

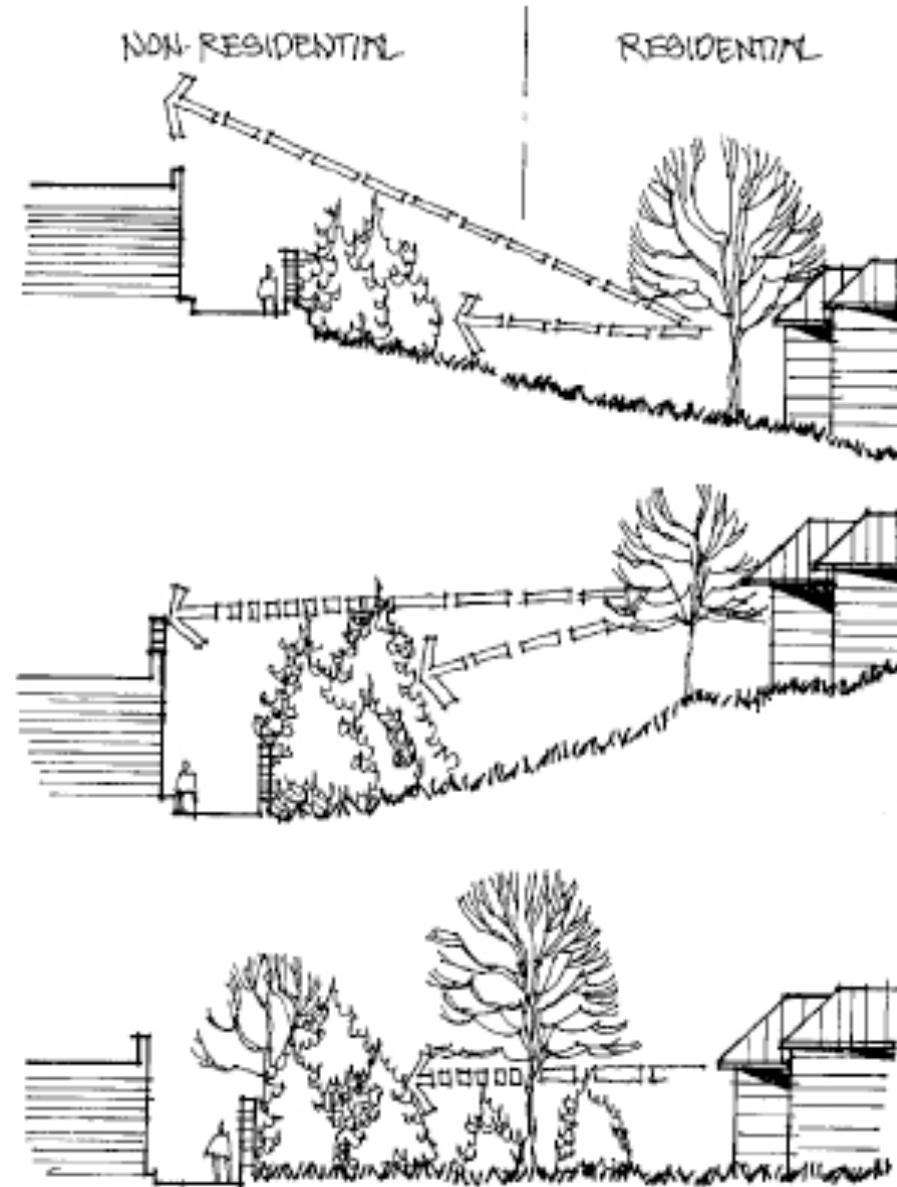
The following buffer design guidelines apply to conventional, use-segregated developments where differing or incompatible land uses are placed adjacent to each other and are intended to be isolated from one another. Use-segregated developments utilize buffers that are intended to hide and isolate land uses. This development style is in contrast to “Traditional Neighborhood” design where land uses are integrated in close proximity and large buffers and setbacks are not necessary.

These guidelines address minimum buffer requirements for conventional development design. Greater setbacks and landscape requirements than those stated within the guidelines may be imposed as part of plan review or rezoning approvals. The amount and type of buffer between residential and nonresidential uses depends upon several characteristics including the visibility between such uses, existing topography, existing natural features and vegetation, building size, land uses, etc. Generally, buffer areas should include a combination of natural features, landscaping, berms, fencing, water features, and other attractive elements. Buffer plans that create walled subdivisions and “gated” communities with a “compound” appearance are discouraged.

These guidelines strongly encourage creative site design, building design, and building arrangement. Any buffer standards within these guidelines may be modified in “planned” zoning districts when determined by the Planning Commission/ Governing Body to be appropriate due to land use restrictions, alternative site plans and building designs, or unique site characteristics such as topography or existing vegetation. The standards may also be modified based upon the amount of buffer provided by adjacent properties.

1. STANDARDS FOR RESIDENTIAL DEVELOPMENT (R-1 & R-2)

- a. A 75 foot building setback for all lots adjacent to land zoned C-2 through M-3.
 - b. The building setback could be reduced to 60 foot if a 25 foot wide landscape buffer is provided. The setback could be further reduced 1 foot for each additional foot the landscape buffer is increased.
- (Note: All setbacks could be modified in “planned” zoning districts due to unique site circumstances, topography, vegetation, or development design. The standards may also be modified based upon the amount of buffer provided by adjacent nonresidential properties.)



[image a]

2. STANDARDS FOR RESIDENTIAL DEVELOPMENT (R-3, R-4, & R-5)

a. A 75 foot building setback for multiple-family developments adjacent to land zoned C-2 through M-3.

b. The setback could include parking, paving, and carport/garage structures if a minimum of 30 feet of landscape area is maintained adjacent to the nonresidential development.

(Note: All setbacks could be modified in "planned" zoning districts due to unique site circumstances, topography, vegetation, or development design. The standards may also be modified based on the amount of buffer provided by adjacent nonresidential properties.)

3. STANDARDS FOR NONRESIDENTIAL DEVELOPMENT (C-0 & C-1)

A minimum 20 foot landscape buffer (parking/paving setback) and 20 foot building setback. The landscape buffer shall include a 6 foot high screen with shade/evergreen trees for every 30 lineal feet and 1 ornamental tree for each 3 shade/evergreen trees.

4. STANDARDS FOR NONRESIDENTIAL DEVELOPMENT (C-2 THROUGH M-3)

A minimum 40-50 foot building setback, depending upon the size of the development area adjacent to the land zoned R-1 through TN, inclusive. The building setback must include a minimum landscape buffer (parking and paving setback) of 20-30 feet. Building setbacks and landscape buffers are required to be increased if the development includes loading docks/overhead doors, parking, or buildings over 20 feet in height abutting residential zoning (see matrix). Buffers adjacent to residential in the "Original Town" are established on a case-by-case basis.

Development areas less than 5 acres in size:

a. A minimum 20 foot landscape buffer (parking/paving setback) & 40 foot building setback. (See matrix for any additional setback requirements.)

b. A 6 foot high wall or berm. Landscaping shall include 1 shade or evergreen/coniferous tree per 30 lineal feet along the property line, plus 1 ornamental tree for each 3 required shade or evergreen/coniferous tree. (Note: A double row of evergreen trees may be substituted for the wall or berm, but may not count toward landscape requirements.)

Development areas between 5-10 acres in size:

- a. A minimum 25 foot landscape buffer (parking/paving setback) & 45 foot building setback. (See matrix for any additional setback requirements.)
- b. A 9 foot high masonry wall or berm combination (i.e. 6 foot wall and 3 foot berm). Landscaping shall include 1 shade or evergreen/coniferous tree per 15 lineal feet along the property line, plus 1 ornamental tree for each 3 required shade or evergreen/coniferous trees.
(Note: A double row of evergreen trees may be substituted for the wall or berm, but may not count toward landscape requirements.)

Development areas 10 acres or more in size:

- a. A minimum 30 foot landscape buffer (parking/paving setback) & 50 foot building setback. (See below for any additional setback requirements).
- b. An 11 foot high masonry wall or berm combination (i.e., 6 foot wall and 5 foot berm). Landscaping shall include 1 shade or evergreen/coniferous tree per 10 lineal feet along the property line, plus 1 ornamental tree for each 3 required shade or evergreen/coniferous trees.
(Note: A double row of evergreen trees may be substituted for the wall or berm, but may not count toward landscape requirements.)

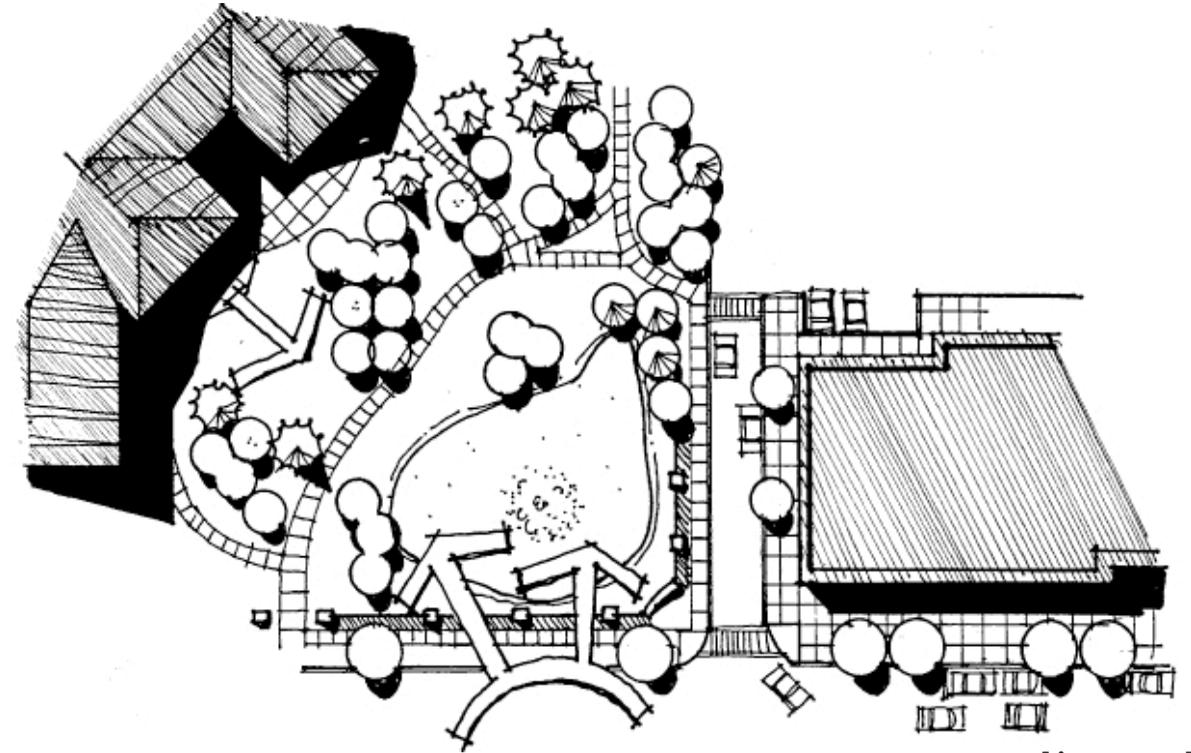
MATRIX

For nonresidential developments zoned C-2 through M-3 adjacent to residential, the following additional setbacks shall apply where applicable.

Parking	(Add 25 feet to the building setback)
Loading docks and/or overhead doors	(Add 25 feet to the building setback and 25 feet to landscape buffer)
Buildings exceeding 20 feet in height	(Add 50 feet to the building setback, with 20 feet of the 50 feet to be additional landscaping)
Outdoor storage yards	(Prohibited adjacent to residential)

5. Creative site design, building design, and building arrangement is strongly encouraged. Required landscape buffers and building setbacks may be reduced in “planned” zoning districts if the property owner can demonstrate that an alternative design results in a better and higher quality buffer with no negative impact upon either the residential or nonresidential properties. *Design alternatives may include the following:

- a. Nonresidential development limitations requiring low-scale, low-intensity, pedestrian-oriented buildings and land uses which relate to adjacent residential areas.
- b. Nonresidential building designs where the facades facing residential development have the appearance of a front facade and have an architectural appearance compatible with residential areas. Such building designs and arrangements do not appear to “back up” to residential areas.
- c. Nonresidential buildings with service and loading areas entirely integrated into the building architecture.
- d. High quality and attractive landscape or drainage features (i.e. fountains and ponds) which provide adequate screening or buffering and are well integrated into the development design.
- e. Incorporation of significant topographic or natural features.



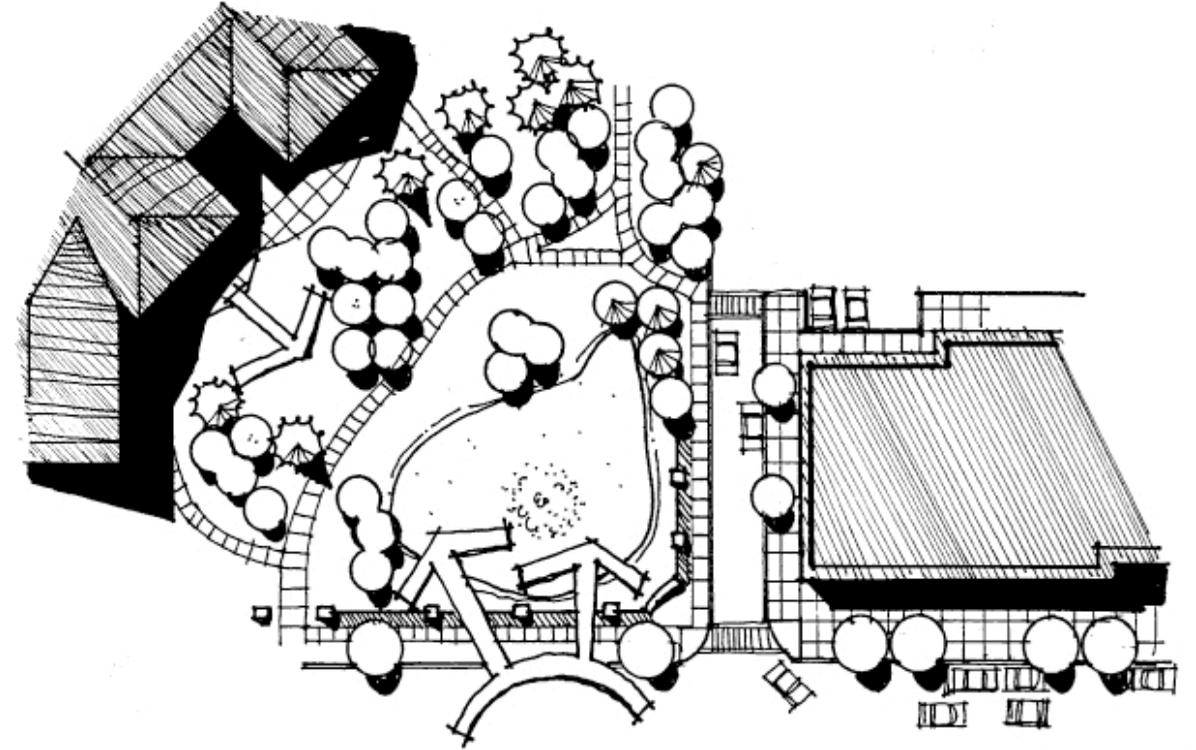
[image a]

The purpose of these guidelines is to assure creative, aesthetic approaches to open storm drainage and detention. Such improvements should be designed as amenities and an asset to the community, while providing safe, efficient removal of storm water.

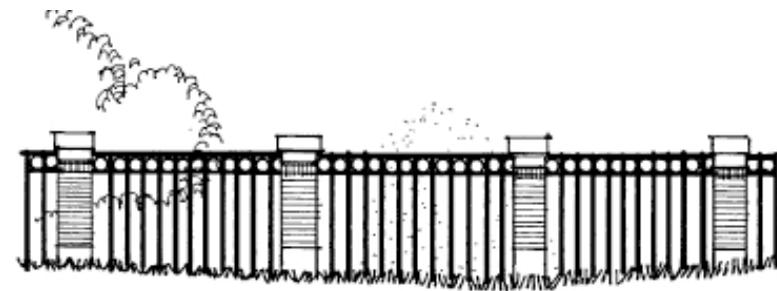
- *1. Open detention basins visible to the public shall be incorporated into the design as an attractive amenity or focal point in the site design.
 - *a. Wet-bottom basins are encouraged for basins visible to the public or from adjacent property. The need to provide water movement should be handled creatively with such elements as spray fountains or water falls.
 - *b. Dry basins in public view are allowed if designed as a primary focal element of the site as an extensively landscaped open space. Dry-bottom basins shall be designed so the slopes and bottoms can be easily maintained. The bottom shall be sloped adequately to ensure proper surface drainage. Casual water flow should be piped underground. If properly designed and maintained, dry-bottom basins may be designed as wetlands to remove non-point source pollutants from storm water runoff.
 - *c. Geometric basins with constant side slopes should be used only in areas not visible to the public or from adjacent property. Geometric basins shall be easily maintained and routinely mowed.

*2. When fencing is required or provided, it shall be a decorative material that coordinates with other elements on the site, such as stone or brick columns. Fencing shall be open to allow views into and across the landscaped detention area. [see image b]. [see image c].

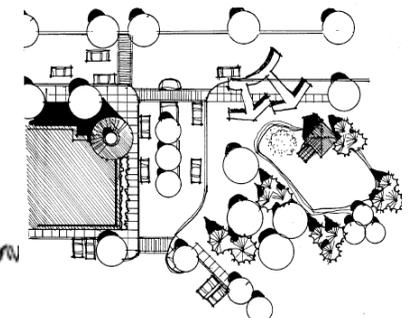
3. Natural drainage areas should be preserved with adequate green space to protect existing riparian systems and to allow maintenance access. When natural areas are altered, landscaping should be planted to reestablish the previous riparian habitat. Walks are encouraged to facilitate pedestrian circulation throughout the site, to adjacent streets and properties, and to the city's trail system.



[image a]



[image b]

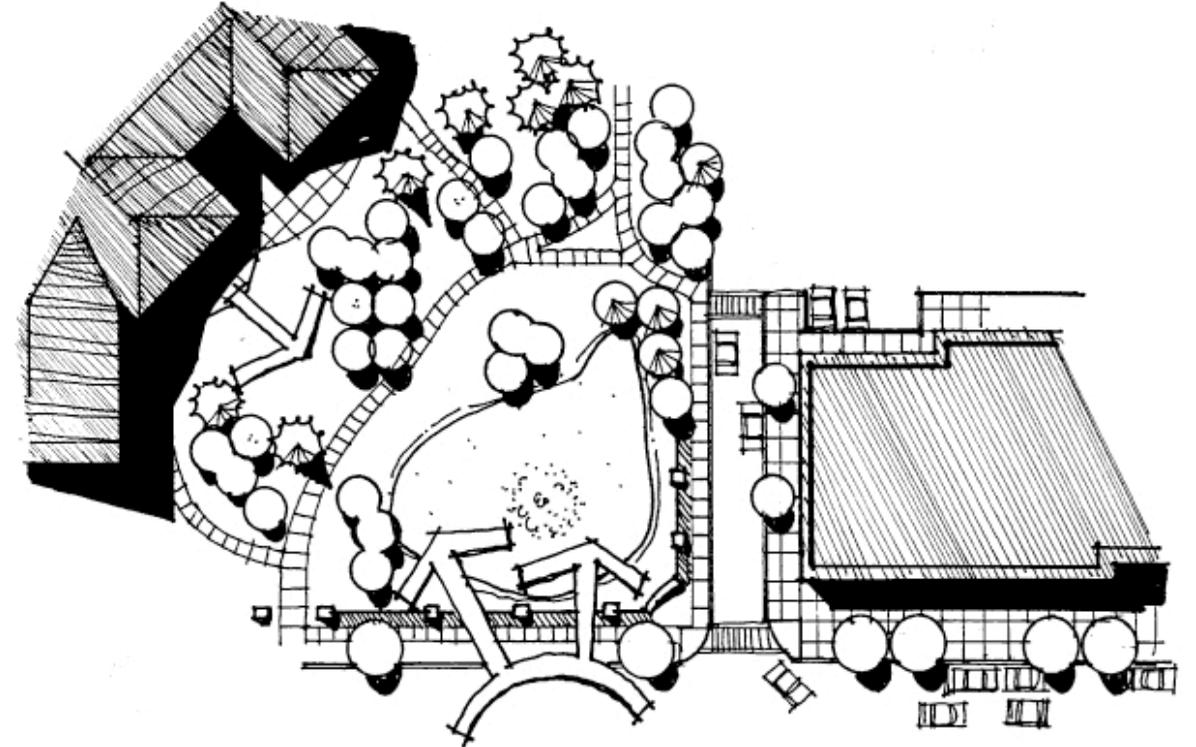


[image c]

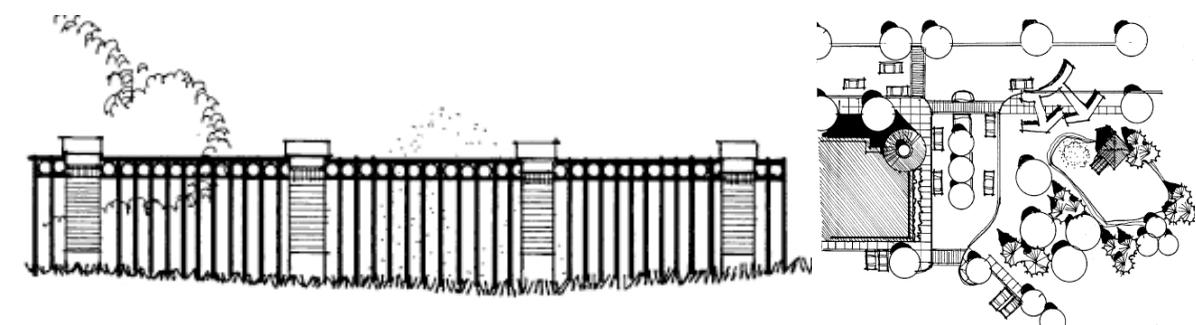
The purpose of these guidelines is to assure creative, aesthetic approaches to open storm drainage and detention. Such improvements should be designed as amenities and an asset to the community, while providing safe, efficient removal of storm water.

4. Detention basins serving multiple owners and/or development sites within a single large development are recommended in order to reduce the number of basins, to create watersheds of adequate size to support wet-bottom basins or wetlands, and to distribute the cost and maintenance of the basins.

5. All detention basins and open drainage areas shall be readily accessible for inspection, and to maintenance equipment. All detention basins shall be mowed routinely, unless designed as wetlands. Wetlands shall be defined as areas which are predominantly covered with shallow water or wet soils for the majority of the growing season for most years and be capable of supporting water tolerant plants.



