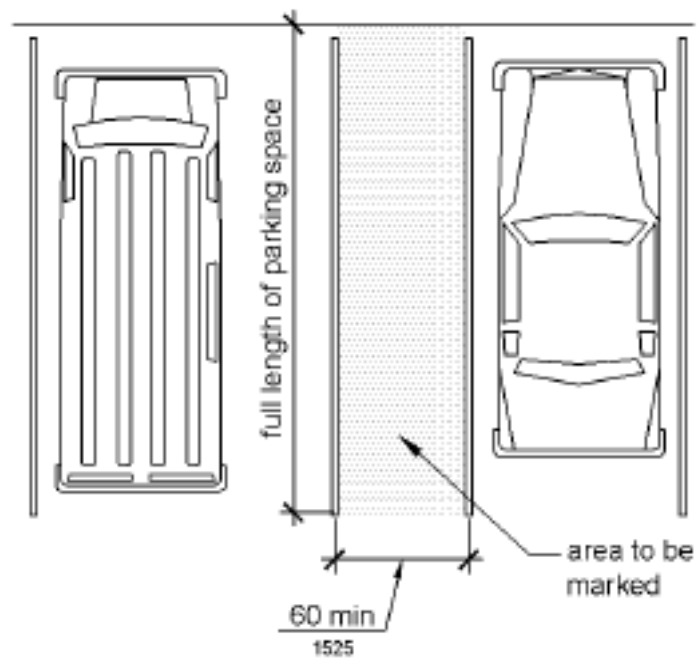
11. Curb ramps shall be provided wherever an accessible route crosses a curb.
12. The least possible slope shall be used for any ramp. Handrails shall be installed for any ramp exceeding a 5% slope. The maximum running grade of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30 inches. (Ramp slopes between 1:16 and 1:20 are preferred.) Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20.
13. The minimum clear width of a ramp shall be 3 feet, exclusive of the flared sides.
14. Landings: Ramps shall have level landings at bottom and top of each ramp and each ramp run. The landing may be considered part of the access aisle. Landings shall have the following features:
 - a. The landing shall be at least as wide as the ramp run leading to it.
 - b. The landing length shall be a minimum of 5 feet clear.
 - c. If ramps change direction at landings, the minimum landing size shall be 5 feet by 5 feet.
 - d. If a doorway is located at a landing, then the area in front of the doorway shall include the doorway width as well as 2 feet each side of the door by a width of 5 feet.
15. The cross slope of ramp surfaces shall be no greater than 1:50. Ground and floor surfaces along accessible routes and in accessible rooms and spaces including floors, walks, ramps, stairs, and curb ramps, shall be stable, firm, and slip-resistant.
16. A curb ramp shall have a detectable warning that shall extend the full width and depth of the curb ramp at any public access point.
17. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes.
18. If a curb ramp is located where pedestrians must walk across the ramp, or where it is not protected by handrails or guardrails, it shall have flared sides (5 feet flare minimum); the maximum slope of the flare shall be 1:10.
19. The standard accessible aisle width is 5 feet along main entrance route but can be reduced to 3 feet at minor entrances.
20. Access aisles shall be marked so as to discourage parking in them.

Figure 14.512-3 Passenger Loading Zone Access Aisle



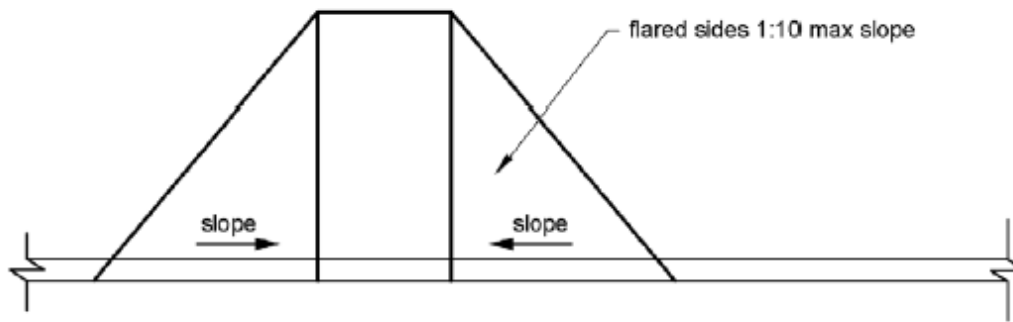
21. Access aisles shall adjoin an accessible route. Two parking spaces shall be permitted to share a common access aisle.