[image a]



[image b]

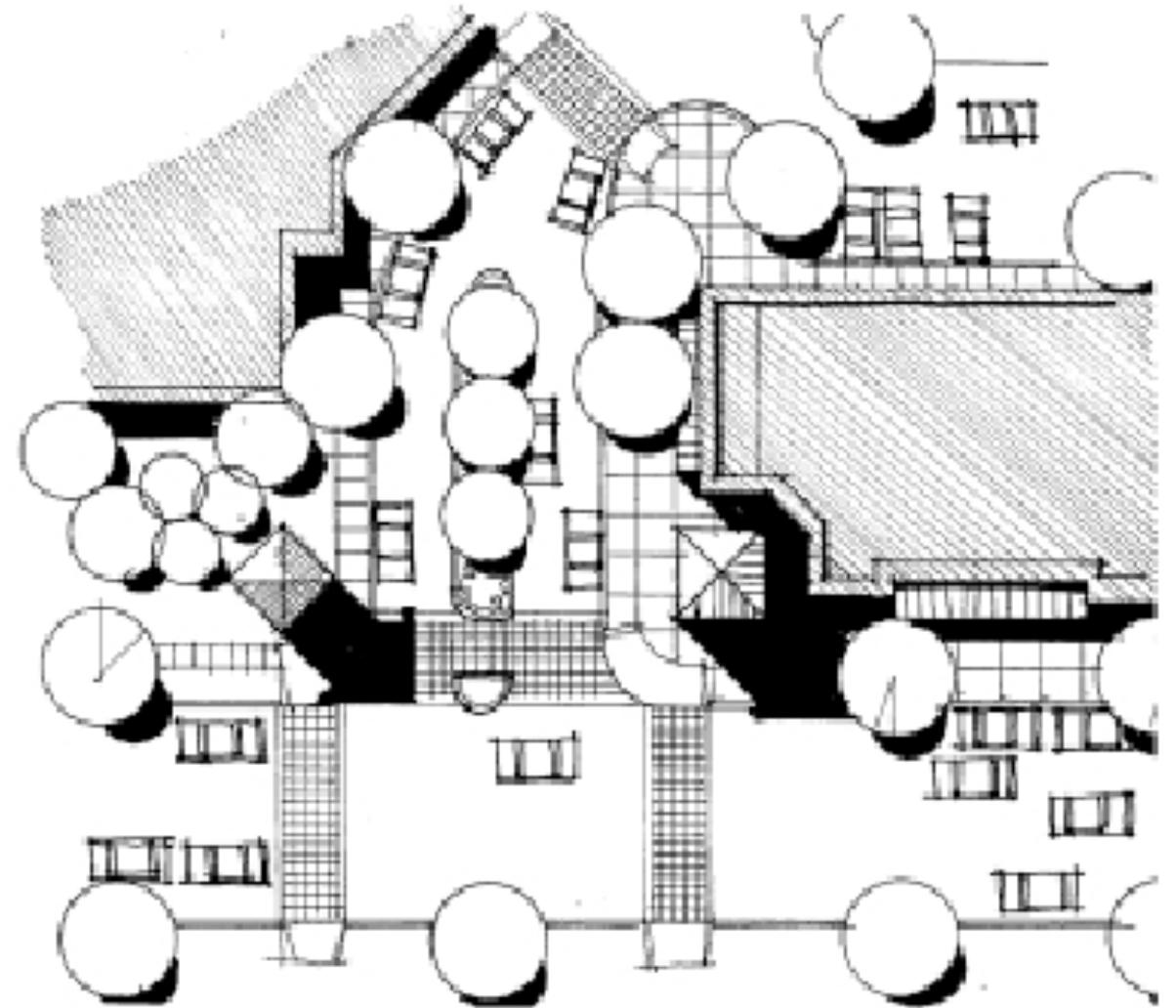
[image c]

The purpose of these guidelines is to ensure pleasant and functional pathways for the pedestrian. A pleasant environment can greatly influence the number of people willing to walk or ride as an alternative to driving; create linkages between residential and nonresidential uses; and create more mixed-use development. The principal is to balance the needs of the vehicle and pedestrian while creating convenient and safe methods for pedestrian while creating convenient and safe methods for pedestrian movements.

1. Initial site development design should consider pedestrian circulation patterns in equal importance to that of the vehicle and building arrangement.

*2. Sidewalks and walkways shall be provided to connect sidewalks along adjacent roadways and trails in the city's greenway system with buildings within a development. Walkways should also provide access between buildings.

3. Site design should separate pedestrians and vehicles as much as possible, with the number and length of pedestrian crossings through parking and paved areas kept to a minimum. Where walkways pass through paved parking areas and drives, the following should be accomplished:
- a. A decorative paving material (i.e. pavers, stamped/textured concrete, or color concrete) should be used to delineate the walkway crossing.
 - b. The corners of the intersection should be flared (narrow driveway/street width at crossing).
 - c. ADA ramps shall be used at all crossings.



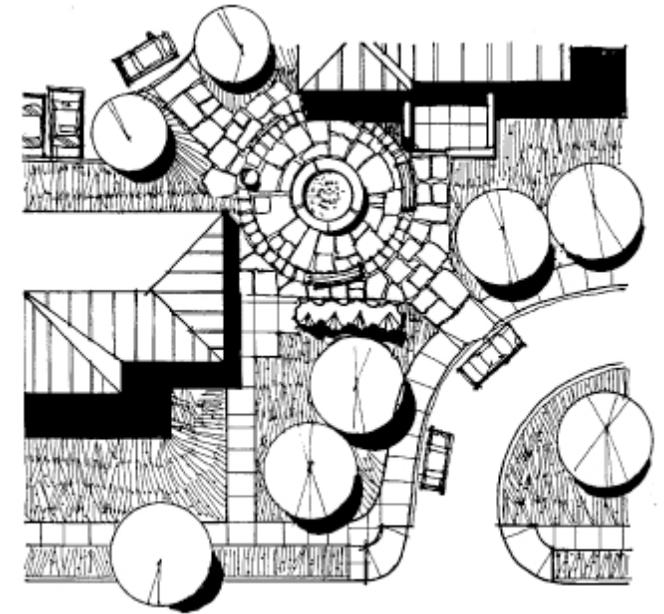
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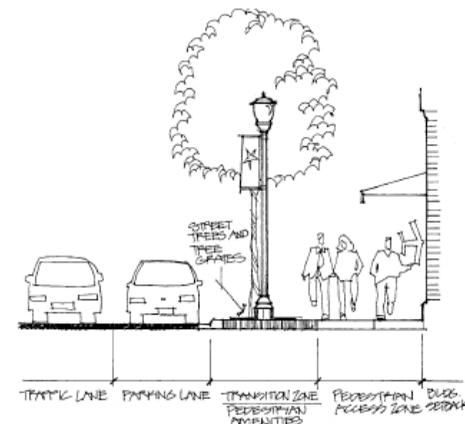
4. Walkways shall be designed and buffered in a manner that encourages their use. Elements such as landscaping, street trees, street furniture, public open spaces and plazas create contrast to the built environment by softening the streetscape and making the walking experience more enjoyable and inviting. Walkway design within a development should recognize the following:

- a. Along entrance or internal access drives, pavement setbacks should be a minimum of 20 feet from the curb to allow adequate room for the sidewalk, berms and/or landscape plantings.
- b. Trees should be planted between the access drive curb and the sidewalk, with shrubs and berms located between the sidewalk and the parking lot curb. This arrangement will separate the pedestrian from both the road/drive and the parking lot, as well as create a street tree canopy.
- c. Low-level pedestrian lighting (10-15 feet high poles/fixtures), bollards, and up-lighting will help bring the environment down to "human scale".

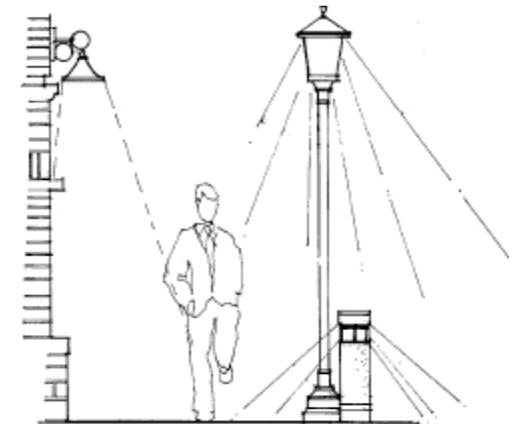
5. Pedestrian comfort can be enhanced by carefully considering building design, location, setbacks, and orientation. Recommended building design considerations include clustering of buildings, covered walkways, street-level display windows, and avoiding monotonous blank walls.



[image a]



[image b]



[image c]

The purpose of these guidelines is to create well designed and functional parking lots. Landscaping within parking of should be incorporated in a manner that is both attractive and easy to maintain, minimizes the visual impact of surface parking, and improves environmental and climatic impacts.

*1. Landscape design and species shall be used to create visual continuity throughout the development. Landscape coordination shall occur among all phases of the development.

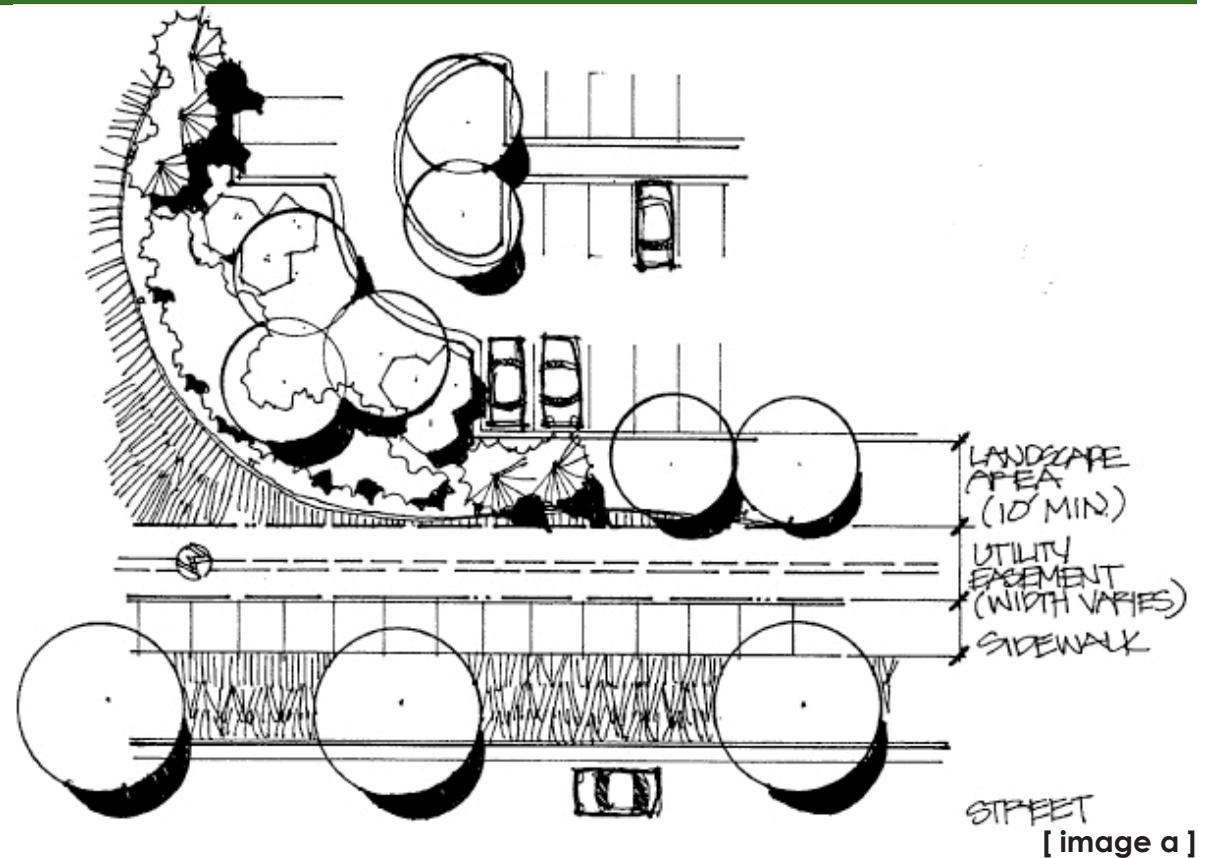
a. Landscape areas should be combined to form larger clusters at highly visible locations such as landscaped courts, plazas or common areas.

b. Landscape design should create variety, interest, and view corridors for visibility.

*c. A variety of different species (including both deciduous and evergreen species) shall be incorporated into the site design to provide visual interest, as well as disease and pest resistance. A minimum of one-third of the plantings shall be evergreen/coniferous species.

*d. Required landscape plantings shall be coordinated with the location of utilities, driveways, and traffic clearance zones. Landscape plantings shall be located an adequate distance away from utility lines and easements to avoid damage when such lines are repaired or replaced.

*2. Plant materials shall be placed intermittently against long expanses of building walls, fences and other barriers to create a softening effect.



[image a]

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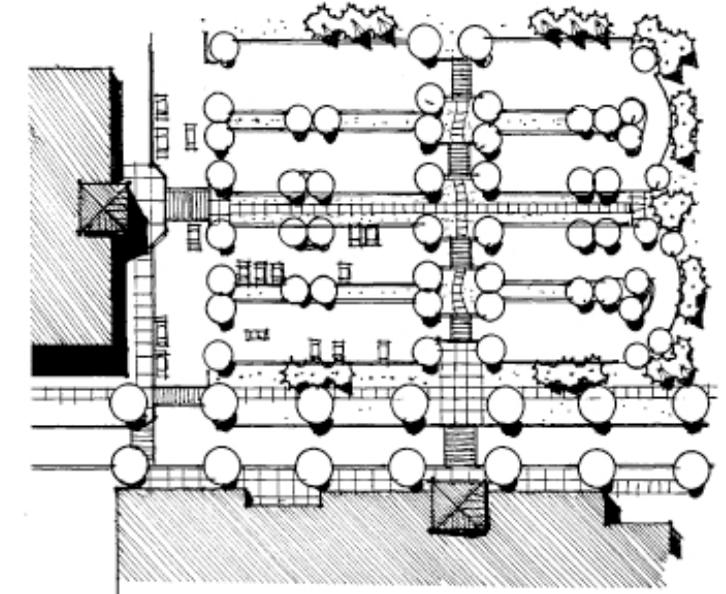
*3. Large parking lots shall be divided into smaller parking fields of 50-100 cars with landscape strips, peninsulas, or grade separations to reduce the visual impact of large expanses of paving, to direct vehicular traffic through the parking lot, and to provide a location for pedestrian walks. Such requirements shall not apply to sites with unique conditions or terrain.

*a. Parking lots shall be designed to separate pedestrians from vehicle and include protected pedestrian walkways within parking areas which lead to store entrances.

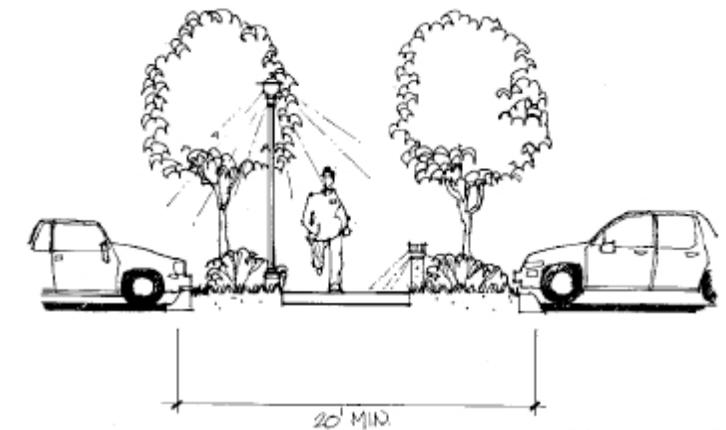
*b. Landscape strips between parallel parking rows shall be a minimum 10 feet in width. When incorporating pedestrian walkways, such strips shall be a minimum of 20 feet in width to accommodate vehicular overhangs, the walk, lights, posts and other appurtenances. Landscape aisles and strips shall include medium to large deciduous trees at a minimum of 1 tree every 30 linear feet, in addition to other parking lot landscape requirements.

*c. Aisles should be placed on both sides of entrance drives to create pleasing tree lined entrances, to direct vehicles into and out of the site, and to provide adequate space for vehicular stacking at exits onto perimeter roadways.

4. Decorative paving materials and pedestrian amenities, such as 10-15 foot high pedestrian light poles, bollards, seating, bicycle racks and trash receptacles should be used to accent pedestrian spaces at building entrances, courts, plazas and along pedestrian walks.



[image a]



[image b]

The purpose of these guidelines is to ensure that lighting meets the functional and security needs without adversely impacting adjacent properties.

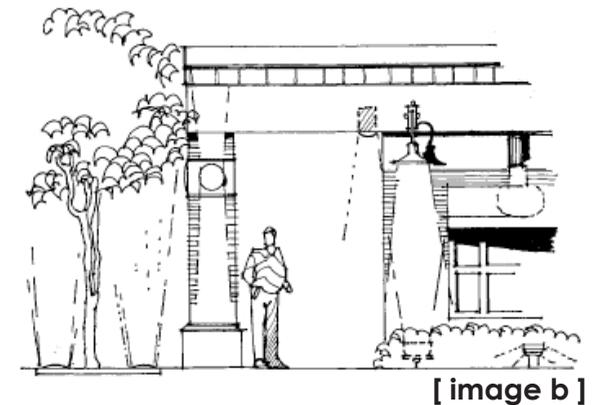
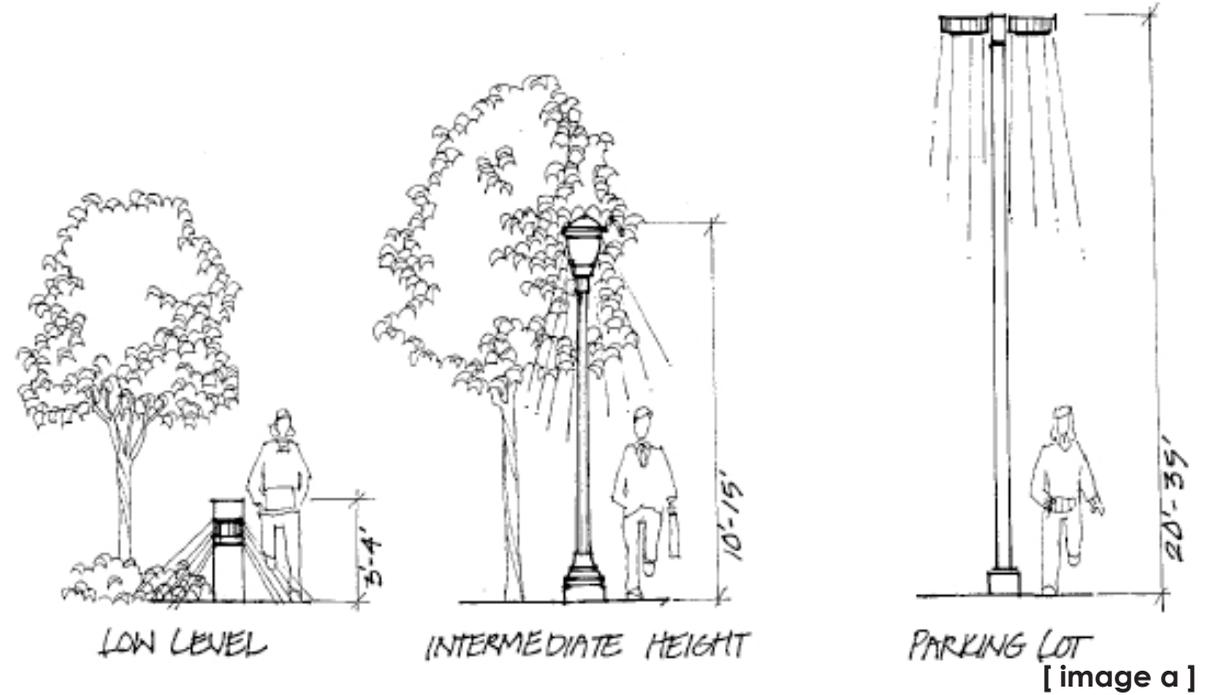
1. Driver and pedestrian orientation can be enhanced by providing a hierarchy of lighting effects such as bollards (3-4 feet high), intermediate-height pedestrian lights (10-15 feet high), and parking lot and roadway lights (20-35 feet high).

*2. Building-mounted light fixtures should be for aesthetic and safety purposes only and must direct light upward or downward. Lighting should be used to highlight architectural features and create visual interest. Wall-pack lights or other lighting that shine outward toward adjoining properties or street right-of-way is prohibited.

- *a. Building-mounted fixtures for site illumination are permissible on the "back" sides of buildings in industrial areas where facing other industrial buildings and not visible from the street right-of-way or residential properties.
- b. Accent lighting that highlights building architectural features is encouraged.
- *Exterior neon lighting, illuminated banding, or other lighting that creates a glow is prohibited, unless approved by the Planning Commission as part of an overall theme for the development area.

*3. Parking lot illumination must be accomplished with individual light poles and fixtures. Building-mounted fixtures are not permitted as a method of parking lot illumination.

- *a. The style of lighting should reflect the architectural character of the area.
- *b Maintain parking lot light poles/fixtures of the same style, height, color, and intensity of lighting throughout the development area. Varying styles of fixtures may be permitted if it is demonstrated that the styles contribute to an overall theme for the area.
- *c. The maximum pole height in commercial shopping centers and office parks shall be 35 feet, but no more than 25 feet when located adjacent to residential development. The maximum pole height for individual businesses shall be 25 feet.
- *d. Light fixtures shall be non-adjustable horizontally-mounted fixtures with less than 90 degree luminaire cutoff. Fixtures that project light or glare toward street right-of-way or adjoining properties shall not be permitted.
- e. Shielding shall be provided to avoid light trespass and glare.



**4. Properties visible from an arterial roadway and areas adjacent to residential or other site sensitive locations shall be required to submit a point by point photometric plan to show compliance with lighting standards. The maximum maintained vertical foot-candle at an adjacent property line is 0.5 foot-candles measured 5 feet above grade. The maximum average maintained foot-candles for all parking lots shall be 3 foot-candles, unless otherwise approved by the Planning Commission.*

Exposed downspouts on the building exterior can contribute to and reinforce a structure's appearance, and when designed appropriately will enhance the architectural appearance. To ensure that exposed downspouts have a positive impact upon the building design, downspouts should be included in the initial design phase as an architectural feature, rather than added as an afterthought. This policy applies in instances where downspouts may be visible from the street, internal circulation areas within a development, adjoining residential areas, or any other highly visible area. Less emphasis is placed on downspouts only visible from service areas.

1. The location and design of exposed downspouts shall be identified on plans submitted for Planning Commission approval.

2. When exposed downspouts are necessary on any building elevation, the downspouts shall be designed as an architectural element of the building and shall achieve the following:

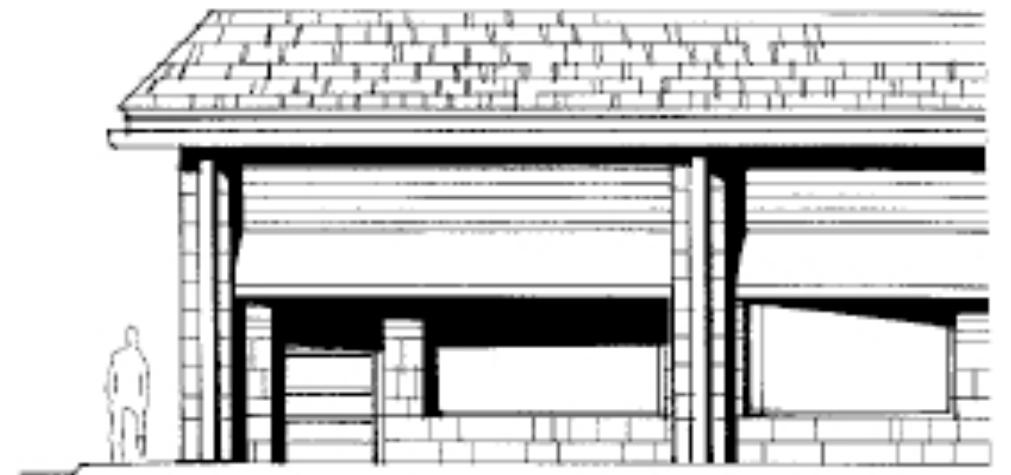
- a. Architecturally blend and accent the building's style or theme, rather than create a dominate visual feature. Such blending will coordinate with architectural accent features (i.e. soldier courses, accent tiles, canopies, columns, pilasters, quoins, key stones, etc.) rather than visually compete with those accent features (i.e. vertical downspouts clashing with horizontal accent bands).
- b. Coordinate with vertical elements (i.e. towers, columns, pilasters) and the corners of buildings so that the eye is not drawn to or attracted by the downspout. However, downspouts shall not be the only vertical element or the only relief/projection on the building facade or placed in the middle of large expanses of building wall.
- c. The downspout color should blend or accent the building, but color alone is not the only method of coordinating with the building's architectural design.
- d. Decorative scuppers shall be used which accent the architectural theme of the building and larger development area.

3. Water from downspouts must be routed under or around sidewalk areas and must not flow over walkways where it could freeze and create dangerous walking conditions.

4. If downspouts cannot be designed to blend with the building's style or theme and avoid a "tacked-on" or mechanical appearance, then the downspouts shall be closed and entirely screened from view.



[image a]



[image b]

The purpose of these guidelines is to ensure that rooftop mechanical equipment is not visible. It shall also be considered in the overall design and appearance of the building in a manner that enhances the building appearance and creates attractive visual features. Rooftop mechanical equipment includes HVAC units, fans, vents, flues, and other similar devices.

1. Rooftop mechanical equipment screens shall be required at a height that is as high or higher than the rooftop equipment being screened.

*2. Screening shall be provided in a manner that is architecturally integral to the overall appearance of the building.

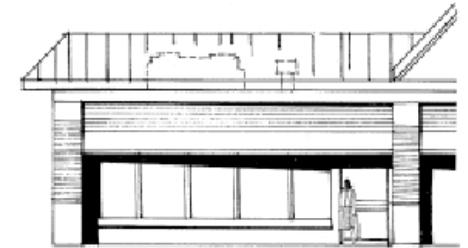
3. The use of parapet walls or specially designed rooftop penthouse enclosures are the preferred methods of screening for rooftop mechanical equipment.

4. Partition screens are generally less desirable for screening purposes. However, when using partition screens, the use, design, and material of the screen should blend with the building architecture and create a massing hierarchy that projects the same high quality appearance as the building facade.

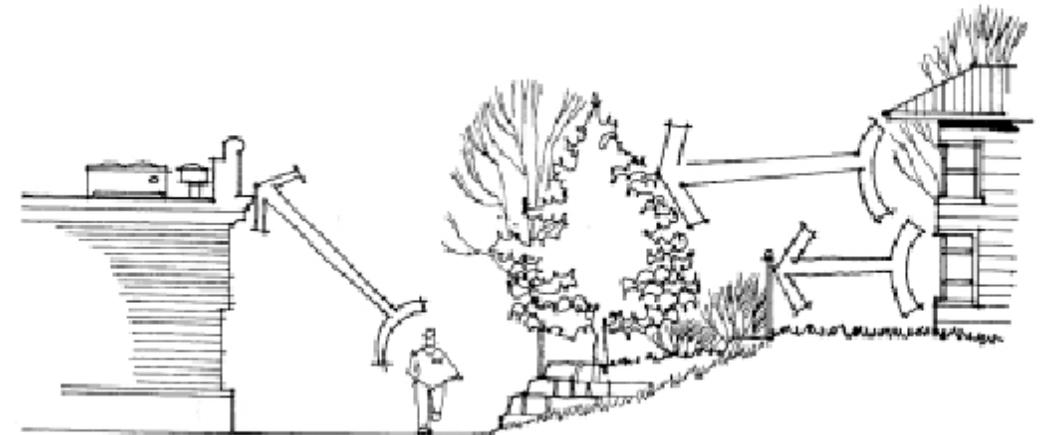
5. The number of vents and flues shall be kept to a minimum and located in a manner to not be visible. On sloped roof structures, vents and flues shall be incorporated into architectural features or painted to blend with the roofing material.

*6. After submittal of justification and careful analysis (i.e. site line visibility study), the Planning Commission may grant exceptions to the screening requirements if one of the following exception criteria is valid:

- *a. A building is located at a high elevation in relation to surrounding properties and it is demonstrated that rooftop equipment will not be visible.
- *b. A building is located in the middle of an industrial park and rooftop equipment is not visible from arterial roadways, residential properties, nor will it have a negative impact upon any sensitive areas or scenic views or vistas.
- *c. A building is sited in a manner where the location and setback of rooftop equipment from the building edge in relation to the elevation and visibility of surrounding properties is such that the equipment will not be visible from any distance and additional screening measures are not required.



[image a]



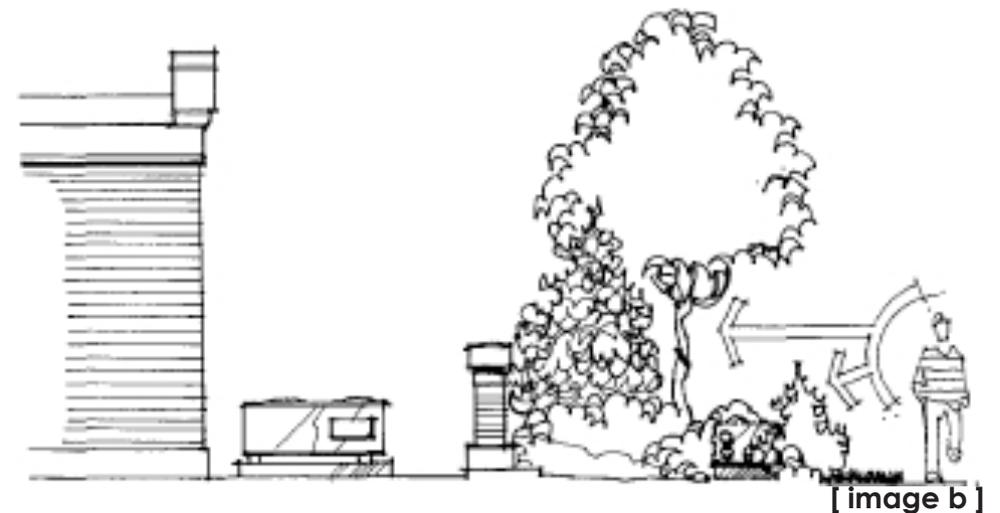
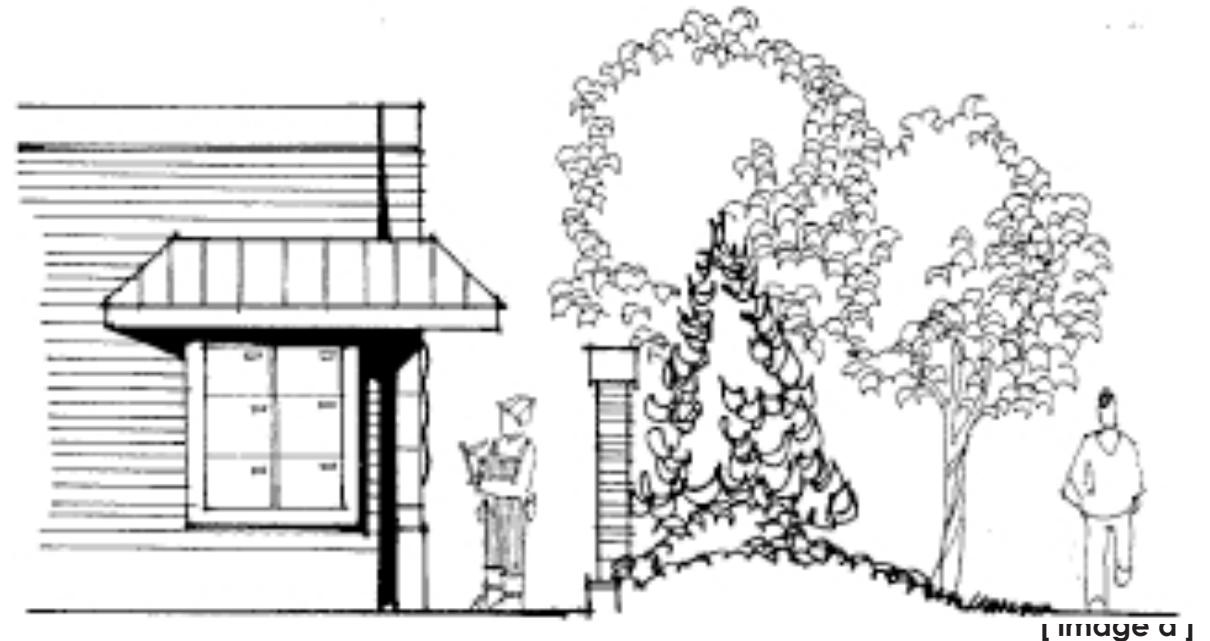
[image b]

The purpose of these guidelines is to ensure that mechanical devices and areas are appropriately screened in a manner that projects a high quality appearance. Often such screening measures can be used to enhance the building appearance. As required by the UDO, all exterior ground or building mounted equipment, including but not limited to mechanical equipment, utility meter banks and coolers, shall be screened from public view with landscaping or an architectural treatment compatible with the building architecture.

1. When it is not feasible to locate mechanical devices and areas within a building, the following shall be achieved:

- a. Coolers must be finished with the same building materials and architectural detailing as the main building facade.
- b. Coordinate the same material and detailing as the building facade with screening walls or specially designed enclosure cabinets for HVAC and utility meters.
- c. Use an evergreen species as the primary planting when landscaping is used for screening purposes. Landscape plantings for wall-mounted meters must be installed at a height of 6 feet.
- d. The visibility of meters and utility banks (i.e. gas, electric, water) can be reduced by locating such equipment along the side or rear of the building in a location not generally visible from the public.
- *e. All above ground electrical and/or telephone cabinets are required to be placed within the interior side or rear building setback yards. When such utility cabinets are prohibited within required front or corner side yards adjacent to street right-of-way unless screened with landscape materials. When such cabinets are located adjacent to or near a building, they should be screened and treated in the same manner as HVAC equipment and trash receptacles (i.e. screening walls, landscaping, etc.).

2. Mechanical equipment must be located and screened in a manner so as not to be visible or heard from adjoining properties.



The purpose of these guidelines is to ensure that service activities are oriented on the property in a manner that is consistent with the character of the area, privacy, and aesthetic considerations.

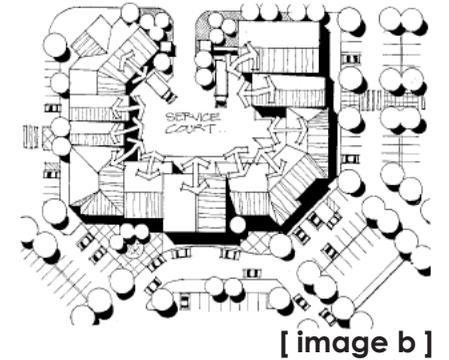
*1. Unattractive elements, such as trash, service, and loading areas are to be located out of public view from streets, adjacent residential properties, and other highly visible area such as parking lots, access drives, etc.

2. If the back or sides of buildings must be oriented toward public streets or highly visible areas, such areas must provide visual interest through a combination of architectural detail, landscaping, and berms.

- a. Buildings should be designed in a manner so that loading docks and service areas are screened either by a building wall or a screening wall, or integrated into the building design to not be noticeably visible. Screening walls must be a length and height to screen the maximum size of vehicle using the area.
- b. Screening walls should reflect the same level of architectural design as the primary structure, including elements such as landscaping to soften the wall's appearance, architectural detailing, staggering with recesses and projections, and visual interest.
- c. Design elements must be accomplished in a manner to control noise generated from service activities and mechanical equipment.

3. If a development or individual building is designed to "back" up to residential or other site sensitive areas and is not designed in a manner to incorporate architectural elements similar to the front facade (i.e. entrances, display windows, canopies, awnings, etc.), significant landscaping and berms will be required in addition to screening walls to provide an adequate buffer.

4. When fencing is provided along a property line, a decorative fencing material and architectural accents shall be used which are compatible with the building facades. Fencing must be designed in a manner to create variety such as staggering the fence line and incorporating wrought-iron and masonry columns.



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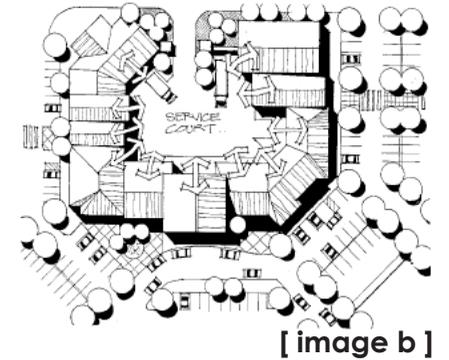
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- c. Design elements must be accomplished in a manner to control noise generated from service activities and mechanical equipment.

3. If a development or individual building is designed to "back" up to residential or other site sensitive areas and is not designed in a manner to incorporate architectural elements similar to the front facade (i.e. entrances, display windows, canopies, awnings, etc.), significant landscaping and berms will be required in addition to screening walls to provide an adequate buffer.

4. When fencing is provided along a property line, a decorative fencing material and architectural accents shall be used which are compatible with the building facades. Fencing must be designed in a manner to create variety such as staggering the fence line and incorporating wrought-iron and masonry columns.



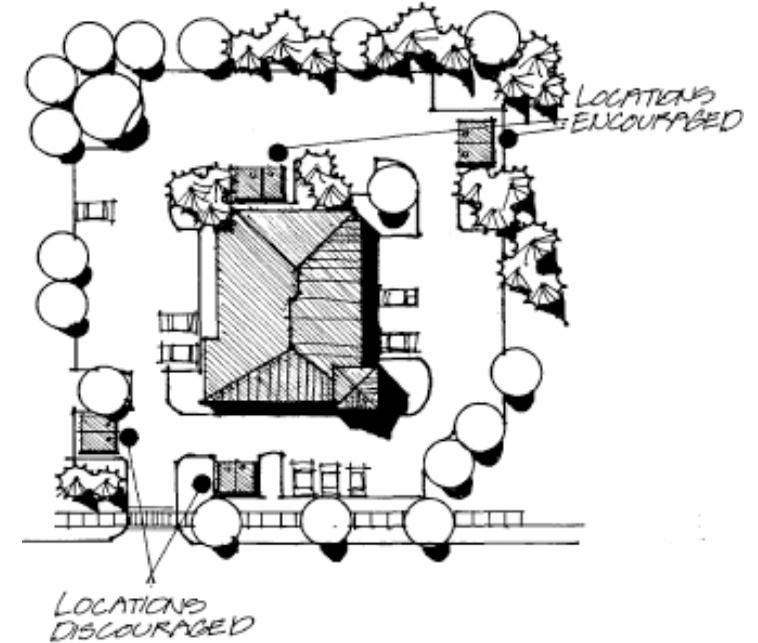
The purpose of these guidelines is to ensure that service activities are oriented on the property in a manner that is consistent with the character of the area, privacy, and aesthetic considerations.

*1. Refuse enclosures shall be screened from public view on at least 3 sides with a 6 to 8 foot opaque screen of either masonry, landscaping treatment or other compatible building or landscape materials.

2. Trash receptacle areas should not be placed in an area along a public street. Such areas should be located to allow for convenient access by refuse vehicles.

3. When located in a highly visible area, trash receptacle screening walls should be softened with landscape materials on earth berms.

4. Screening doors on the enclosure should be finished with a high quality material and durable finish.



[image a]



[image b]

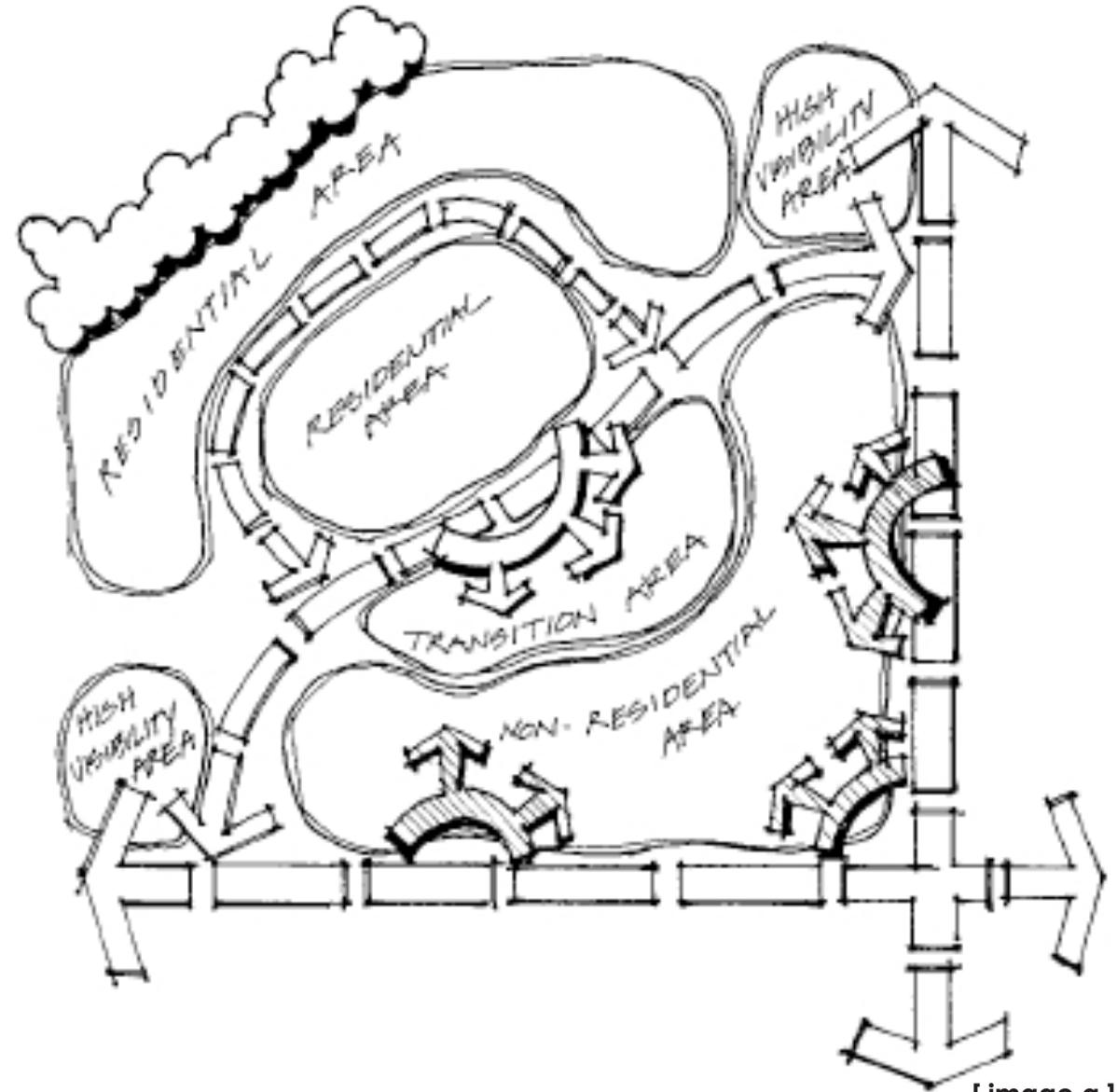
The level of design quality and building appearance required for the development of commercial buildings is subject to a tiered pattern, which is dependent upon location, visibility, and character of the surrounding area. Required design quality standards vary based upon the following:

1. HIGH VISIBILITY OR SENSITIVE AREAS: The highest development standards, including building materials and architectural design are required for buildings within this category. Such developments will be expected to achieve the policies adopted in the “Commercial Building Appearance Guidelines” and all other applicable design guidelines. Properties subject to this category are those with the following attributes: [see image a].

- a. Properties located along or visible from an arterial roadway, highway, or other major roadways.
- b. Properties located adjacent to residential development.
- c. Properties located in corridors that are key to the community image.
- d. Properties located near historically significant structures or districts in the community.

2. PREDOMINANTLY DEVELOPED AREAS: Buildings proposed to be developed in high visibility or sensitive areas that are predominantly developed may be permitted to incorporate similar building materials and design features as nearby buildings and will be permitted more flexibility in achieving the “highest quality” development standards. These materials and designs may not be considered of the “highest quality” but should still present an attractive and quality image for the community.

3. ORIGINAL TOWN/REDEVELOPING AREAS: Buildings proposed to be developed or redeveloped in the “Original Town” or other established areas of the community will be expected to incorporate building materials and architectural designs consistent with the surrounding area. Architectural styles and building materials must compliment the area’s historic development patterns and preserve its distinct character. Building quality should meet or exceed that of the surrounding area to upgrade building conditions and appearances; to improve economic viability and to reduce blight.



[image a]

The purpose of these guidelines is to ensure that the function, quality, and appearance of proposed structures are compatible when considered in the context of the surrounding area. How the architecture relates to other site considerations and elements will be design considered as part of design review.

Building character is extremely important in areas developed with a distinct architectural character or theme, or for areas of established or redeveloping uses.

1. Buildings should be designed in an attractive and interesting manner to define the image of the community.
2. Consistent architectural design, including building materials and colors, should be carried throughout the development area. Designs should provide visual interest and variety, yet be consistent with the architectural character of area.
3. In general, buildings should relate in scale and proportion to other buildings in the area. However, buildings of different size can be made architecturally compatible through skillful design and careful orientation.
4. All sides of the building should be equally attractive. Architectural details such as texture, pattern, color, and building form used on the front facade should be incorporated on all visible building facades. However, such requirements shall not apply to any façade(s) facing service courts or other areas generally not visible to the public.
5. Building massing should be varied to create a logical hierarchy of building forms; to break up long expanses of facade; to create shade and shadow; and to create "human scale". **[see image a]**
6. Human scale should be created by building massing form, as well as the use of architectural elements such as colonnades, canopies, walkways, street-level display windows, lighting, and a variety of building materials. Human scale should be further reinforced by site design features around the building exterior.



[image a]

7. Building materials should be similar to the materials of structures in the area. However, dissimilar materials may be permitted when incorporating other characteristics such as scale, form, architectural detailing and color to make the building compatible with the area.

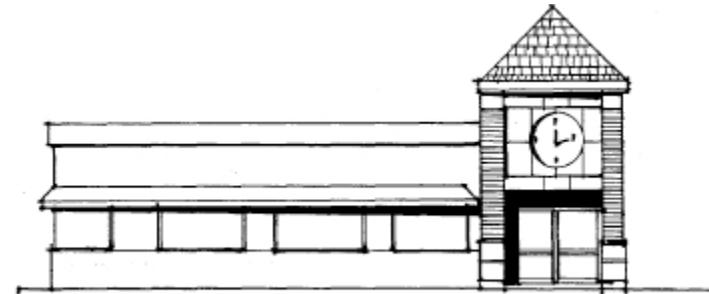
8. Materials requiring low maintenance are recommended over high maintenance materials. For instance, materials with integral color are generally recommended over materials that require painting.

9. Individual "corporate image" architectural design elements and colors shall be incorporated only as secondary elements to the development and not as the dominant element. Such elements should be consistent and blend with the larger development area.

10. Foundation planters and trees should be incorporated around the building exterior to soften the building appearance and to create a place of relief from the summer sun.

11. Service and mechanical areas shall be designed as an architectural feature of the building and entirely screened from view.

12. Additional guidelines may be established through corridor plans and plan reviews.



[image a]



[image a]



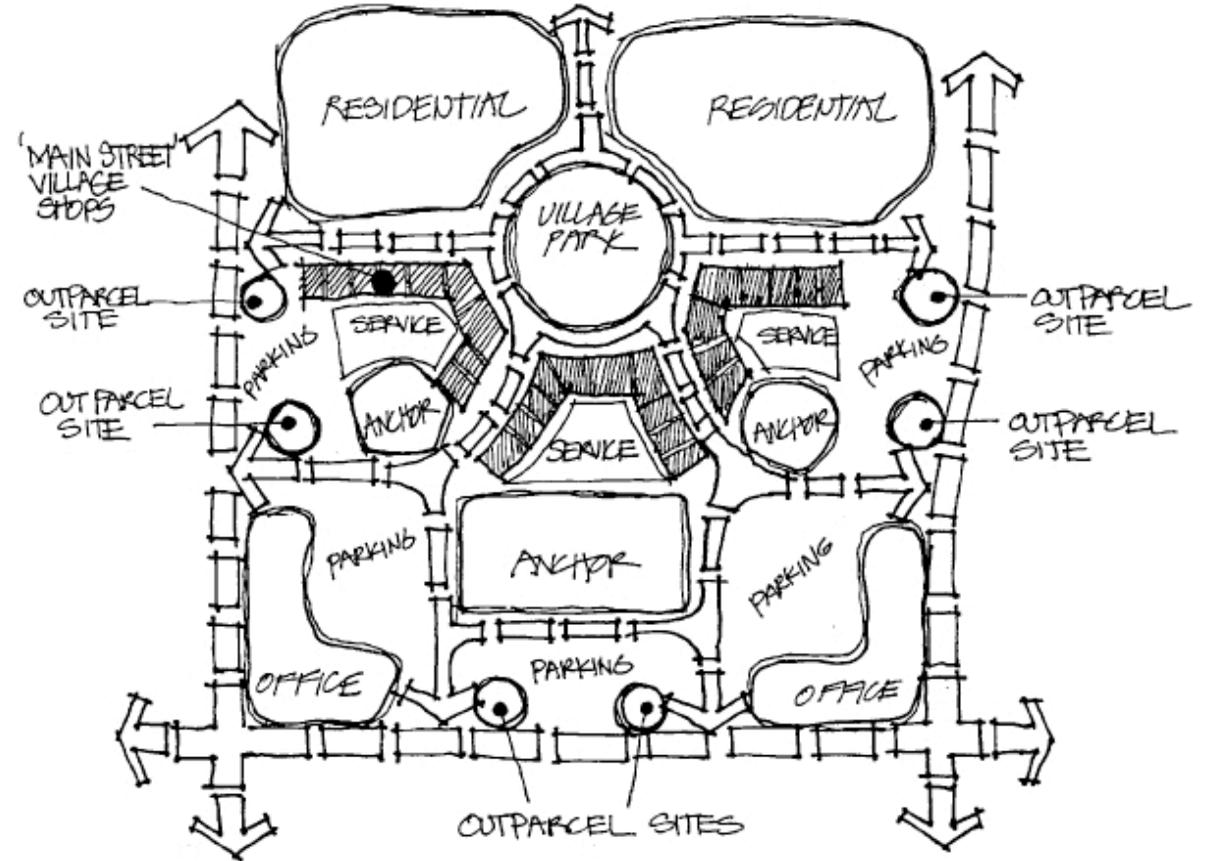
[image a]



[image a]

The purpose of these guidelines is to ensure that the function, quality, and appearance of proposed structures are compatible when considered in the context of the surrounding area. How the architecture relates to other site considerations and elements will be design considered as part of design review.