Figure 14.512-4 Parking Access Aisle



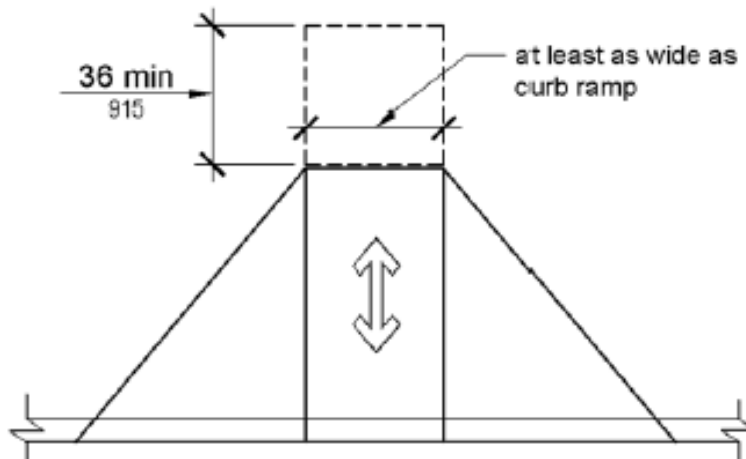
22. Where provided, curb ramp flares shall not be steeper than 1:10.

Figure 14.512-5 Sides of Curb Ramps



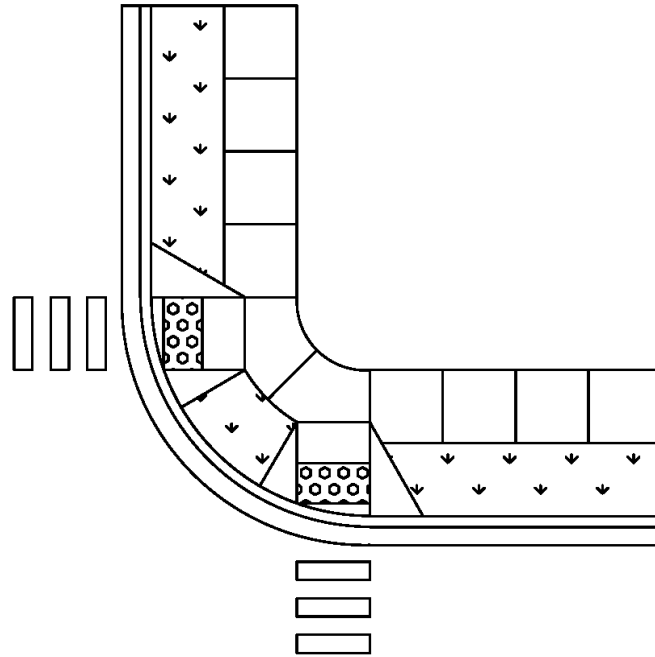
23. Landings shall be provided at the tops of curb ramps. The landing clear length shall be 36 inches (915 mm) minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.

Figure 14.512-6 Landings at the Top of Curb Ramps



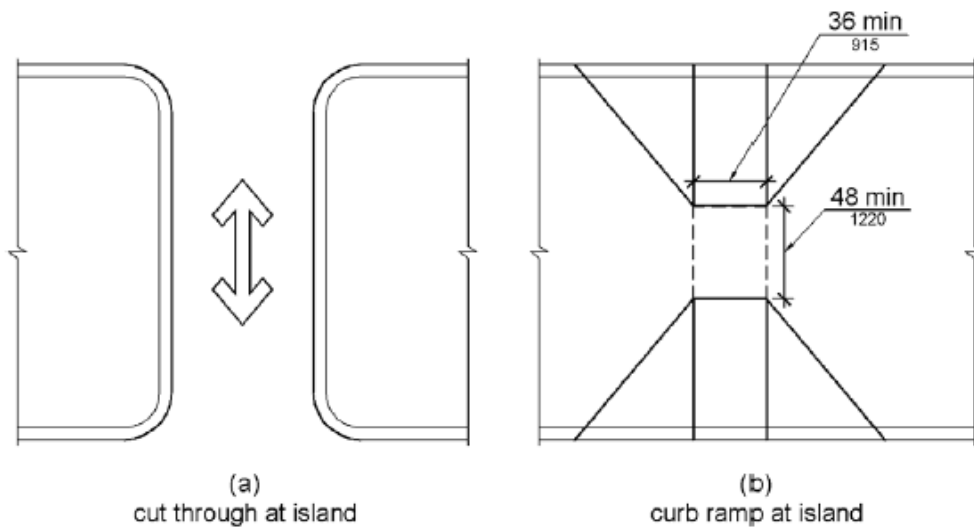
24. Landings subject to wet conditions shall be designed to prevent the accumulation of water.
25. Where two pedestrian crosswalks arrive at one corner, two corner-type curb ramps with returned curbs or other well-defined edges shall be used, one for each cross walk.