1. Preliminary site plans for commercial development shall indicate the ultimate development of the site, even where final development will be phased.
2. The development design, including the arrangement and placement building and site amenities, shall create "human scale" and be pedestrian oriented.
3. The development design shall utilize the opportunities and reflect the constraints created by floodplains, slopes, soils, vegetation and other physical features. Engineering techniques shall not be utilized to force-fit development into the environment.
4. Landscape areas should be combined to form plazas, open spaces, and other focal points within the development.
5. Open storm drainage and detention areas visible to the public shall be incorporated into the design of the development as an attractive amenity or focal point. **[see image a]**
6. The impact of the development on adjacent land uses shall be minimized by controlling building orientation, site design, landscaping, and architectural design.



[image a]

The purpose of these guidelines is to ensure that the function, quality, and appearance of proposed structures are compatible when considered in the context of the surrounding area. How the architecture relates to other site considerations and elements will be design considered as part of design review.

7. The circulation, utility, and storm drainage systems within a shopping center shall be designed and constructed so that when the center is fully developed the resulting systems are logical and efficient.

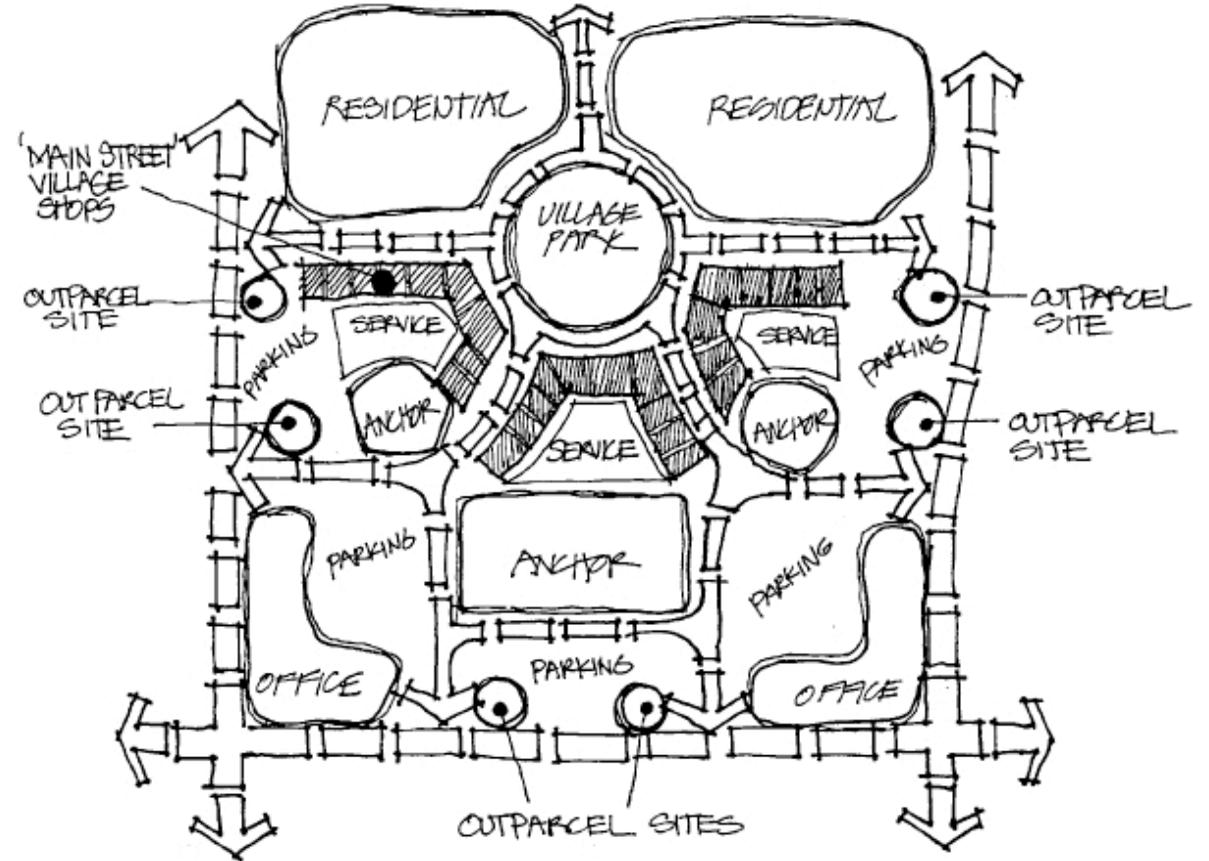
8. In conventional developments, the number, location, and design of independent pad sites shall reinforce, rather than obscure, the identity and function of the development. In neighborhood centers, pad sites are not permitted unless designed in a manner to create the appearance of multiple tenants and storefronts. All building elevations of a pad site structure shall be finished with the same level of architectural detail and quality.

9. The number and location of entrances shall be consistent with the existing or anticipated design of adjacent streets. The specific locations of entrances are largely dependent upon the following factors:

- a. The location of existing or planned median breaks;
- b. Separation requirements between the entrance and major intersections;
- c. Separation requirements between other entrances;
- d. The need to provide shared access with other sites;
- e. The need to align with previously approved or constructed access points on the opposite side of the street;
- f. The minimum number of entrances needed to move traffic onto and off the site safely and efficiently.

10. Entrance drives shall provide efficient ingress and egress to the center free from parking spaces backing into the drive.

11. Additional guidelines may be established through corridor plans and plan reviews.



[image a]

The level of design quality and building appearance required for the development of industrial buildings is subject to a tiered pattern dependent upon location, visibility, and character of the surrounding area. Required design quality standards vary based on the following:

1. HIGH VISIBILITY OR SENSITIVE AREAS:

The highest development standards, including building materials and architectural design are required for buildings within this category. Such developments will be expected to achieve the policies adopted in the "Industrial Building Appearance Guidelines" and all other applicable design guidelines. Properties subject to this category are those with the following attributes:

- a. Properties located along or visible from an arterial roadway, highway, or other major roadways.
- b. Properties located adjacent to residential development.
- c. Properties located in corridors that are key to the community image.

2. PREDOMINANTLY DEVELOPED AREAS:

Buildings proposed to be developed in high visibility or sensitive areas that are predominantly developed, may be permitted to incorporate similar building materials and design features as nearby buildings and will be permitted more flexibility in achieving the "highest quality" development standards. These materials and designs may not be considered of the "highest quality", but should still present an attractive and quality image for the community.

3. SECLUDED OR LOW VISIBILITY AREAS:

Properties located in secluded areas or in the middle of industrial parks with minimal visibility will be permitted the greatest flexibility and leniency in achieving the design guidelines for nonresidential building appearance.

The purpose of these guidelines is to ensure the function, quality, and appearance of proposed structures are compatible when considered in the context of the surrounding area. How the architecture relates to other site design considerations and elements will be considered as part of design review. Building character is extremely important in areas developed with a distinct architectural character or theme, or for areas of established or redeveloping uses. The following guidelines apply in “high visibility or sensitive” areas:

1. Buildings should be designed in an attractive and interesting manner to define the image of the community.
2. Consistent architectural design, including building materials and colors, should be carried throughout the development area. Designs should provide visual interest and variety, yet be consistent with the architectural character of the area.
3. In general, buildings should relate in scale and proportion to other buildings in the area. However, buildings of different size can be made architecturally compatible through skillful design and careful orientation.
4. Architectural details such as texture, pattern, color and building form used on the front facade should be incorporated on all visible building facades. However, such requirements shall not apply to any facade(s) facing service areas, storage yards, or other areas generally not visible to the public.
5. Building massing should be varied to create a logical hierarchy of building forms; to break up long expanses of facade; to create shade and shadow; and to create “human scale”.
6. Building materials should be similar to the materials of structures in the area. However, dissimilar materials may be permitted when incorporating other characteristics such as scale, form, architectural detailing and color to make the building compatible with the area.

7. Materials requiring low maintenance are recommended over high maintenance materials. For instance, materials with integral color are generally recommended over materials that require painting.

8. Service and mechanical areas shall be designed as an architectural feature of the building and entirely screened from view.

9. Additional guidelines may be established through corridor plans and plan reviews.

The purpose of these guidelines is to ensure the function, quality, and appearance of proposed developments are compatible when considered in the context of the surrounding area. How the building layout relates to other site design considerations and elements will be considered as part of design review.

1. Preliminary site plans for industrial development shall indicate the ultimate development of the site, even where final development will be phased.
2. The development design shall utilize the opportunities and reflect the constraints created by floodplains, slopes, soils, vegetation and other physical features. Engineering techniques shall not be utilized to force-fit development into the environment.
3. Open storm drainage and detention areas visible to the public shall be incorporated into the design of the development as an attractive amenity or focal point.
4. The impact of the development on adjacent land uses shall be minimized by controlling building orientation, site design, landscaping, and architectural design.
5. The circulation, utility, and storm drainage systems within industrial and business parks shall be designed and constructed so that when the area is fully developed the resulting systems are logical and efficient.
6. The number and location of entrances shall be consistent with the existing or anticipated design of adjacent streets. The specific locations of entrances are largely dependent upon the following factors:
 - a. The location of existing or planned median breaks;
 - b. Separation requirements between the entrance and major intersections;
 - c. Separation requirements between other entrances;
 - d. The need to provide shared access with other sites;
 - e. The need to align with previously approved or constructed access points on the opposite side of the street;
 - f. The minimum number of entrances needed to move traffic onto and off the site safely and efficiently.
7. Entrance drives shall provide efficient ingress free from parking spaces backing into the drive.
8. Additional guidelines may be established through corridor plans and plan reviews.

GUIDELINES FOR ACCESS TO PARK AND OPEN SPACE AREAS WITHIN RESIDENTIAL NEIGHBORHOODS R1

Parks, greenways and open space are vital components of the quality of life of a community. The intent of these guidelines is to increase the livability of residential neighborhoods by providing convenient, direct and safe access to these areas.

*1. In residential developments, accessways for pedestrian and maintenance purposes shall be provided by the developer to greenways, park and open space areas, and detention areas. Such access shall be provided in conformance with the following:

- *a. Where cul-de-sac streets back up to such areas.
- *b. A minimum of every 600 feet where lots back up to such areas.

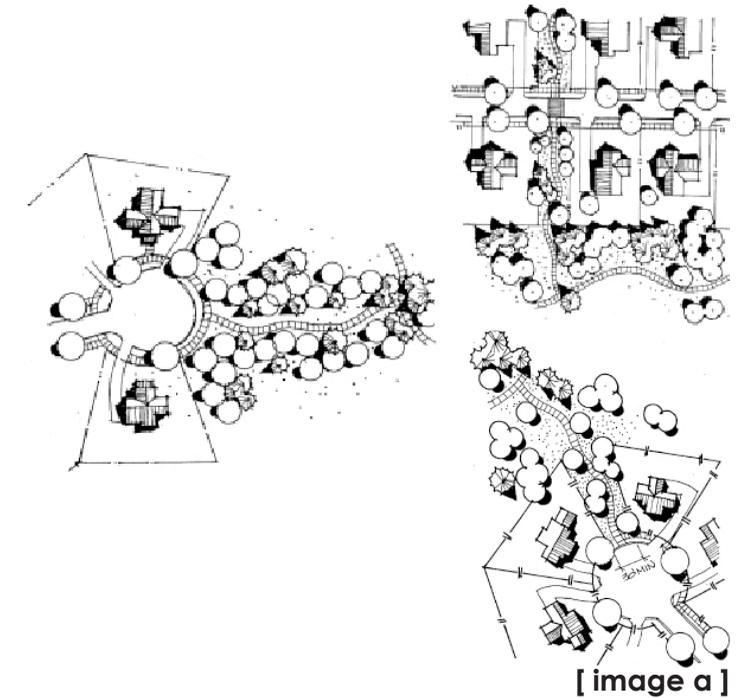
2. Access to park and open space areas may be accomplished as follows. Design alternatives which accomplish the intent of these guidelines will be considered.

- a. Direct access from a street.
- b. Direct access from a cul-de-sac that abuts or extends into the open space.
- c. Designated accessway between lots.

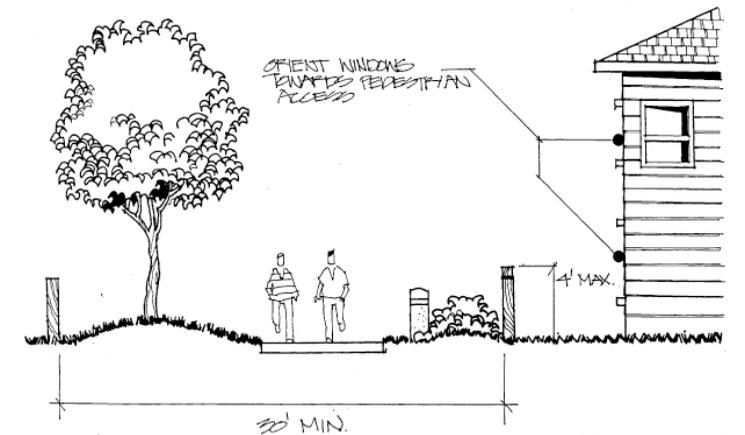
3. Accessways must be designed to be inviting and feel safe.

- a. Accessways must be of adequate width so that the placement of adjoining homes and fences will not create a long narrow "tunnel" effect. *Such accessways shall be a minimum of 30 feet in width or shall be another alternative in conformance with the intent of these guidelines.
- b. The maximum height of a fence along an accessway shall not exceed 4 feet.
- c. Adjoining houses are encouraged to provide windows facing the accessway to provide a sense that the space is being observed and not isolated.
- d. In some instances, it may be desirable to provide illumination of the accessway so that it can be safely used at night.
- e. In some instances, bollards or other similar treatment may be necessary to prevent cars from entering the accessway.

*4. Accessways which are intended to provide access for both pedestrians and maintenance vehicles must provide a minimum 8 to 10 foot wide paved surface in conformance with Engineering design standards.



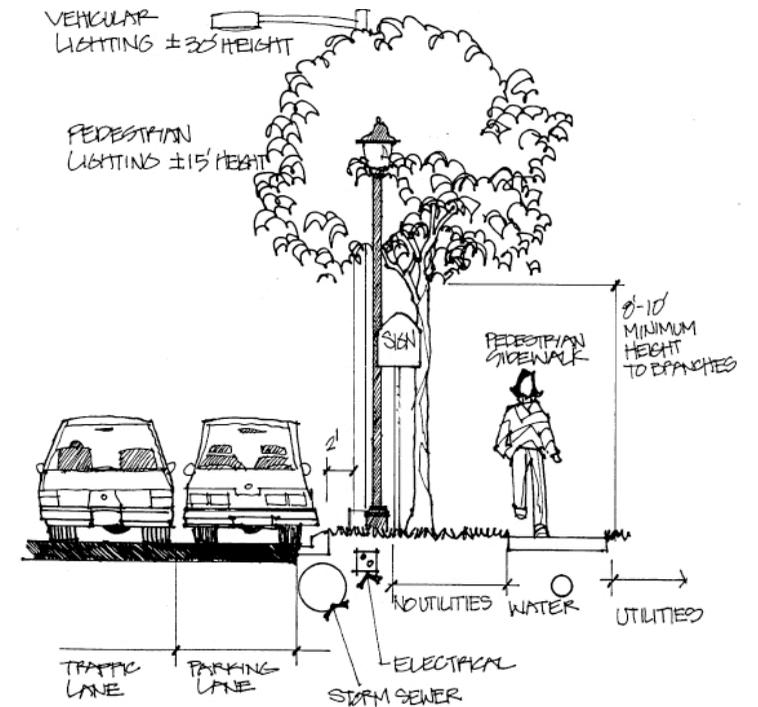
[image a]



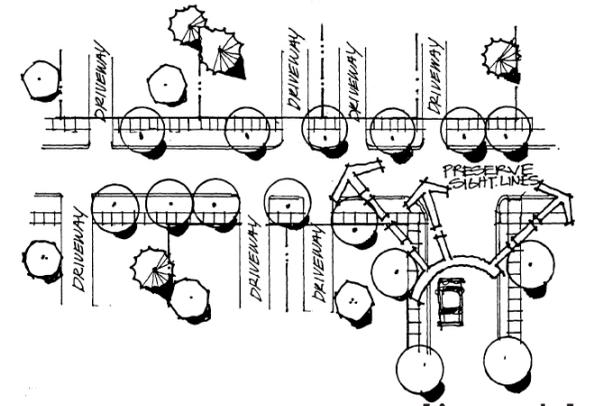
[image b]

The purpose of these guidelines is to create a more pleasing environment by improving the appearance of streets in developments through the use of street trees. Tree-lined streets encourage walking, promote interaction between neighbors, slow the speed of vehicles, and moderate climatic effects.

- *1. All residential developments shall incorporate the design and placement of street trees. However, a formal street tree planting scheme shall not be required if a master landscape plan is approved for a development area.
 - a. Individual streets should be recognizable by the tree used. They may be planted with more than one species of tree to accent common areas and focal points within the development.
 - b. Different streets should be planted with different species of trees to provide interest and to ensure disease and pest resistance throughout a development and the city.
- 2. The design and placement of street trees in a development should begin early in the design process to achieve the maximum benefit and to minimize conflicts.
 - *a. Street trees shall be located within the right-of-way and between sidewalks and curbs, or along the outside of the right-of-way within a 15 foot wide landscape easement.
 - *b. A minimum of 1 street tree is required per lot, with a minimum of 2 trees required on a corner lot. Street trees may count toward the overall number of trees required within the interior of the lot only for single-family and two-family dwellings.
 - *c. Street trees should be spaced as uniformly as possible. However, it may be necessary to group trees in some locations to create views and to avoid obstructions.
 - *d. Street tree species and typical spacing shall be indicated on preliminary plats.



[image a]



[image b]

The purpose of these guidelines is to create a more pleasing environment by improving the appearance of streets in developments through the use of street trees. Tree-lined streets encourage walking, promote interaction between neighbors, slow the speed of vehicles, and moderate climatic effects.

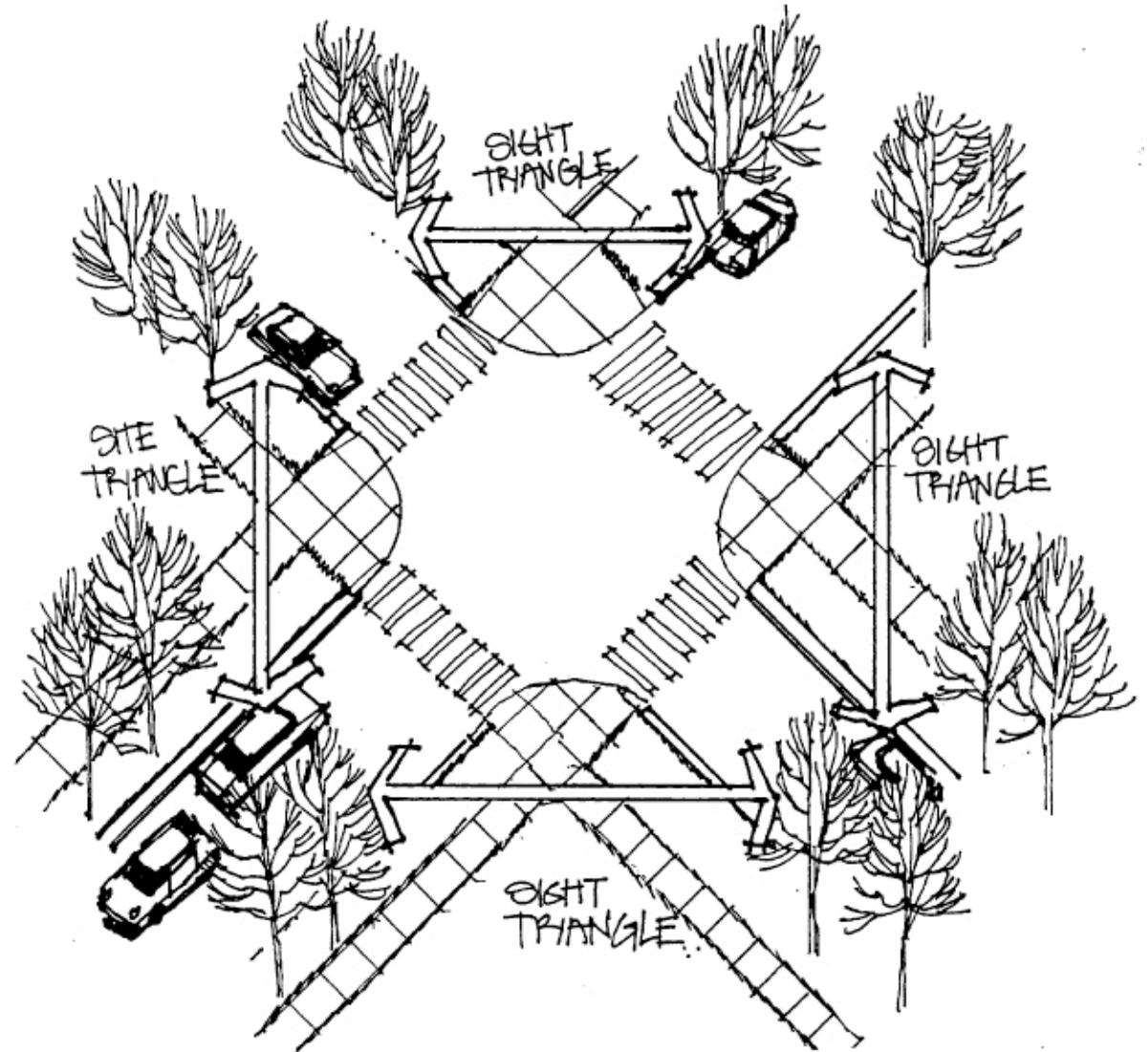
*3. Adequate clearances between street trees, infrastructure, and driveways shall be coordinated.

*a. Variances in street tree spacing may be necessary to coordinate utilities, street lights, driveways, storm drain structures, sidewalks, and traffic clearance zones.

*b. Street trees and utilities shall be placed to allow access to utilities with minimal disruption to trees and their supporting root systems while avoiding increased service costs.

*c. Street trees shall observe all sight-distance requirements per 18.68.150 of the UDO and as specified by the City Traffic Engineer.

4. The developer shall be responsible for planting street trees at the completion of each development phase of development in a residential subdivision. Prior to beginning the final phase, the developer shall submit a bond or other financial guarantee that street trees will be planted in all phases yet to be completed.