Figure 14.512-7 Corner-Type Curb Ramps



26. Raised islands in crossings shall be cut through level with the street or have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) long minimum by 36 inches (915 mm) wide minimum at the top of the curb ramp in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the running slope of the curb ramp it serves. The 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum areas and the accessible route shall be permitted to overlap.

14.512-8 Islands in Crossings



27. Off-Street Loading and Unloading Requirements

1. Buildings or structures hereafter constructed and used for industry,

business, or trade involving the receiving or distribution of vehicles, materials, or merchandise shall provide space for the loading and unloading of vehicles off the street. The spaces shall have access to a public or private alley, or if there is no alley, to a public street and shall be a minimum of twenty-five (25) feet in length. The minimum required spaces for this provision shall be based on the total usable floor area of each principal building according to the following table:

TOTAL USABLE FLOOR AREA	SPACE REQUIRED
0 to 9,999 square feet	One (1) space (10 by 25 feet)
10,000 to 14,999 square feet	One (1) space (10 by 50 feet)
15,000 to 19,999 square feet	Two (2) spaces (10 by 50 feet)
Over 20,000 square feet	Two (2) spaces (10 by 50 feet), plus one (1) additional space for each additional 20,000 square feet

2. The Board of Zoning Appeals may consider a request for a variance to these requirements.
3. In selected zoning districts, there are no off-street loading and unloading requirements, as specified in the district regulations (see Chapter 3).
4. Loading docks, delivery and/or service entrance areas shall be surfaced with asphalt, concrete, or equivalent material.
5. Storage areas larger than two (2) acres in industrial zones, IP, IL, and IH may be exempt from the paving requirements at the discretion of the Engineering Department.

28. Off-Street Parking Lot Design Standards

1. Design Objectives: Parking areas shall be designed with careful regard given to orderly arrangement, topography, amenity of view, ease of access, and as an integral part of the overall site design. All parking areas shall be landscaped in accord with the requirements contained in Chapter 8, Section 14-504. For reasons of use and appearance, it is desirable that parking areas be reasonably level or on terraces formed with the slope of the land. Changes in level between the terraces should be formed by retaining walls or landscaped banks.
2. Access Regulations: In order to promote the safety of the motorist and pedestrian and to minimize traffic congestion and conflict by reducing the points of contact, the following regulations shall apply.
 - a. Maximum width of driveway openings at the property line:
 - i. Multifamily residential uses with greater than eight (8) units: Twenty-four (24) feet.
 - ii. Multifamily residential uses with eight (8) units or less; Single-family and duplexes: Eighteen (18) feet.
 - iii. All other non-residential uses: Thirty-five (35) feet.

- A greater width may be approved at the discretion of the Engineering Department to accommodate truck turning movements in industrial developments.
 - b. Minimum distance from an adjoining interior lot line and a driveway opening at the street right-of-way line:
 - i. Non-residential and multifamily uses with greater than eight (8) units: Twelve and one-half (12 1/2) feet.
 - c. Minimum distance from the intersection of street right-of-way lines on a corner lot and a driveway opening at the right-of-way line:
 - i. Single-family Residential uses: Twenty-five (25) feet.
 - ii. Non-residential and Multifamily uses: Fifty (50) feet.
 - d. Minimum distance between two driveways serving the same property and which provide access to the same street, measured at property line:
 - i. Residential uses: Twenty-five (25) feet.
 - ii. Non-residential uses: Thirty-five (35) feet.
 - iii. All uses on a state highway: Thirty-five (35) feet or the same as the widest driveway, whichever is greater.
 - iv. Multifamily developments with greater than eight (8) units: Between a one-way access point and another access point, centerline to centerline: two hundred (200) feet.
 - v. Between two-way access points, centerline to centerline: three hundred (300) feet.
 - e. Radius of Curb Return: The curb return radius shall meet the following requirements provided, however, that no radius shall exceed the distance between the driveway opening at the property line and the adjoining property line or one-half (1/2) the distance to an adjacent driveway:
 - i. Residential uses: Five (5) feet minimum, fifteen (15) feet maximum.
 - ii. Non-residential uses in Mixed Use Districts: Five (5) feet minimum, ten (10) feet maximum.
 - iii. Non-residential uses in other districts (not Mixed Use Districts): Five (5) feet minimum, thirty (30) feet maximum.
 - f. Drainage: All driveways shall be constructed with proper drainpipes sized for the amount of water each should carry. The pipes shall be concrete, and headwalls and endwalls shall be constructed.
 - g. Nothing in this section shall be interpreted to prohibit shared drives for adjoining parcels or larger developments.
3. Surfacing and Border Barriers
- a. All impervious off-street parking areas shall be surfaced with asphalt, concrete, or other hard surfaced material (excluding gravel and other similar materials) and so constructed to provide for adequate drainage for

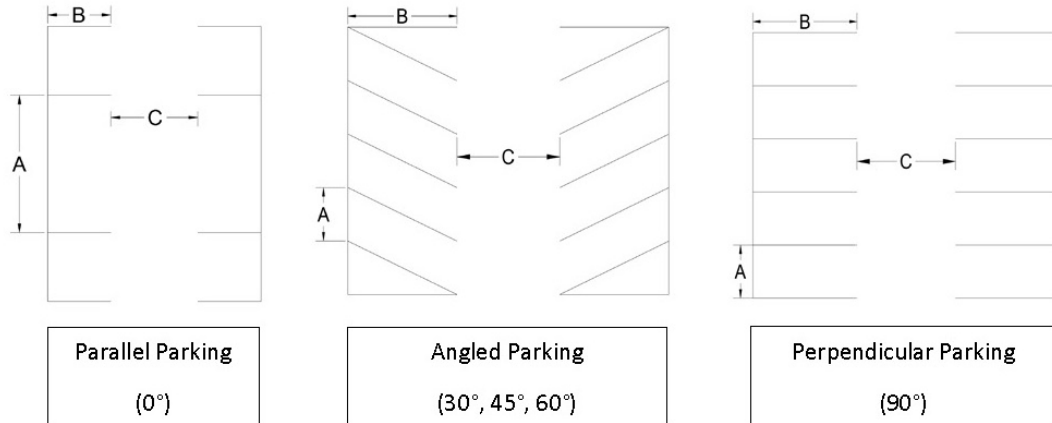
both on and off-site and to prevent the release of dust. In no case shall drainage be allowed to cross sidewalks.

- b. Pervious Pavement or Pervious Pavement Systems: Pervious pavement or pervious pavement systems, including pervious asphalt, pervious concrete, modular pavers designed to funnel water between blocks, or similar structured and durable systems are permitted. Gravel, turf, or other materials that are not part of a structured system designed to manage stormwater shall not be considered pervious pavement or a pervious pavement system. Pervious pavement and pervious pavement systems shall meet the following conditions:
 - i. All materials shall be installed per industry standards. Appropriate soils and site conditions shall exist for the pervious pavement or pervious pavement system to function. For parking lots of ten (10) spaces or more documentation that verifies appropriate soils and site conditions shall be provided.
 - ii. Pervious pavement or pervious pavement systems, except for pervious asphalt or pervious concrete, shall not be used for accessible parking spaces or the accessible route from the accessible space to the principal structure or use served.
 - iii. Pervious pavement or pervious pavement systems shall be prohibited in areas used for the dispensing of gasoline or other engine fuels or where hazardous liquids could be absorbed into the soil through the pervious pavement or pervious pavement system.
 - iv. Pervious pavement or pervious pavement systems, except for pervious asphalt, pervious concrete, or modular pavers shall not be used for drive aisles or driveways.
 - v. Lighting: See Section 14.509 Outdoor Lighting.
4. Parking Stalls: The size of each parking space shall be as shown on the sample layout illustration according to the angle of parking and appropriately marked with painted lines or curbs.
5. Maneuvering Space: Minimum width of driveways providing maneuvering space within a parking lot for ingress to and egress from parking stalls shall be as indicated on the illustration for parking lot design details.
6. Slope in Parking Areas: The maximum slope within the area of the parking stalls shall be five (5) percent. The maximum slope of driveways shall be ten (10) percent.
7. Compact Spaces: In parking areas with 20 parking spaces or more, a minimum of 85% of the total spaces required shall be standard spaces and the remaining amount may be compact parking spaces. All compact stalls must be designated by signage or pavement markings.