[image a]

The purpose of these guidelines is to create a more pleasing environment by improving the appearance of streets in developments through the use of street trees. Tree-lined streets encourage walking, promote interaction between neighbors, slow the speed of vehicles, and moderate climatic effects.

*5. The following are the preferred trees to be used to meet City street tree standards and specifications (for other trees which may be acceptable under certain conditions contact the City Forester):

*a. Street Tree Species:

<i>Acer platanoides</i> var.	Norway Maple
<i>rumbrum</i> var.	Red Maple
<i>saccharum</i> var.	Sugar Maple
<i>Carya illinoensis</i>	Pecan
<i>Celtis occidentalis</i>	Hackberry
<i>Cladrastis lutea</i>	American Yellowwood
<i>Franxinus americana</i> var.	White Ash
<i>pennsylvanica lanceolata</i> var.	Green Ash
<i>quandrangulata</i>	Blue Ash
<i>Ginkgo biloba</i>	Ginkgo (male, seedless)
<i>Gleditsia triacanthos inermis</i> var.	Honeylocust (thornless, podless)
<i>Gymnocladus dioicus</i>	Kentucky Coffeetree
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Plantanus x acerfolia</i>	London Planetree
<i>Quercus acutissima</i>	Sawtooth Oak
<i>bicolor</i>	Swamp White Oak
<i>borealis</i>	Northern Red Oak
<i>imbricaria</i>	Shingle Oak
<i>macrocarpa</i>	Bur Oak
<i>muhlenbergi</i>	Chinquapin Oak
<i>robur</i>	English Oak
<i>Tilia americana</i>	American Linden
<i>cordata</i> var.	Little Leaf Linden
<i>tomentosa</i>	Silver Linden
<i>Sophora japonica</i>	Japanese Pagodatree
<i>Ulmus carpinus</i> var. <i>buisman</i>	Buisman Elm
<i>parvifolia</i>	Lacebark Elm
<i>Zelkova serrata</i>	Zelkova

*b. Prohibited Trees:

Ailanthus, White and Silver Birch, Box Elder, Catalpa, Cottonwood, Siberian Elm, "Fruit" trees, Silver Maple, Mimosa, Pin Oak, Russian Olive, Poplar, Weeping trees, Willows, Shrubs, all Evergreens.

*c. Street Tree Specifications:

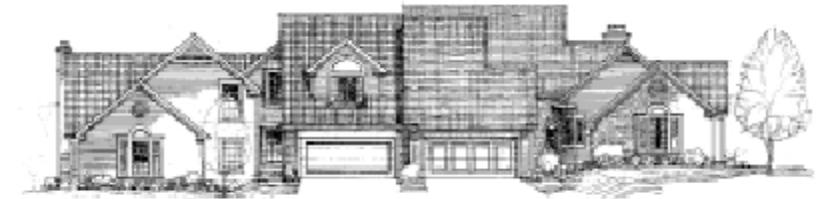
All street trees shall meet the city's Technical Specifications for material quality, minimum size, etc. Trees shall be guaranteed for a period of no less than 1 year.

The intent of these guidelines is to increase the livability and the appearance of multi-family complexes. The design of such development contributes to the overall image of the city and is a significant component of the multi-family buildings are clustered into complexes rather than integrated into mixed-use “Traditional Neighborhoods”, it is expected that such complexes will be designed to establish strong “neighborhood” environments.

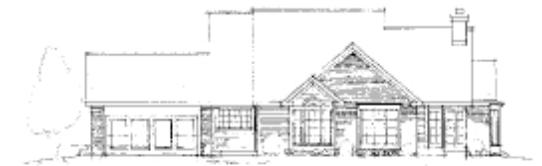
1. As much as possible, developments should include a mix of housing styles such as townhomes, condominiums, garden apartments, duplexes, and single-family units to create a mixed-use community with housing options for residents of all ages and incomes.

2. When located adjacent to single-family dwellings, the design and appearance of multiple-family dwellings must have similar massing, height, roof pitch, and architectural features including front porches; cornice lines; horizontal lines of windows; and architectural embellishments, such as: shutters, dormers, belvederes, chimneys, etc., to create the appearance of single-family dwellings.

3. Exterior facades shall be finished with high quality building materials and architectural detailing. A minimum of 75% of the exterior walls shall be finished with decorative masonry, stone, or stucco. Synthetic or imitation materials with a false or “tacked on” appearance shall not be permitted. Vinyl siding is strongly discouraged unless of the highest durability and fabricated design.



□ FRONT



□ R. SIDE



□ L. SIDE



□ BACK

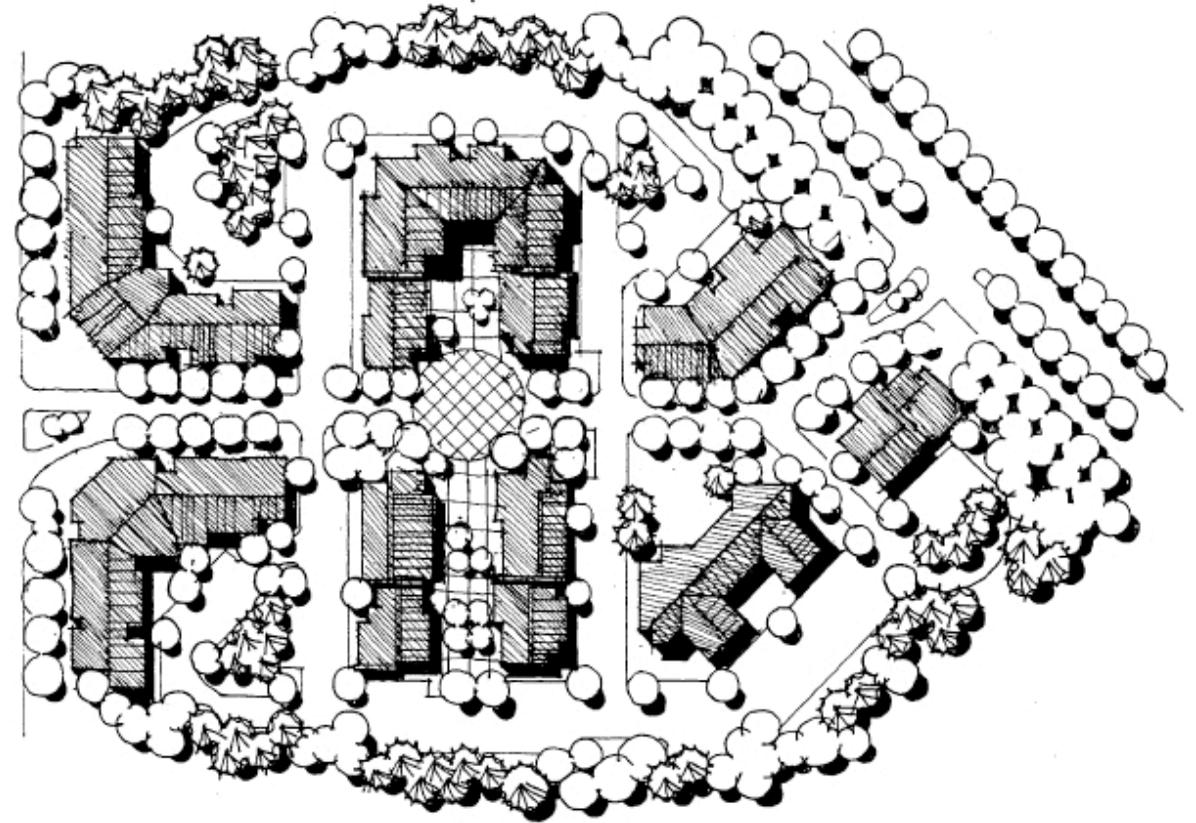
The intent of these guidelines is to increase the livability and the appearance of multi-family complexes. The design of such development contributes to the overall image of the city and is a significant component of the multi-family buildings are clustered into complexes rather than integrated into mixed-use “Traditional Neighborhoods”, it is expected that such complexes will be designed to establish strong “neighborhood” environments.

4. Site designs should create a sense of “neighborhood” which includes:
 - a. An internal vehicular circulation system reflective of a single-family residential street system, as opposed to looped systems which may appear disjointed and confusing.
 - b. Buildings sited with front entrances and porches oriented toward streets, drives, and plazas, rather than clustered around parking lots.
 - c. Parking lots located behind buildings or screened from view from internal streets, unless it is deemed appropriate to use a parking lot as a buffer from an arterial street.
 - d. Walkways that connect all buildings with parking areas, play areas, clubhouses, and sidewalks along adjoining streets, as well as neighboring stores, offices, and transit stops.
 - e. Centrally located plazas, clubhouses, pools, and recreational facilities.
 - f. Access to transit stops and neighborhood retail centers, whenever possible.



The intent of these guidelines is to increase the livability and the appearance of multi-family complexes. The design of such development contributes to the overall image of the city and is a significant component of the multi-family buildings are clustered into complexes rather than integrated into mixed-use “Traditional Neighborhoods”, it is expected that such complexes will be designed to establish strong “neighborhood” environments.

5. Building designs that create variety and do not look monotonous if replicated throughout the development are required. Such designs should include the following:
- a. Side and rear building elevations, garages, carports, and all accessory structures with the same level of design, aesthetic quality, and architectural detailing.
 - b. Porches, varied rooflines, and varied façade depths to create variety and individuality of each dwelling within the building.
 - c. Windows and projecting wall surfaces to break up larger wall surfaces, establish visual interest and provide visibility of the street and other public spaces encouraging social interaction.
 - d. Protective entry courts, common vestibules, covered breeze ways, or enclosed stair halls to reduce the number of visible doors, unless designed in a row house or townhouse manner oriented toward the street.
 - e. Garages designed to be integrated with the building design or sited so as to avoid long monotonous rows of garage doors and building walls. Garages shall be oriented so that they do not visually dominate the building façade or the streetscape.



CHAPTER 1 - INTRODUCTION

1.1 PURPOSE OF RESIDENTIAL NEIGHBORHOOD DESIGN MANUAL

The purpose of this manual is to briefly describe methods to achieve the Comprehensive Plan's goals of encouraging pedestrian-friendly, residential neighborhood development in an attractive, landscaped setting while promoting economic stability in a safe living environment. The conventional residential subdivision since World War II has focused on hierarchical and loop street patterns to create neighborhoods within a subdivision. Oftentimes nonresidential land uses, such as retail and office developments are segregated or isolated from residential areas both visually and physically. However through good design, differing land uses can be integrated together and interwoven within the neighborhood, all within close proximity.

This manual contains guidelines, illustrations, and standards for a conventional residential subdivision. This information is intended to be used for planning, architectural design, street and streetscape layout, open space, landscape design, as well as locating utilities and drainage systems. It is the intent of this manual to improve the conventional residential development pattern by promoting the design of "neighborhoods" with greater emphasis placed on livability, appearance, transportation opportunities, convenience and safety for all residents. While these standards are not absolute, they are intended to guide the review and approval of conventional residential subdivision development plans, plats, and infrastructure plans.



CHAPTER 2 - DEVELOPMENT GUIDELINES

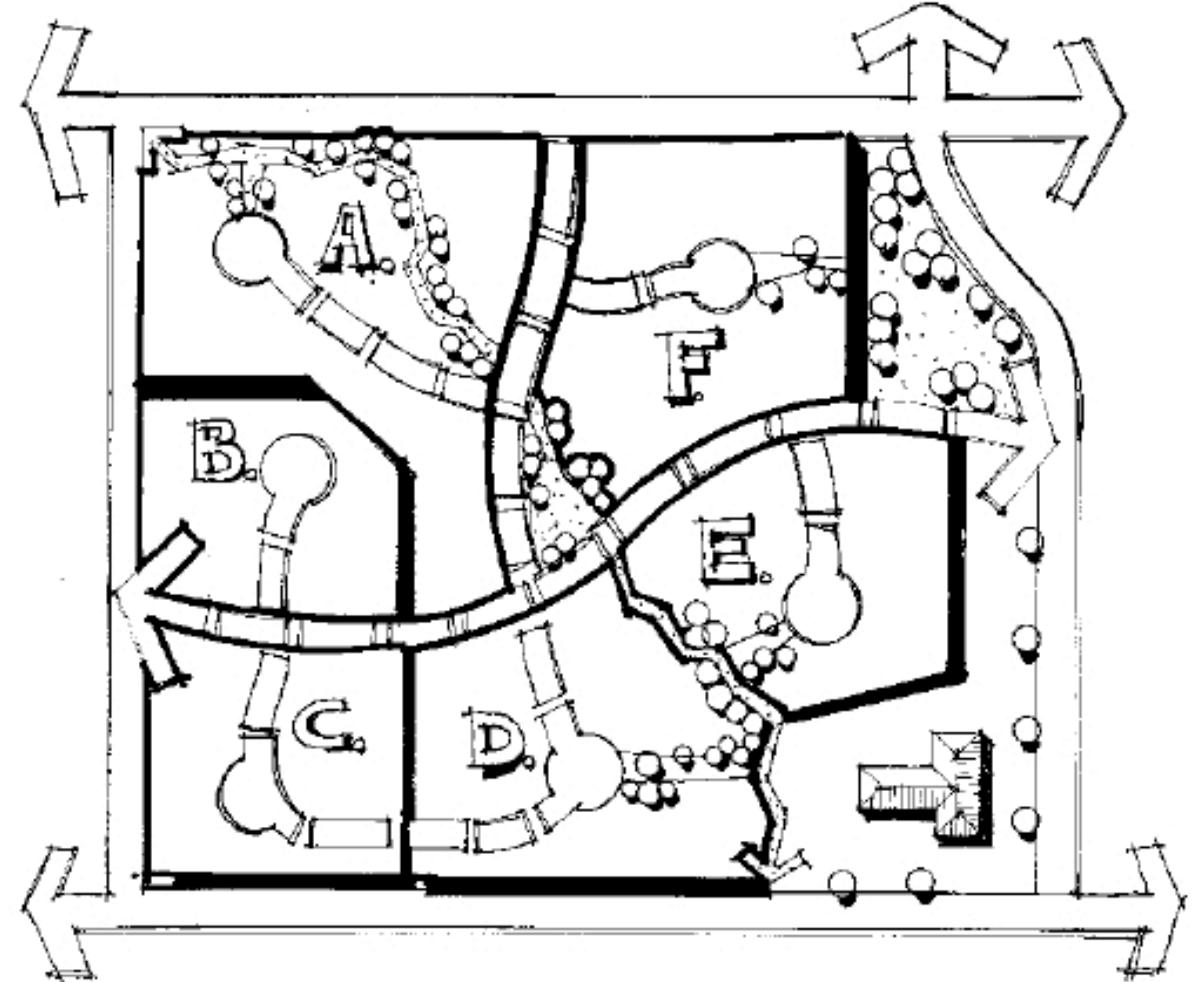
2.1 SUMMARY

There are a number of design issues that impact the livability of residential neighborhoods. This chapter describes and illustrates the characteristics of a successful residential neighborhood design.

2.2 RESIDENTIAL NEIGHBORHOOD CHARACTERISTICS

Objective 2.2(A) Neighborhood Size

Residential neighborhoods should be designed in a manner that allows for pedestrian activity. The majority of the population should be within a 5-minute walking distance (approximately ¼ mile) of neighborhood services, such as community facilities, parks, schools, neighborhood retail centers, and employment centers. Neighborhoods should be designed in a manner to include multiple development areas within shorter walking distances by incorporating greenways and mid-block pedestrian and cul-de-sac connections so that all areas are easily connected and equally accessible. Development design should not be circuitous or force residents to drive to neighborhood destinations.



CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.2(B) Land Uses

The Comprehensive Plan recommends that diverse high quality residential areas be created which include a variety of housing styles and land uses. A development design with a mix of “integrated” land uses is highly desirable so that it is not necessary to create large buffers between differing uses. Conventional residential subdivisions are designed to either separate and isolate land uses with buffers, or to integrate land uses so that large buffers are not necessary. The preferred land use development pattern creates a variety of housing types, including single-family residential, duplex, townhomes, condominiums, and apartments all intermixed throughout the neighborhood to meet the diverse needs of residents with varied ages and incomes. Shops, offices, public services and civic buildings, and other nearby employment opportunities should be located within close proximity to be easily accessible by pedestrians.

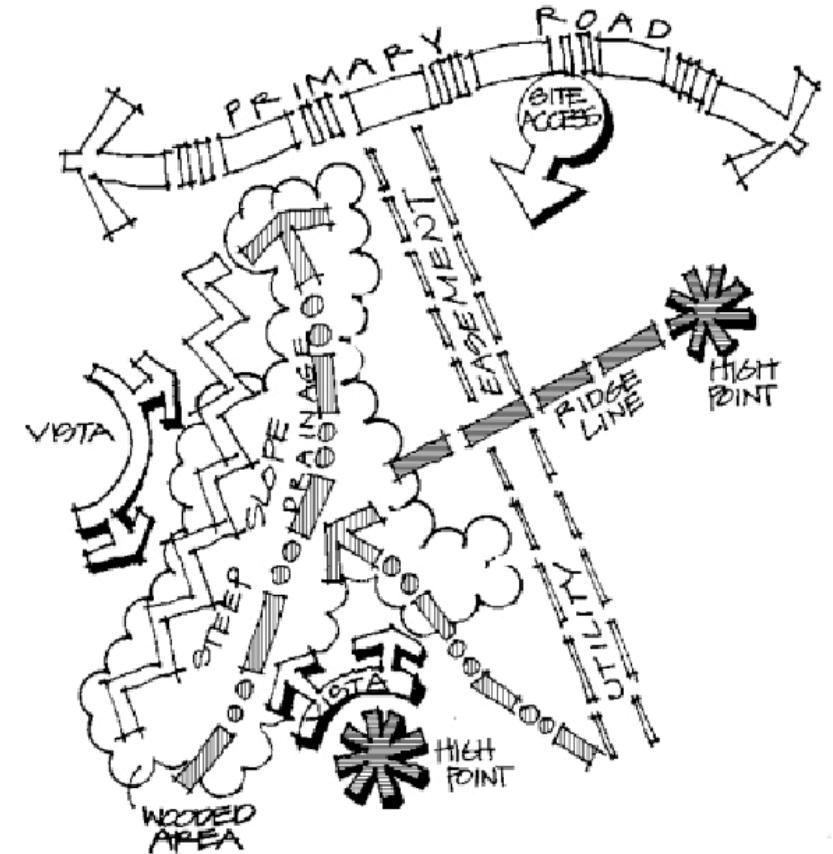
When land uses are designed to separate and isolate one another, the transitional area buffer design is critical. Buffer areas should screen noise, lighting, and undesirable views from residential areas with a combination of landscaping, berms, walls and decorative fencing. However, buffer designs that create “walled-in” or “compound” communities with no interaction with the surrounding area are highly undesirable and will not be approved. Landscaped open space and common areas with pedestrian access and recreational amenities should be incorporated in buffer areas to provide open space amenities for the neighborhood.



CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.2(C) Designing with the Environment

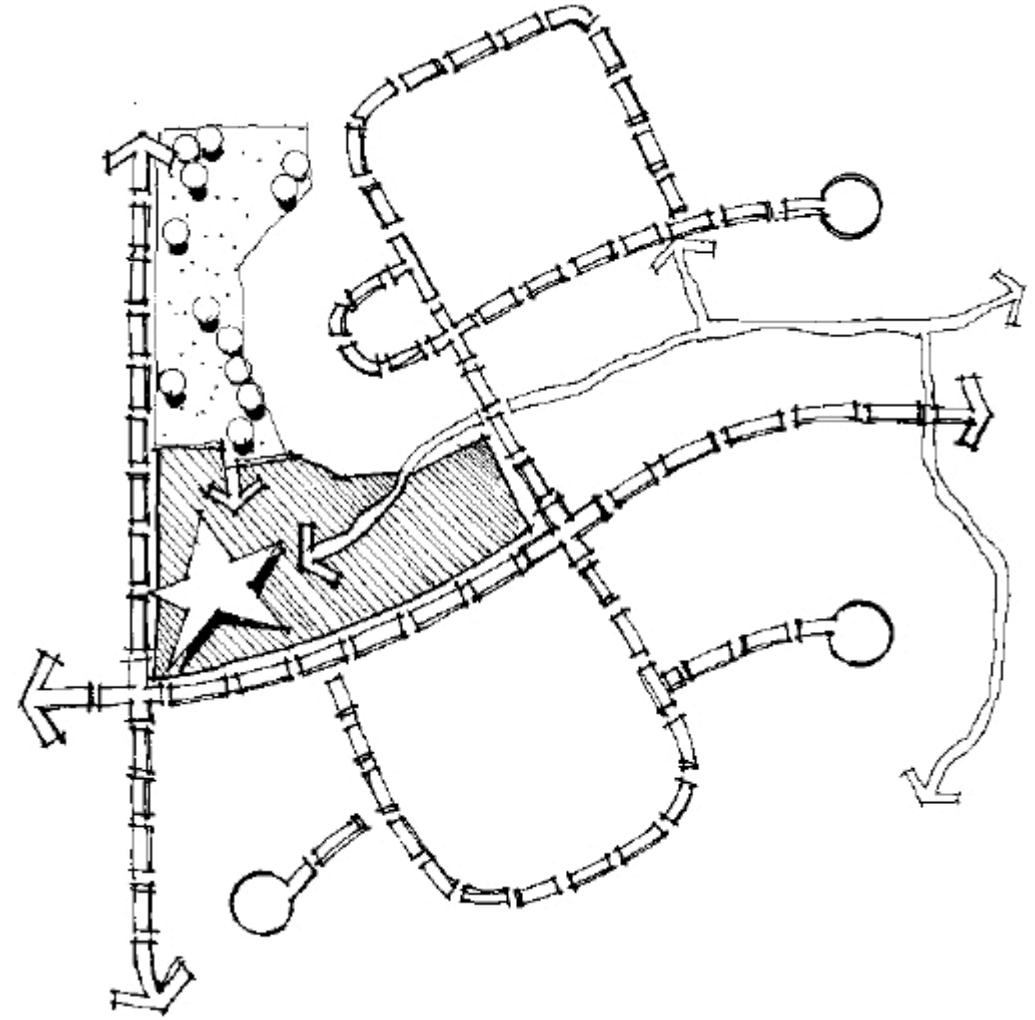
Residential subdivision designs must always respect the natural environment and develop in harmony with existing natural features. The Comprehensive Plan recommends that natural physical features be incorporated into new developments, with drainage areas and other natural features left in their natural state and incorporated into the overall subdivision design. Engineering techniques shall not be used to force-fit development into the environment. Development designs that require significant amounts of cut and fill to maximize the number of lots at the expense of the environment shall not be approved.



CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.2 (D) Public Parks & Open Space Systems

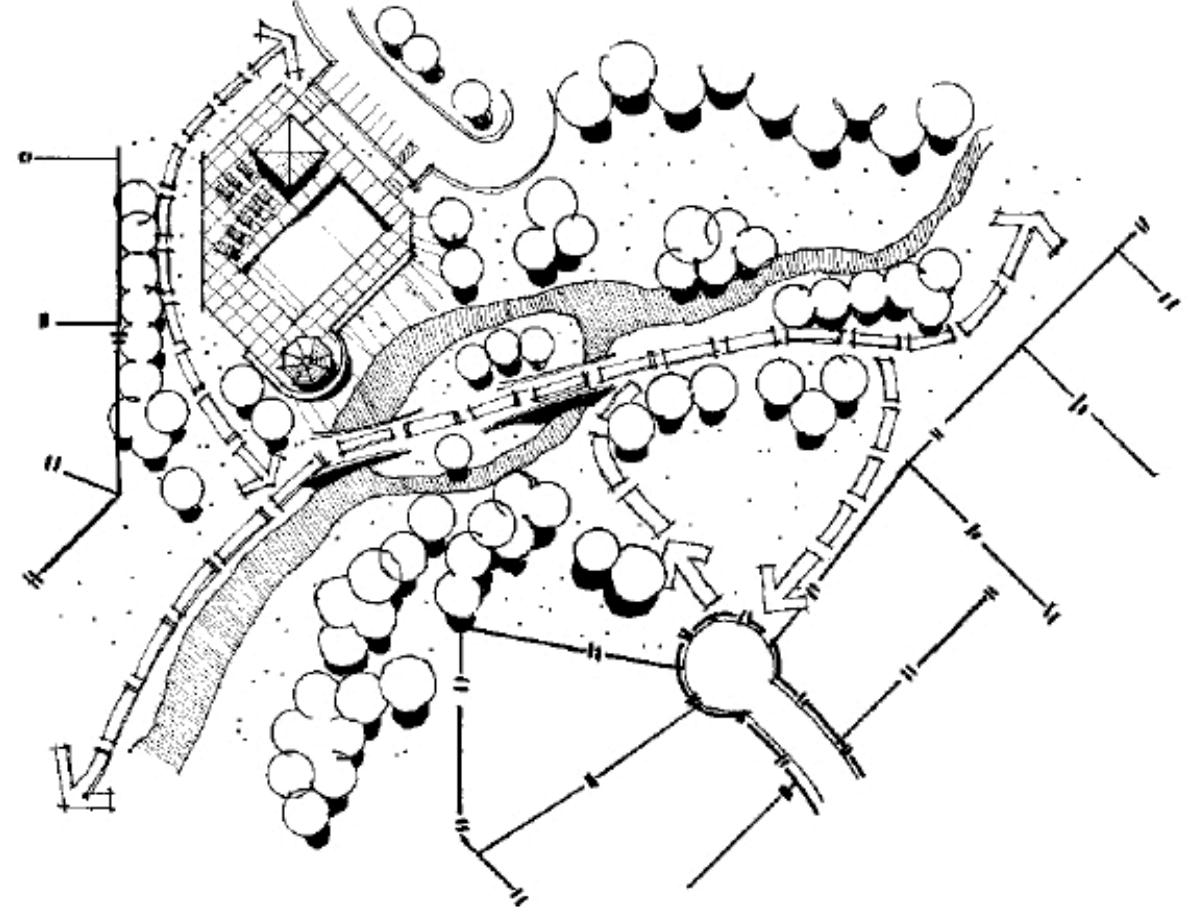
Publicly accessible neighborhood parks and greenway systems provide open spaces in conventional subdivisions. Greenways are typically located along creeks and serve to preserve the natural character of floodplains and wooded areas. Some larger utility easements may provide opportunities for greenways and multi-use open space. Trails should be provided within the open space to provide linkages to community facilities, such as schools and parks, and to adjoining subdivisions. The Comprehensive Plan recommends that neighborhood parks should be provided within each quarter-section of residentially developed area or an approximate 5-minute walking distance of a majority of homes in an area. Wherever possible, neighborhood parks should be located along a greenway system to maximize their recreational potential and improve access to the neighborhood park. All neighborhood parks should be located along at least one or two collector streets. Access to neighborhood parks from adjacent subdivisions should be coordinated in the preliminary platting stages of development.



CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.2(E) Private and Semi-Private Open Space

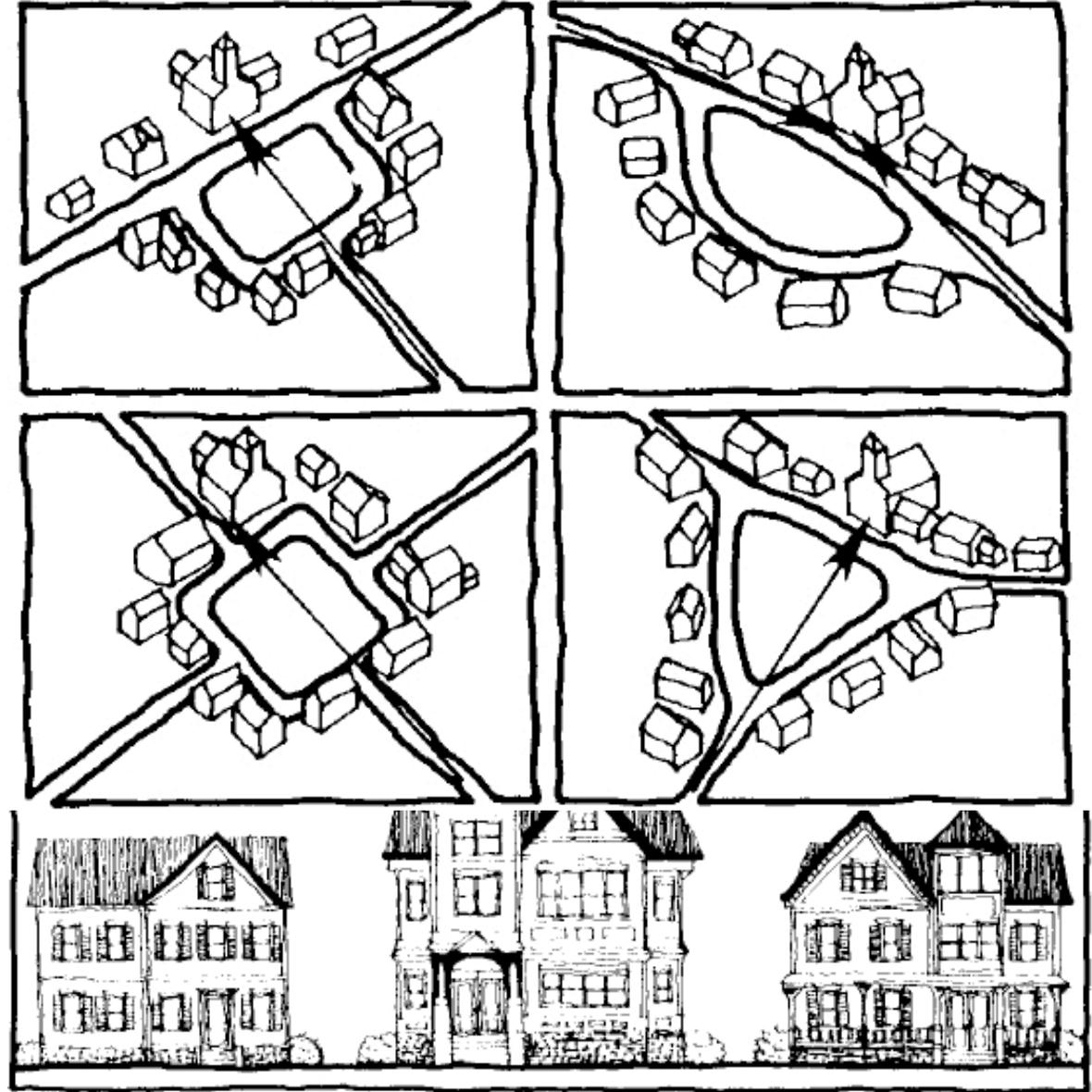
Private open space systems, which preserve environmentally sensitive areas and provide recreational opportunity, should be encouraged. These privately-owned and maintained spaces can provide important recreational opportunities to nearby residents. Neighborhood and homeowner's associations are encouraged to provide the maintenance and improvements for these areas. Private open space systems and facilities can provide buffering from conflicting land uses.



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Objective 2.2(F) Relationship between Buildings and Landmarks

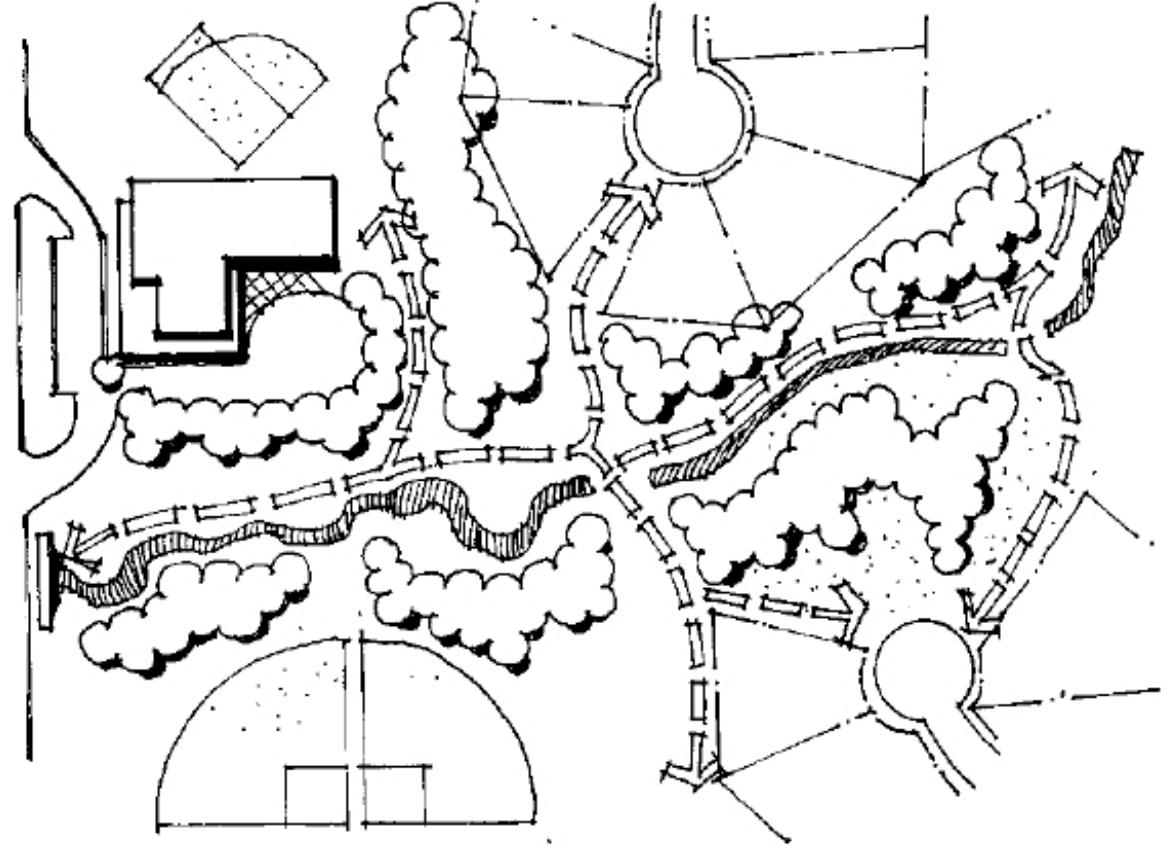
The compatibility of buildings in the neighborhood is determined by their arrangement, bulk, form, character and landscaping with common architectural elements. Streets should be visually terminated with important buildings, vistas of open space, water, or other distant topographic features. Civic buildings (schools, churches, museums, government offices, theaters, meeting halls, etc.) should be located on prominent sites within the neighborhood, such as on squares or at the termination of streets vistas.



CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.2(G) Schools and Community Facilities

The location of schools, civic buildings, neighborhood pools, clubhouses, and neighborhood recreational facilities within a conventional subdivision greatly affect the identity and stability of a neighborhood. Schools and community facilities should be centrally located and linked to a greenway or private open space system to provide direct, safe walking access. The location of schools should be determined for an area before preliminary platting begins or be coordinated with preliminary plats. Walking distances to schools and community facilities should be minimized through the combined use of sidewalks, trails, and mid-block and cul-de-sac connections. The location and design of schools and community facilities must always recognize the resulting traffic impact and circulation patterns within the neighborhood.

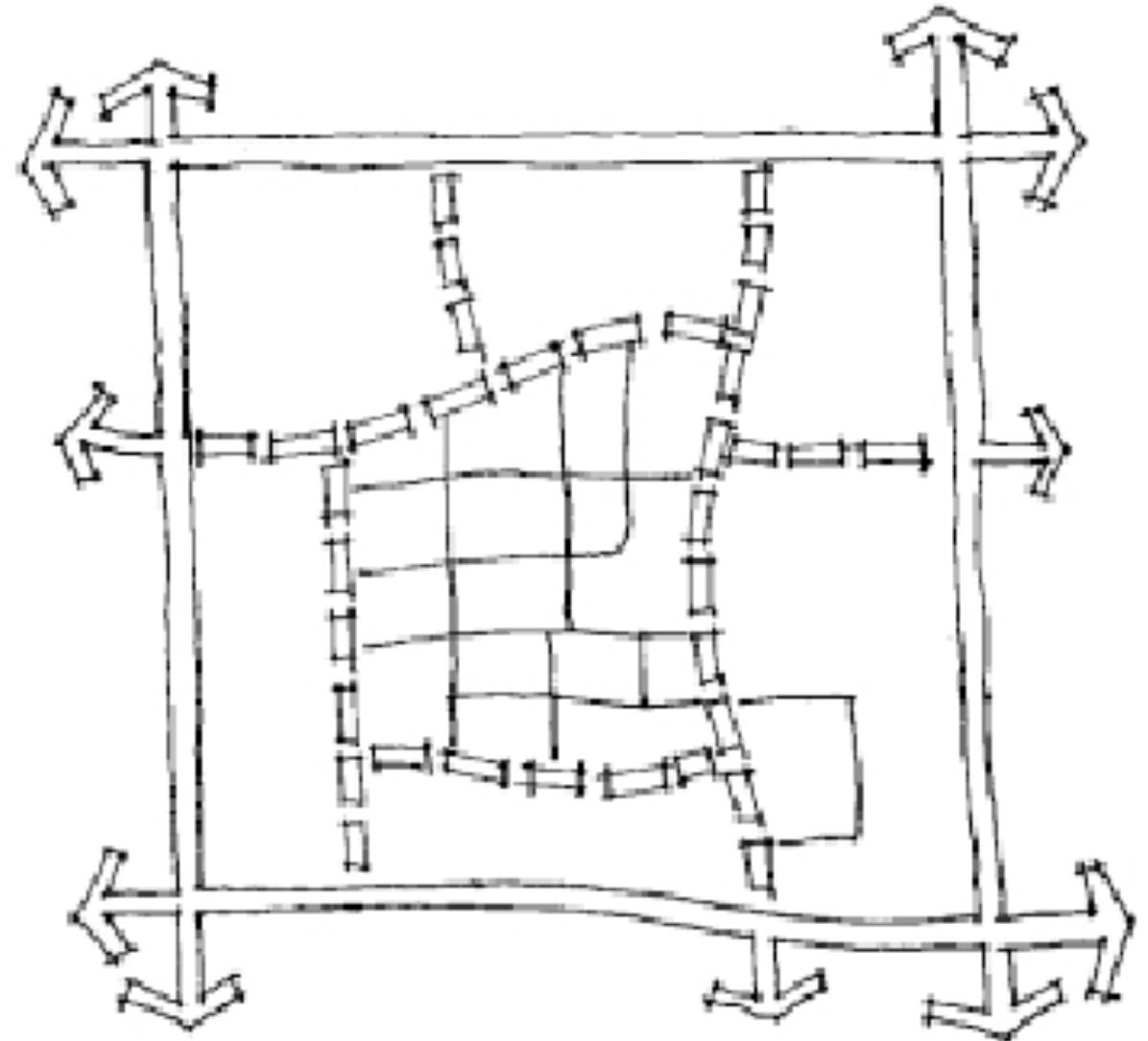


CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(A) Street Network

The transportation network serves as the basic framework of the conventional subdivision design. Street layouts should always respond to local conditions such as topography, watercourses, greenways and the existing street systems of neighboring developments. Street systems that do not recognize local topographic conditions and instead are designed for purposes of maximizing the number of lots within the development shall not be approved. Local streets must be laid out such that their use by through-traffic will be discouraged. However, the street network is required to consist of interconnecting streets with alternative routes throughout the neighborhood to diffuse automobile traffic and shorten walking distances. The street network must not be so circuitous that it creates confusion and it must not funnel all vehicular and pedestrian traffic on one street through the neighborhood.

Variations on the grid street pattern are encouraged, with curvilinear streets, cul-de-sacs, or "U" shaped streets used where such street design will respond to and preserve natural features. Each square mile of residential area should contain an average of four collectors to distribute the traffic evenly throughout the residential area and provide the most direct access to the arterial street system. Ideally, collector intersection and traffic signals to be located with maximum efficiency. In addition, a limited number of local street intersections to the arterial roadway without a median break (right-in/right-out intersections) shall be permitted in order to provide additional entrances into the neighborhood and to help diffuse traffic. The signalized intersection of a collector and arterial roadway are preferred locations for gateways into the neighborhood, transit stops, and "neighborhood centers" to provide neighborhood-oriented services to area residents.



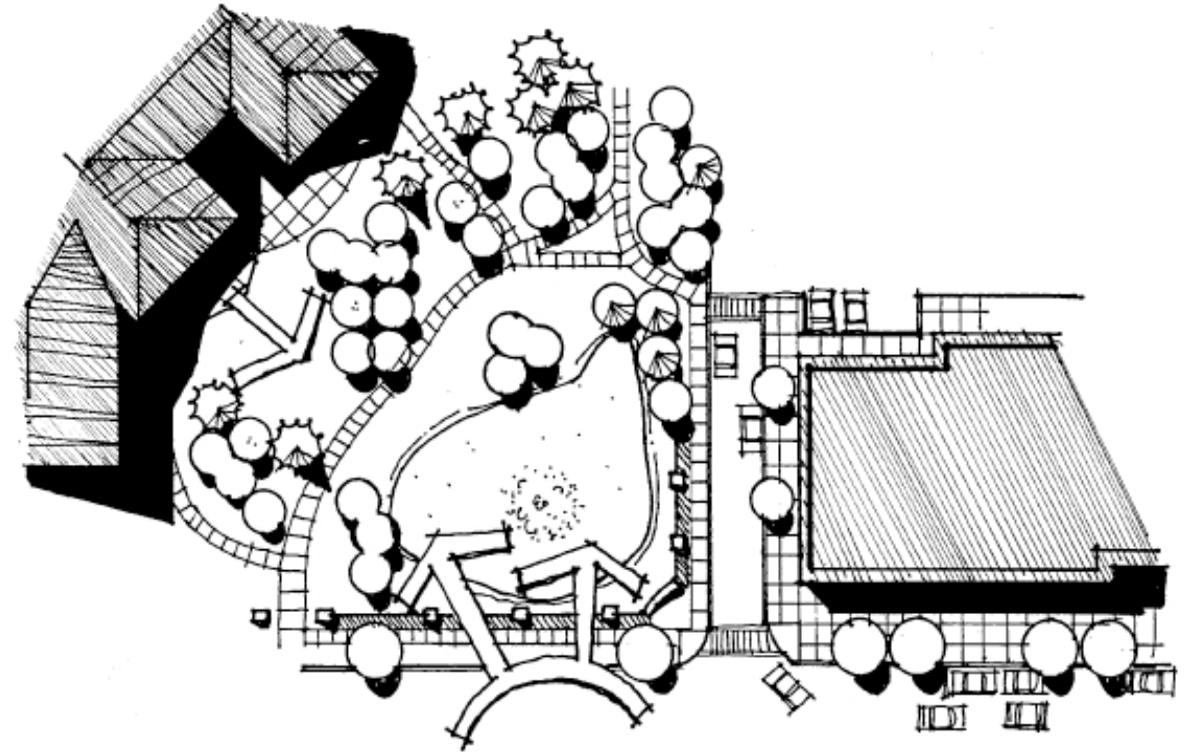
CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(B) Neighborhood Center

A neighborhood center containing retail, commercial, civic, public services, and transit stops to meet the daily needs of community residents serves as the gateway and focal point of a neighborhood. Neighborhood centers may be located at the intersection of a collector roadway and an arterial street or located within a neighborhood in a central location. The 'NC' Neighborhood Center zoning district is intended as the method of incorporating "neighborhood-oriented" services in areas identified as "residential" by the Comprehensive Plan.

Neighborhood Centers are expected to be fully integrated into the neighborhood so buffers are not necessary. It is an area that is pedestrian-oriented with easy vehicular and pedestrian access from within the neighborhood.

The areas around a neighborhood center are ideal for higher density housing such as townhouses, row houses, or condominiums to create a true mixed use environment and a higher concentration of residents to patronize neighborhood businesses and transit stops. Uses typically found in a neighborhood center include small-scale retail shops, restaurants, offices, banks, hotels, post office, governmental offices, churches, community centers, and attached residential dwellings.

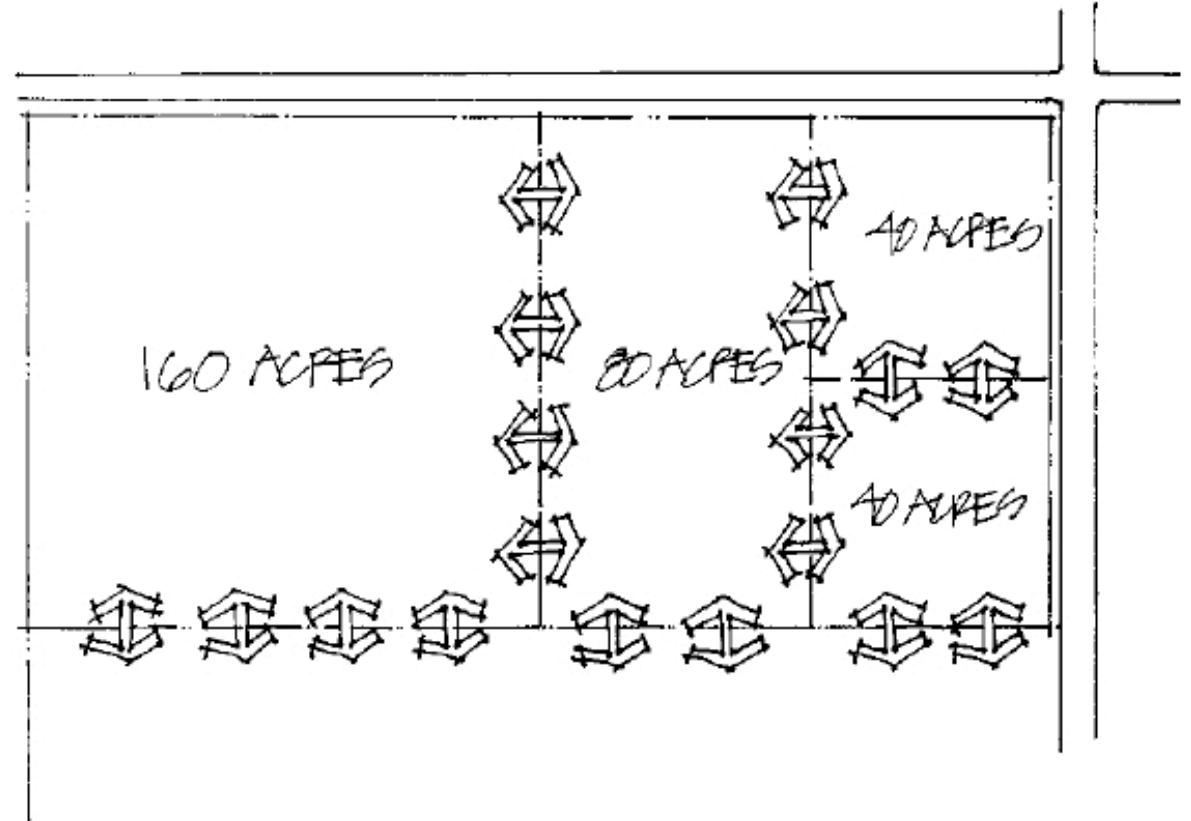


CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(C) Connections to Adjacent Properties

Interconnection between development areas is a prime consideration when designing a subdivision. Street linkages between adjoining developments can reduce the volume of traffic on collector roads and at subdivision entrances. In addition, various routes throughout a development area result in more evenly distributed traffic as well as reduced travel distances for motorists and pedestrians.

Development designs must reflect existing topography, as well as existing and future land uses of adjoining properties, rather than designing around existing property lines. When located adjacent to an area anticipated to develop with similar land uses, streets shall be extended to the boundary lines of the tract, unless prevented by topography or other physical conditions. At a minimum, there shall be one street extended to the boundary line of the tract for each 660-linear feet of the property line with adjoining tracts (approximately every 1/8th mile).

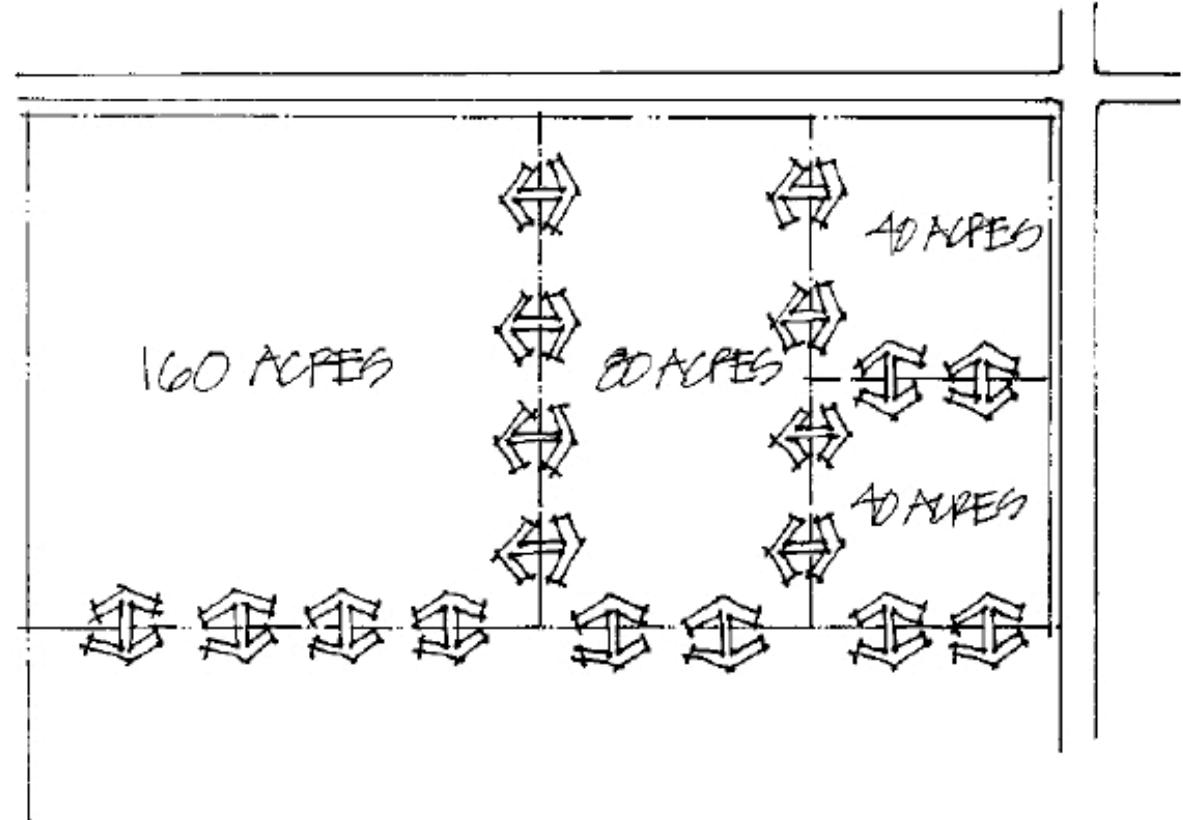


CHAPTER 2 - DEVELOPMENT GUIDELINES

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Development designs must reflect existing topography, as well as existing and future land uses of adjoining properties, rather than designing around existing property lines. When located adjacent to an area anticipated to develop with similar land uses, streets shall be extended to the boundary lines of the tract, unless prevented by topography or other physical conditions. At a minimum, there shall be one street extended to the boundary line of the tract for each 660-linear feet of the property line with adjoining tracts (approximately every 1/8th mile).



CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(D) Pedestrian Network

The sidewalk provides the framework for the pedestrian system in every neighborhood. At a minimum, sidewalks are provided on one side of cul-de-sacs and local streets, but are encouraged on both sides of the street whenever possible. Sidewalks are required on both sides of collector and arterial streets. The pedestrian network can be greatly improved and walking distances substantially reduced through the use of trails within greenways or other open space systems, mid-block connections and cul-de-sac linkages. Mid block connectors should be provided approximately every 600- feet on long continuous rows of houses, particularly when those houses back up to a public greenway or private open space. Cul-de-sac linkages should be incorporated on long cul-de-sacs to reduce walking distances between cul-de-sacs, parks, greenways, schools and other neighborhoods. Mid-block connections and cul-de-sac linkages should be a minimum of 30- feet wide with a 4-foot to 8-foot wide walk or trail. Some arterial streets may incorporate trails within a perimeter landscape easement as part of a city-wide trail system.

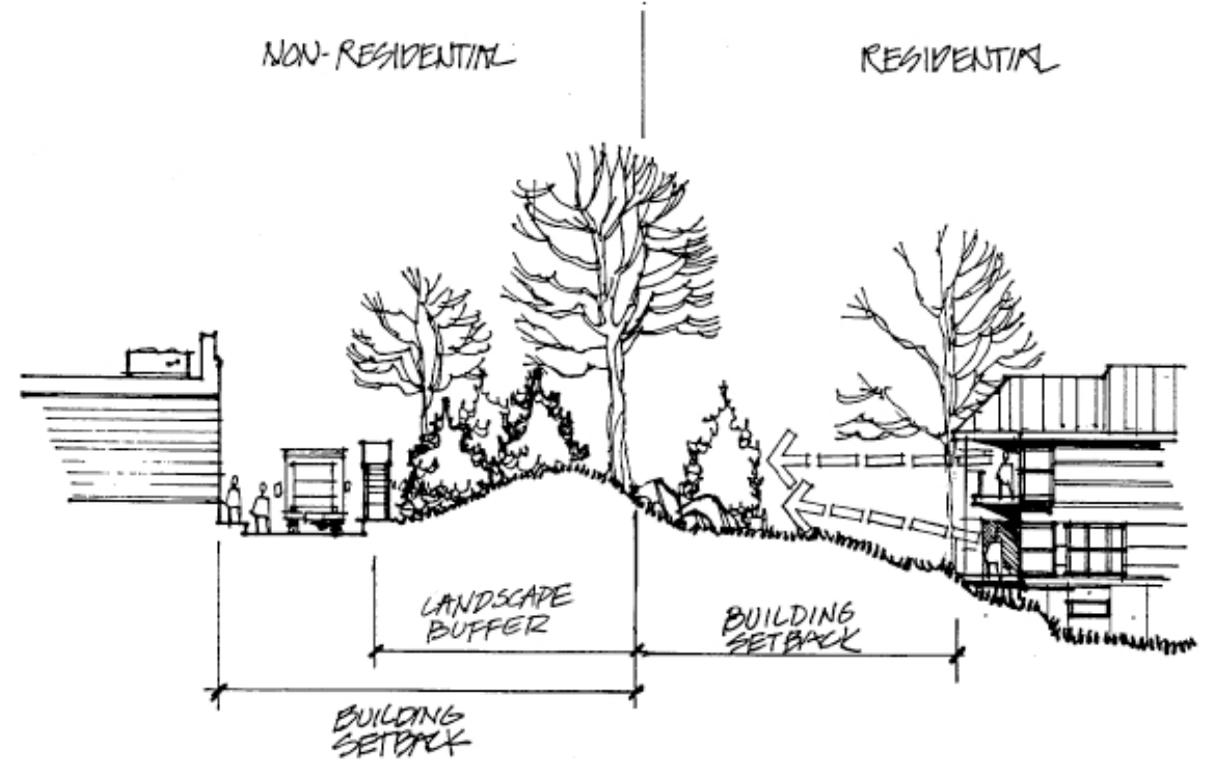


CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(E) Buffers

When developments are designed to segregate and isolate residential and nonresidential uses, a 75- foot wide rear and side yard setback (or similar sized landscape buffer strip) is required for the principal residential building where adjacent to commercial or industrial developments zoned C-2 through M-3. However, if a 25- foot wide landscape buffer is provided, the setback can be reduced to 60- feet (including the landscape buffer). The setback can be further reduced 1- foot for each additional foot the landscape buffer is increased. All setbacks can be modified in "planned" zoning districts due to unique site circumstances, topography, vegetation, development design, or the amount of existing buffer provided by adjacent nonresidential development.

A master landscape buffer plan is required to be approved by the planning commission for any setback reductions. Generally, buffer areas should include a combination of natural features, landscaping, berms, fencing, water features, and other attractive elements. Buffer plans that create "walled" subdivisions and "gated" communities with a "compound" appearance are discouraged.

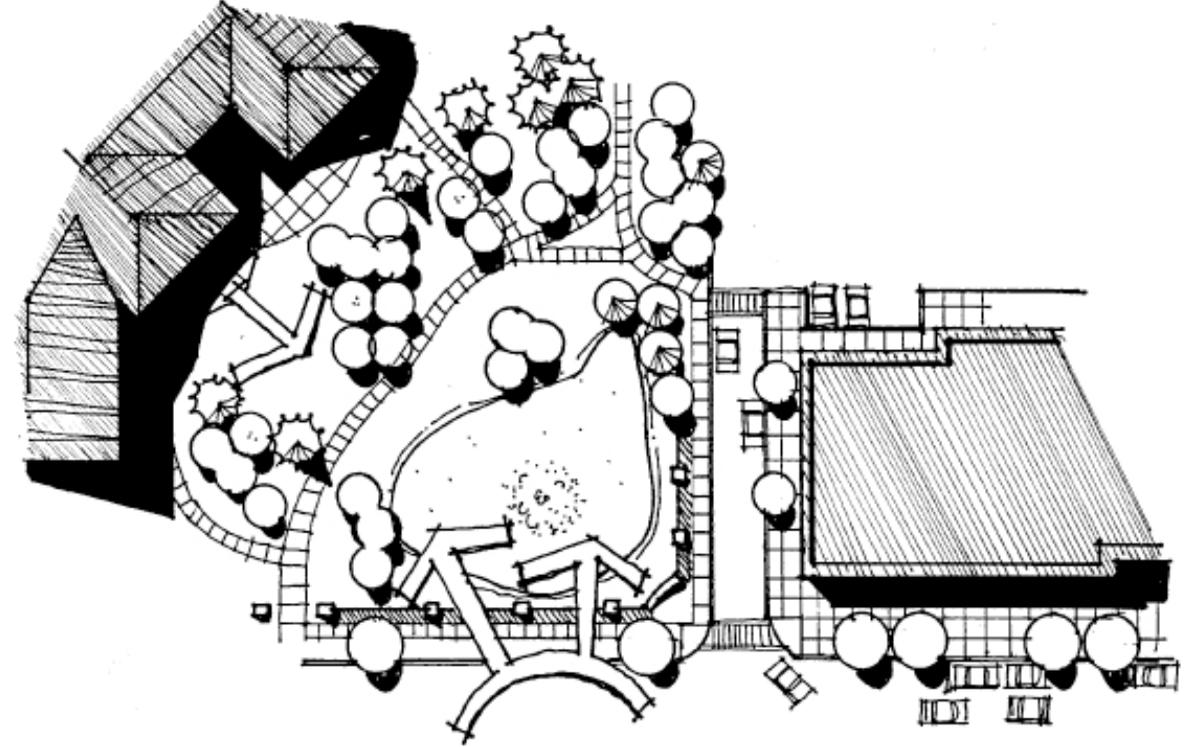


CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(F) Buffers (Alternative Design)

Creative site design, building design, and building arrangement is strongly encouraged. Any buffer standards, including building setbacks and landscape requirements, may be modified in “planned” zoning districts if an alternative design results in a better and higher quality buffer with no negative impact upon either the residential or nonresidential properties. Design alternatives may include the following:

- a. High quality and attractive landscape or drainage features (i.e. fountains and ponds) which provide adequate screening or buffering and are well integrated into the development design.
- b. Incorporation of significant topographic or natural features.
- c. Existing topography, hedgerows or natural features provide significant screening.
- d. Adjacent nonresidential property is restricted to land uses that are of a low impact and scale, and the site is designed in a manner so that adjacent residential properties will not be impacted by any such reductions.
- e. Significant buffers have been provided by adjacent nonresidential development and the residential properties will not be impacted by any reductions to the landscape buffer.



CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(G) Transitions between Large-Lot and Urban Subdivisions

The planning and design of areas adjacent to large-lot residential developments is important in providing an orderly and appropriate transition to higher density developments and differing lot sizes. Transitional development designs should achieve a character and appearance comparable to the large-lot subdivision. Extra sensitivity must be used when locating a subdivision with urban densities adjacent to existing, platted, large-lot residential subdivisions. New developments should provide an orderly and appropriate visual and physical transition between the developments with different densities. Urban residential lots adjacent to large-lot developments should be similar in size, with a gradual reduction in lot sizes as the distance from the large-lot development increases. The developments should be designed to create a seamless visual transition. A strong visual divider between the two types of development is highly discouraged.

New lots in the first tier adjacent to an existing, platted, large-lot subdivision should be similar in total area and have a comparable width at the building line. The area differential should be no greater than one-quarter (1/4), but may not be required to exceed a lot area of more than one (1) acre. The width and depth of lots adjacent to existing platted large lots significantly greater than an average of one (1) acre will be reviewed with appropriate standards determined on an individual basis.

As lots transition beyond the first tier adjacent to a large-lot subdivision, the area differential of lots in the second tier should be no less than fifty (50) percent of the typical lot area in the adjacent large-lot subdivision. The width of the lot at the building line should continue to remain comparable in appearance. Lots beyond the second tier may transition to smaller lot sizes at higher densities as typically found in conventional urban subdivisions.

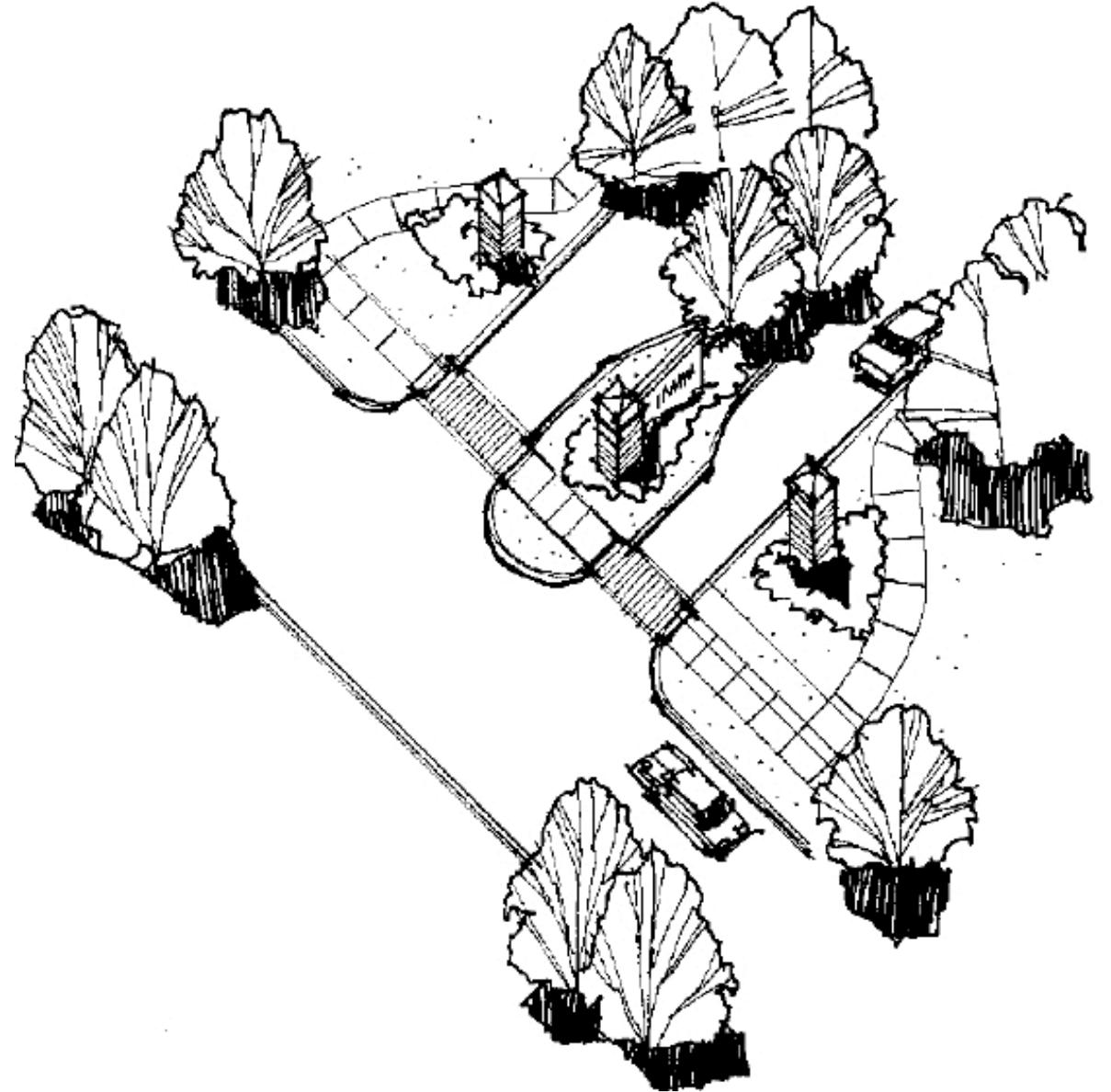
Existing natural features, tree areas, and/or hedgerows should be preserved and incorporated as buffers whenever possible. Utility easements must not be placed within the drip area of trees to be preserved.

Planned zoning districts should be used in all areas adjacent to large-lot subdivisions.

CHAPTER 2 - DEVELOPMENT GUIDELINES

Objective 2.3(H) Neighborhood Identification

Neighborhood identification and signage should be provided at the collector and arterial street intersections in areas set to the side of the right-of-way. Neighborhood or subdivision signage may be incorporated within an entry median when median widths and lengths are adequate to insure safe visibility of the signage and of traffic movement from nearby streets. Secondary entries to subdivisions from local streets may incorporate architectural elements of the primary entry monument to promote neighborhood identity. Where commercial or other land uses share a common collector and arterial street intersection, a common identification monument should be incorporated to encourage interaction between commercial and residential uses. Smaller, architecturally similar identification monuments may be placed on internal collector streets connecting two different subdivisions in areas outside the right-of-way.

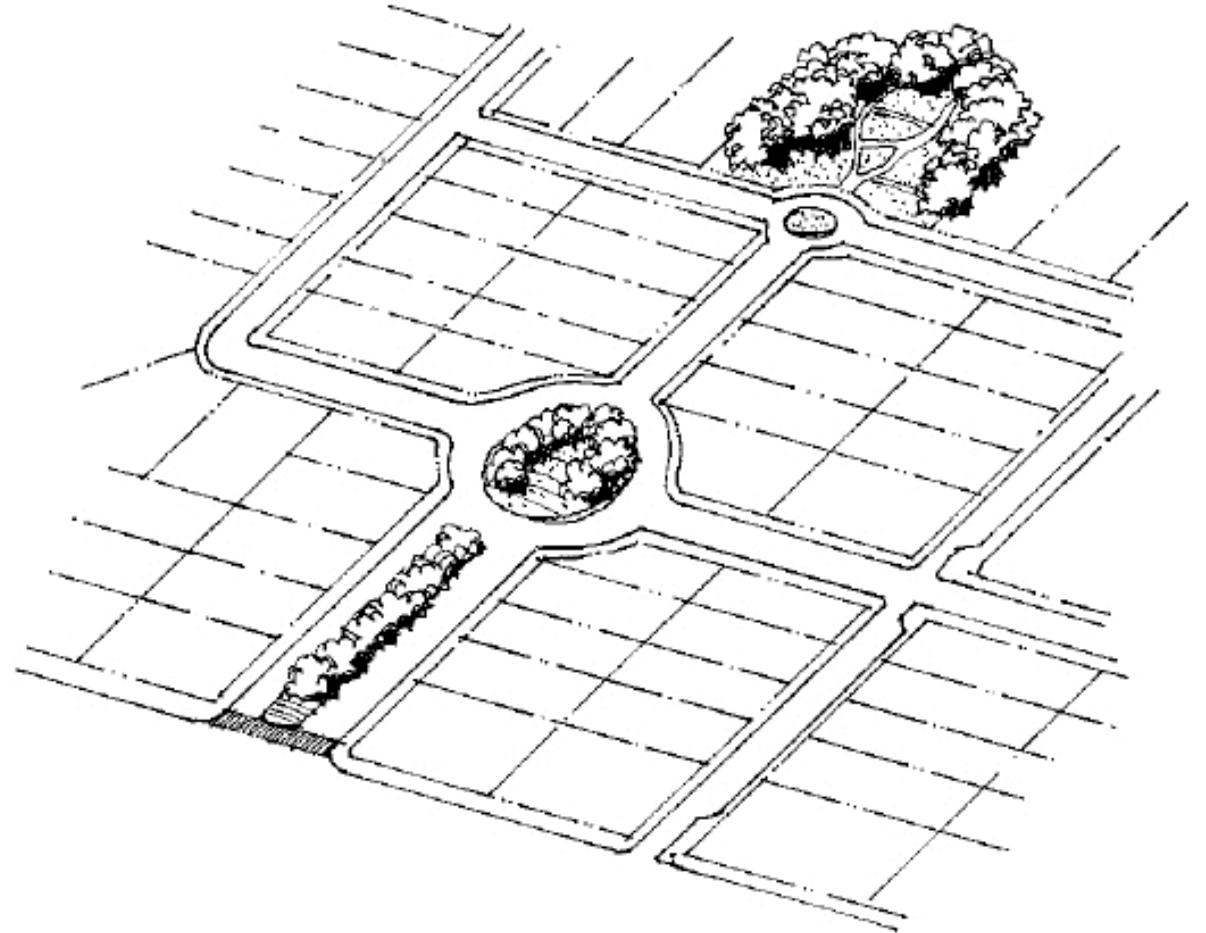


CHAPTER 3 - STREET & STREETScape DESIGN GUIDELINES

3.1 SUMMARY

Streets represent one of the most visible aspects of conventional subdivision design. Street designs and arrangements should always create a balance between the movement of automobiles and transit vehicles with the needs of pedestrian and bicycle pathways, areas of public interaction, and areas for placement of street trees and landscaping. The goal of a residential neighborhood street system is to create traffic-calm streets and to create an environment where driving too fast or too aggressively is inconvenient by the design of the street and streetscape. With appropriate design, drivers will be more likely to choose lower speeds and less aggressive behaviors.

This chapter describes and illustrates the common street and streetscape design. These standards are not absolute, since there can be a wide variety of street types created with various land uses and adjoining properties. Streets should be designed to meet the needs of anticipated land uses, anticipated traffic volumes, and the desired character of the area. Special consideration must be given to the street layout in order to minimize the amount of through traffic and the potential for inappropriate vehicle speeds. Such layouts should include limiting the length of through streets and incorporating rotary or traffic circles, T-intersections, or other similar techniques. Innovative street types and designs will always be considered.