Figure 14.512-9 Dimensions of Parking

Standard Parking Area Dimensions (Dimensions in feet)					Compact Parking Area Dimensions (Dimensions in feet)				
Parking Angle (Degrees)	Curb Length [A]	Stall Depth [B]	Aisle Width		Parking Angle (Degrees)	Curb Length [A]	Stall Depth [B]	Aisle Width	
			One-way [C]	Two-way [C]				One-way [C]	Two-way [C]
90°	9	18 [1]	20	22	90°	8	16 [1]	20	22
60°	10	19	16	20	60°	8.75	16	16	20
45°	12	17	13	20	45°	10.75	14	13	20
30°	17	15	12	20	30°	15	12	12	20
0°	22	9	11	20	0°	19.5	8	11	20

Notes:
[1] Stall Depth may be reduced by 2 feet when parking stall abuts a landscape island or sidewalk that is seven feet in width or wider.



29. Parking, Storage, or Use of Major Recreation Equipment

For purpose of these regulations, major recreational equipment is defined as including boats and boat trailers, travel trailers, tent trailers, pick-up campers or coaches (designed to be mounted on automotive vehicles), motorized dwellings, and the like, and cases or boxes used for transporting recreational equipment, whether occupied by the equipment or not. No such equipment shall be used for living, sleeping, or housekeeping purposes when parked or stored on a residential lot, or in any location not approved for the use.

14.513. Mail Kiosk (Cluster Box)

A. Intent

It is the intent of this section to ensure that adequate centralized mail delivery facilities are provided in all developments when required by the United States Postal Service (USPS) or otherwise provided. The goal is to safely accommodate such facilities for all postal users while minimizing their impact on residents and surrounding development.

B. Applicability

The standards in this section apply to all subdivisions and final site plans for residential development, as well as all other development that provides a mail kiosk (cluster box) facility.

C. Procedure

All new mail kiosk (cluster box) facilities or alterations to existing facilities must be approved as part of a plat or site plan in accordance with following procedures.

1. New residential subdivision
 - a. The location of all mail kiosk (cluster box) facilities and associated parking shall be included on the preliminary plat and final plat.
 - b. The design of the mail kiosk (cluster box), associated parking, and any other related standards shall be submitted in one of the following two ways.
 - i. Construction Documents: All design details required shall be provided within the construction document submittal for the subdivision.
 - ii. Minor Site Plan: All design details required shall be provided within a minor site plan submittal if no construction documents are required for the subdivision.
 - c. If mail kiosk (cluster box) facilities are to be located within a larger structure serving other purposes along with mail delivery (i.e. amenity center, club house, etc.) or are located outside a larger structure, but still on the same legal lot, that facility shall be included within the site plan review of the overall lot.
2. New residential or non-residential site plan

The location and design of all mail kiosk (cluster box) facilities, associated parking, and any other related standards shall be included on the site plan for the development to which the facility is to serve.
3. Addition of a new or alteration to an existing mail kiosk (cluster box) facility
 - a. The location and design of all mail kiosk (cluster box) facilities, associated parking, and any other related standards shall be included on a minor site plan when no other development document is required for the onsite changes.
 - b. Additions of all new mail kiosks on existing sites must be submitted for review as a minor site plan.
 - c. Alterations to any existing mail kiosk (cluster box) must be submitted for review as a minor site plan if any one of the following occurs.
 - i. The location of a mail kiosk (cluster box) changes in a way that the related infrastructure previously approved is no longer able to serve the new location in compliance with the standards in this section.
 - ii. The pedestrian or vehicular access to the mail kiosk (cluster box) facility changes.

D. Standards

1. All mail kiosk (cluster box) facilities shall comply with the guidelines of the United States Postal Service (USPS) and any conflict with the standards within this section shall be waived should the Planning Department or their designee, find the regulations in conflict. Any restrictions further placed upon mail kiosk (cluster box) facilities not in conflict with USPS guidelines shall be incorporated into their design as follows.
2. Location and Maintenance
 - a. No residential unit shall be located more than 0.25 miles from the mail kiosk (cluster box) facility that serves it. This distance shall be measured from the nearest point of the front property line for a subdivided unit or the front door of a unit for unsubdivided units to the nearest entrance of the facility by way of pedestrian path compliant with the American with Disability Act (ADA), existing or proposed.
 - b. Each mail kiosk (cluster box) facility shall be located on a lot owned by the developer, management company, or homeowners' association serving the development. Should none of those interested parties exist in the development at the time the facility is proposed the mail kiosk (cluster box) facility may be placed on an individually owned property. In this case all appropriate access easements must be recorded, and all property owners being served by the facility provide a notarized document agreeing to such an arrangement.
 - c. Each mail kiosk (cluster box) facility shall be maintained by the developer, management company, or homeowners' association serving the development. Should none of those interested parties exist at any time all property owners served by the facility shall equally be responsible for the maintenance.
 - d. Mail kiosk (cluster box) facilities, including those with roofs, may infringe front setback lines if in compliance with all other standards in this section and may infringe interior setback lines within 5 feet if in compliance with all other standards in this section.
 - e. No mail kiosk (cluster box) facility shall be erected within a public right-of-way or an occupied utility easement without the written consent of the Commissioner of Public Services and any other entity party to said easement. Any mail kiosk (cluster box) facility to be erected in an unoccupied Public Utility and Drainage Easement will require a Hold Harmless Agreement from City Council.
 - f. All mail kiosk (cluster box) facilities located within a larger structure serving other purposes along with mail delivery (i.e. amenity center, etc.) are not subject to the standards for standalone facilities. A note stating their location within such a structure shall be added to all relevant construction documents.

3. All standalone mail kiosk (cluster box) facilities shall provide the following:
 - a. A concrete pad that contains the mail kiosk (cluster box) itself and a minimum 4-foot-wide clear path around all sides of the mail kiosk (cluster box).
 - b. Adequate lighting for the entirety of the concrete pad with an average illuminated intensity for the pad of not less than 0.5 and extending to not more than 0.5 at any interior property line.
 - c. Access to all individual boxes compliant with the American with Disability Act (ADA).
 - d. Unobstructed clear sight lines from all ingress/egress points in proximity to the facility.
4. Standalone mail kiosk (cluster box) facilities that contain 20 or less individual boxes shall not be required to provide any parking or roof covering, but if parking or roof covering is provided the design standards associated for each shall still apply. All other requirements found in this section shall still apply.
5. Standalone mail kiosk (cluster box) facilities that contain more than 20 individual boxes shall be required to provide the following, in addition to all other requirements in this section:
 - a. A minimum of 2 parking spaces, either parallel in the right-of-way or on the same legal lot as the mail kiosk outside of the right-of-way. 1 additional parking space shall be provided for every 50 individual boxes included in a facility beyond 20 boxes. No more than 5 parallel parking spaces in a row without a landscaped parking bulb. All off-street parking shall be setback at least at least 10 feet from all interior lot lines and provide a Type A Landscape Buffer. when the abutting a property zoned for or developed as residential. All parking shall comply with requirements.
 - b. A roofed structure covering the mail kiosk (cluster box) itself and extending a minimum of 3 feet from all edges of the kiosk shall be erected. Supports of the roof shall not obstruct the required 4-foot-wide clear path on all sides of the kiosk.
6. Standalone mail kiosk (cluster box) facility typical layouts as shown in Figure 14.513-1.

Figure 14.513-1
**Typical Kiosk with Parallel Parking or
 Off-street Parking**