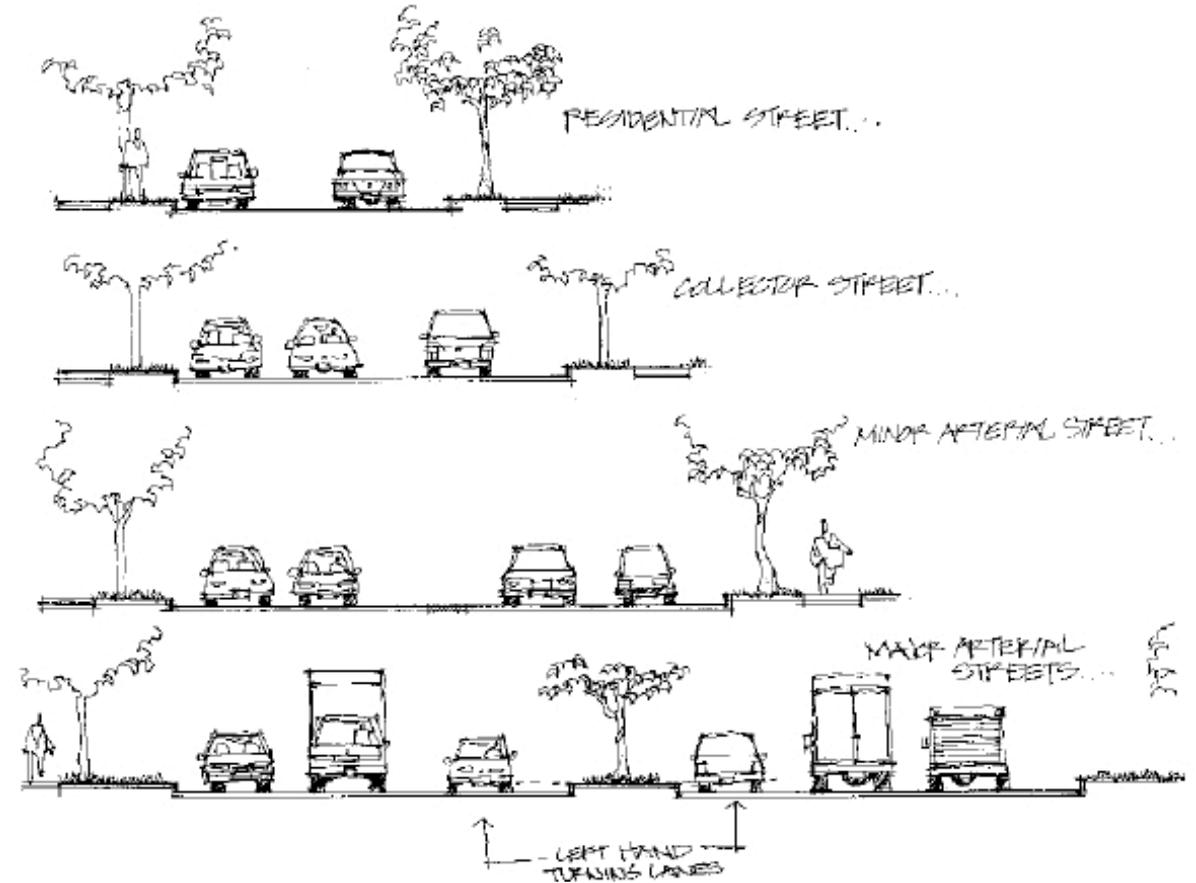


CHAPTER 3 - STREET & STREETScape DESIGN GUIDELINES

3.2 STREET CLASSIFICATION AND DESIGN

The street network system in conventional neighborhoods consists of three basic types of street and levels of service. Each street type is a response to the anticipated vehicular demand created by the neighborhood and the vehicular speed needed to achieve a desired level of service for each type of street.

The residential street is intended to provide access to a majority of residences in a neighborhood. Its narrower width reflects the lower traffic volume and desired slower speed in the residential areas. Most residential streets link to collector streets designed to funnel traffic from the residential streets to the arterial street network. The collector streets are wider with sidewalks on both sides of the street to accommodate the combined traffic generated by numerous residential streets. Minor arterial and major arterial streets are generally located on the perimeter of residential areas. Minor arterial streets are typically narrower than major arterial streets and undivided, whereas major arterial roads are typically divided, four lane roads. The primary purpose of both types of arterial roads is to safely and efficiently move motorists and pedestrians throughout the community at a higher rate of speed. The design of all roads within the street network should consider the physical and safety requirements of all legal users of the roadway system, including bicycles and pedestrians.

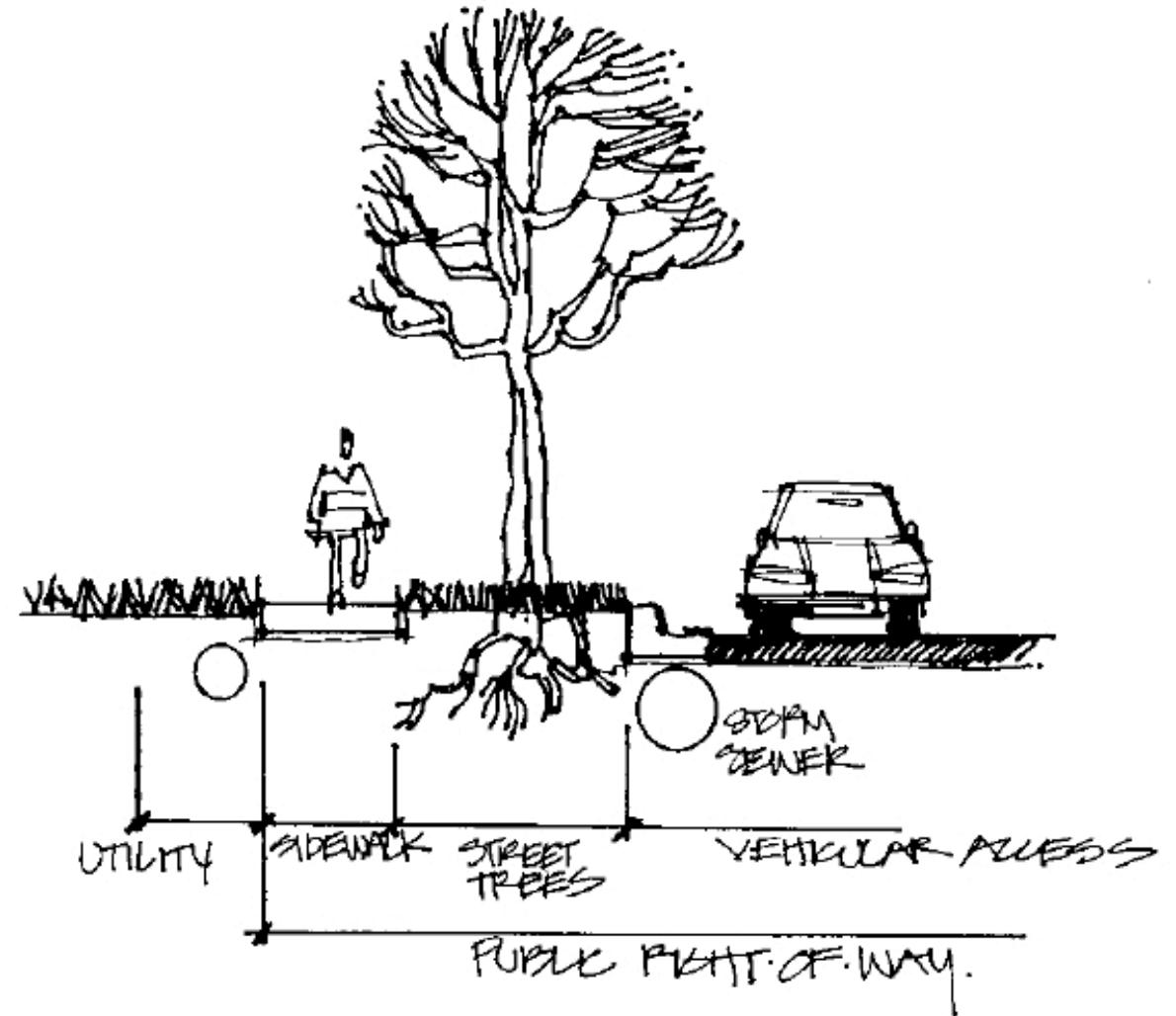


CHAPTER 3 - STREET & STREETScape DESIGN GUIDELINES

3.3 STREET TREE DESIGN GUIDELINES

Street trees are required in residential subdivisions on all local residential and collector streets to create a more pleasing environment. A master landscape/fencing plan is also required along arterial streets within a dedicated landscape tract to enhance the appearance of the neighborhood and community. The neighborhood street tree plan should reflect a continuous theme. Streets should be recognizable by the trees used; however, they may be planted with more than one species to accent common areas and focal points within the neighborhood.

Street trees shall be planted in the right-of-way, with a minimum of 6- feet of space between the sidewalk and the back of curb. Planning for street trees must begin at the preliminary platting phase of development to insure thorough coordination with utilities, driveways and visual clearances for street intersections and traffic signage. Street trees must be spaced as uniformly as possible, generally with a spacing of 40- feet between trees. A minimum of one street tree is required per lot, with a minimum of two trees required on a corner lot. A formal street tree planting scheme is not required if a master landscape plan is approved for a development area.



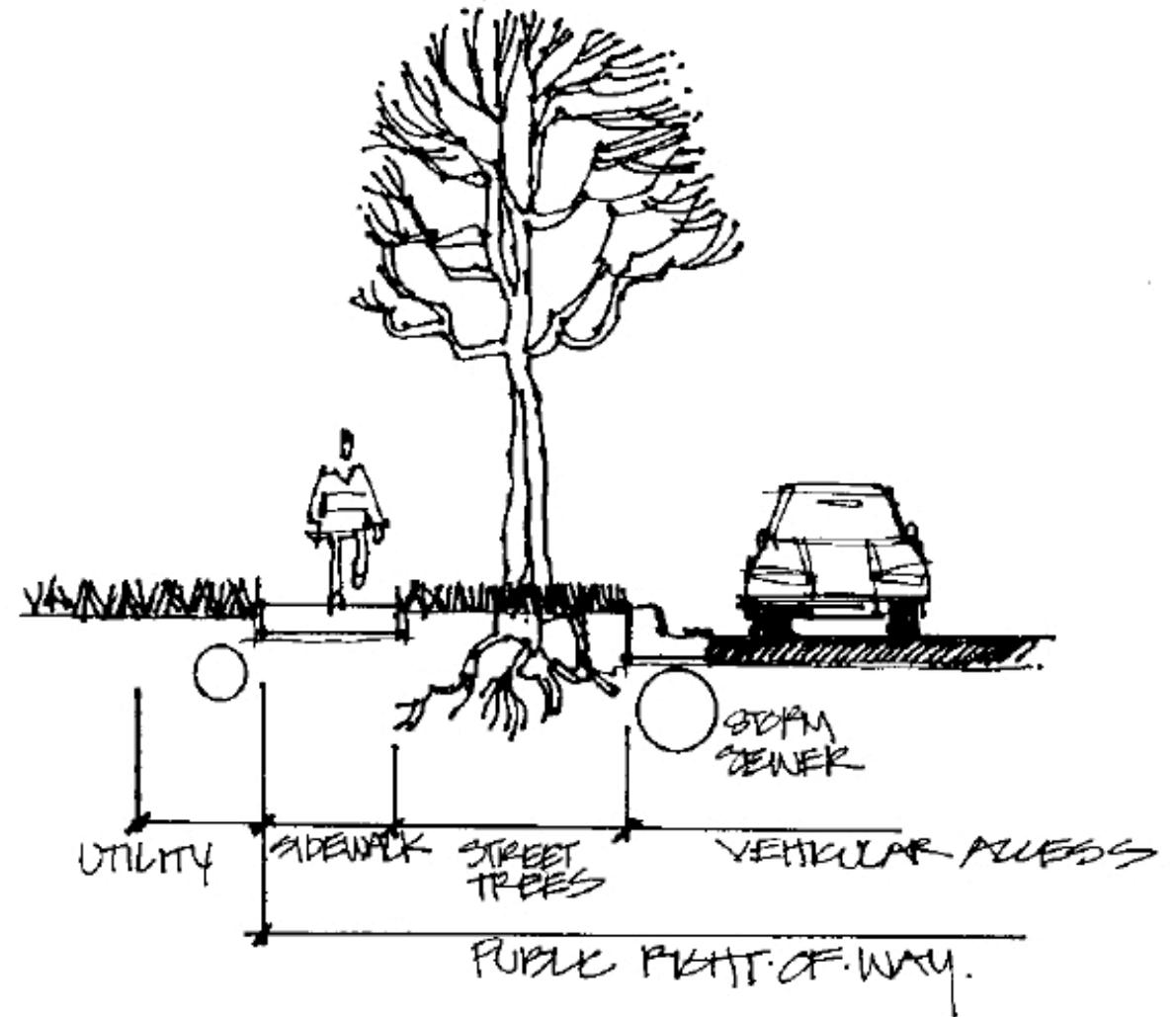
CHAPTER 3 - STREET & STREETScape DESIGN GUIDELINES

3.3 STREET TREE DESIGN GUIDELINES

The developer is responsible for planting street trees at the completion of each phase of development in a residential subdivision. Prior to beginning the final phase, the developer shall submit a bond or another financial guarantee that street trees will be planted in all phases yet to be completed.

Preferred trees to be used to meet city street tree standards:

- Acer platanoides var. Norway Maple
- rubrum var. Red Maple
- saccharum var. Sugar Maple
- Carya illinoensis Pecan
- Celtis occidentalis Hackberry
- Cladrastis lutea American Yellowwood
- Fraxinus americana var. White Ash
- pennsylvanica lanceolata var. Green Ash
- quadrangulata Blue Ash
- Ginkgo biloba Ginkgo (male, seedless)
- Gleditsia triacanthos inermis var. Honeylocust (thornless, podless)
- Gymnocladus dioicus Kentucky Coffeetree
- Liquidambar styraciflua Sweetgum
- Liriodendron tulipifera Tuliptree



CHAPTER 3 - STREET & STREETScape DESIGN GUIDELINES

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- | | |
|---|----------------------------------|
| <i>Acer platanoides</i> var. | Norway Maple |
| <i>rumbrum</i> var. | Red Maple |
| <i>saccharum</i> var. | Sugar Maple |
| <i>Carya illinoensis</i> | Pecan |
| <i>Celtis occidentalis</i> | Hackberry |
| <i>Cladrastis lutea</i> | American Yellowwood |
| <i>Franxinus americana</i> var. | White Ash |
| <i>pennsylvanica lanceolata</i> var. | Green Ash |
| <i>quandrangulata</i> | Blue Ash |
| <i>Ginkgo biloba</i> | Ginkgo (male, seedless) |
| <i>Gleditsia triacanthos inermis</i> var. | Honeylocust (thornless, podless) |
| <i>Gymnocladus dioicus</i> | Kentucky Coffeetree |
| <i>Liquidambar styraciflua</i> | Sweetgum |
| <i>Liriodendron tulipifera</i> | Tulip Tree |
| <i>Plantanus x acerfolia</i> | London Planetree |
| <i>Quercus acutissima</i> | Sawtooth Oak |
| <i>bicolor</i> | Swamp White Oak |
| <i>borealis</i> | Northern Red Oak |
| <i>imbricaria</i> | Shingle Oak |
| <i>macrocarpa</i> | Bur Oak |
| <i>muhlenbergi</i> | Chinquapin Oak |
| <i>robur</i> | English Oak |
| <i>Tilia americana</i> | American Linden |
| <i>cordata</i> var. | Little Leaf Linden |
| <i>tomentosa</i> | Silver Linden |
| <i>Sophora japonica</i> | Japanese Pagodatree |
| <i>Ulmus carpinus</i> var. <i>buisman</i> | Buisman Elm |
| <i>parvifolia</i> | Lacebark Elm |
| <i>Zelkova serrata</i> | Zelkova |

Prohibited Trees:

- Ailanthus, White and Silver Birch, Box Elder, Catalpa, Cottonwood, Siberian Elm, "Fruit" trees, Silver Maple, Mimosa, Pin Oak, Russian Olive, Poplar, Weeping trees, Willows, Shrubs, all Evergreens.

Street Tree Specifications:

All street trees shall meet the city's Technical Specifications for material quality, minimum size, etc. Trees shall be guaranteed for a period of no less than 1 year.

CHAPTER 3 - STREET & STREETScape DESIGN GUIDELINES

3.4 PERIMETER LANDSCAPE DESIGN

The community's image is greatly affected by one's experience on the community's arterial street network. Well-landscaped areas along a neighborhood's perimeter have a tremendous impact on the perception and impression residents' experience in their daily lives. Perimeter landscapes shall include a mixture of shade, evergreen and ornamental trees to provide a variety of foliage, shade and seasonal interest. In addition, berms and shrubbery should be used to accentuate the landscape improvements and help screen residential areas from the arterial street. Perimeter walks and trails can be incorporated into the landscape areas to enhance the pedestrian experience of walking to or along a neighborhood. The landscape improvements shall be located in dedicated tracts with a homeowners organization created to insure the maintenance and survival of the landscape improvements. Parallel utility easements must be placed outside of the required landscape area in order to minimize conflicts between these uses. Fencing or decorative walls shall be located nearest to the residences to maintain a continuous view of the landscape improvements from the arterial street.

Master fence/screening plans along an arterial roadway are required to contain the following landscaping materials at a minimum for each 100- linear feet, or portion thereof, of arterial street frontage:

- a. Eight (8) evergreen trees.
- b. Two (2) shade trees.
- c. One (1) ornamental tree.
- d. For each tree preserved within the landscape tract, one (1) credit shall be given against the minimum tree requirements.
- e. The required landscape materials may be deviated from provided the city planner approves an alternative list of materials that achieves comparable screening and buffering.

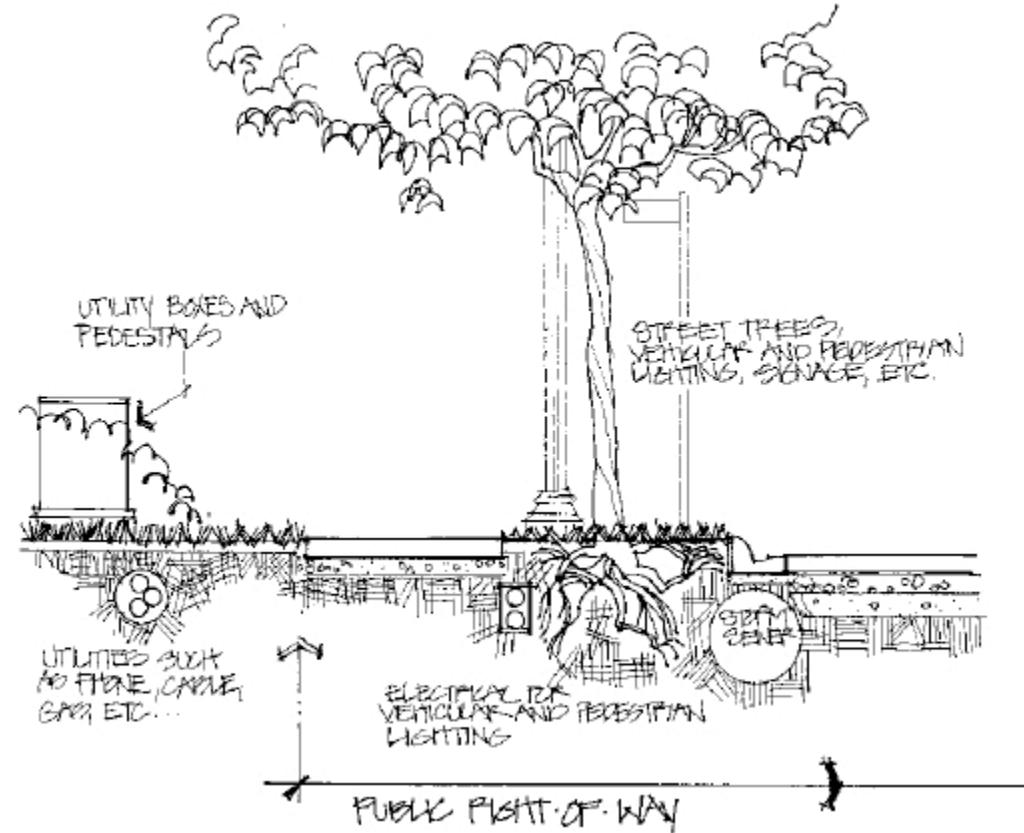


CHAPTER 4 - UTILITY & DRAINAGE DESIGN GUIDELINES

4.1 RIGHT-OF-WAY UTILITY DESIGN

The location and design of utilities within or immediately adjacent to the right-of-way has a significant impact on the way streets are designed. To improve the appearance of the streetscape within conventional subdivisions, utilities shall be designed in coordination with the streetscape.

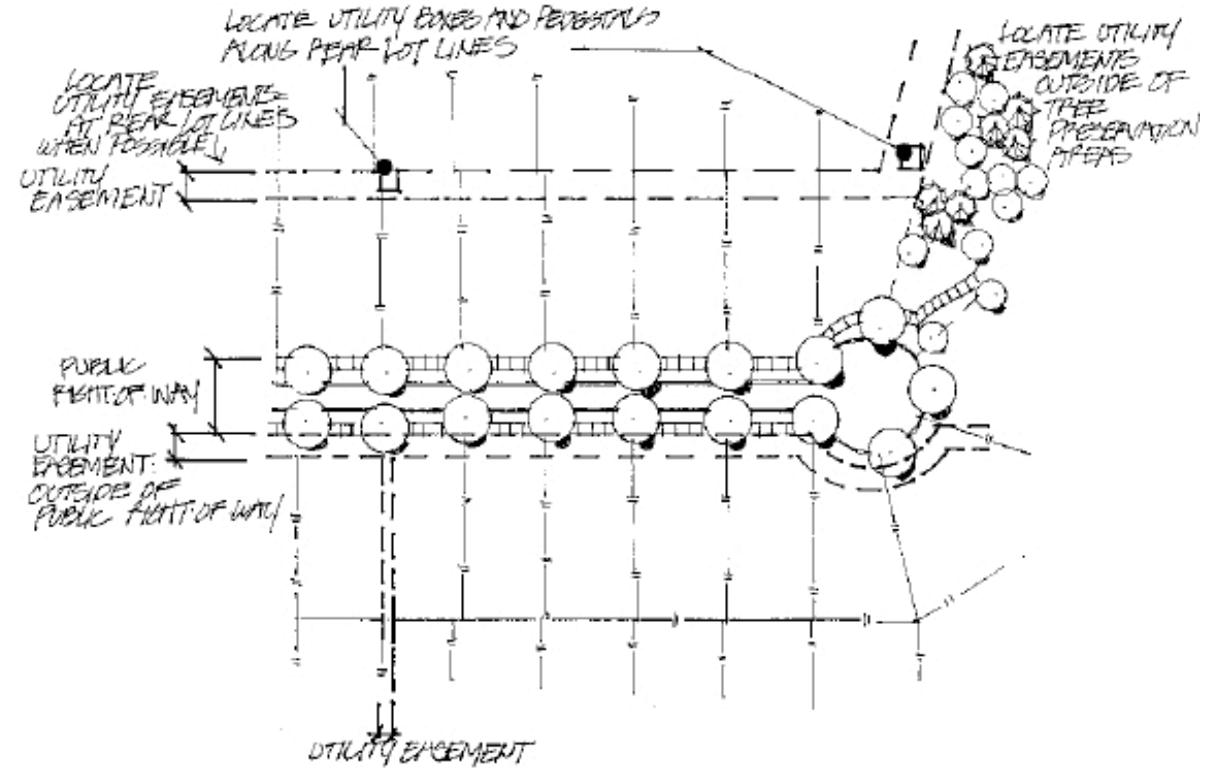
Utilities within the right-of-way, such as storm drains, waterlines and sanitary sewers, should be designed to minimize conflict with the street tree design for the subdivision. Where practical, these utilities should be located within easements paralleling the right-of-way, under sidewalks, or under streets. Other underground utilities, such as electricity, telephone, gas and cable TV, should be located within easements outside the right-of-way. Above ground, utility pedestals and boxes are not allowed within the right-of-way in residential areas. Underground lines for other services within the right-of-way, such as street lights, are to be located immediately behind the curb. Landscape tracts shall be provided immediately adjacent to the right-of-way for the street trees in instances where utilities must be located in conflict with the streetscape design. Additional requirements related to the location of utility easements are available in the City of Olathe's "Technical Specifications and Design Criteria for Public Improvement Projects".



CHAPTER 4 - UTILITY & DRAINAGE DESIGN GUIDELINES

4.2 EASEMENT LOCATIONS AND UTILITY DESIGN

The appearance of conventional subdivisions can be enhanced when the visual impact of utilities serving a development is considered. To minimize the visual impact of utility pedestals, boxes and meters, all utilities should be located along rear lot lines, whenever possible, or between lots. Utility easements shall be located outside tree preservation easements and landscape areas to protect existing trees and minimize conflict with proposed landscape improvements. Storm drains shall be extended to the edge of existing or proposed channels to minimize erosion. Storm drains and sanitary sewers should be designed to minimize the loss of existing trees and damage to natural riparian areas, particularly in open space and tree preservation areas. Additional requirements related to the location of utility easements are available in the City of Olathe's "Technical Specifications and Design Criteria for Public Improvement Projects."



CHAPTER 4 - UTILITY & DRAINAGE DESIGN GUIDELINES

4.3 OPEN DRAINAGE SYSTEM DESIGN

The existing streams and drainage areas contain a majority of the natural wooded areas and wildlife habitat remaining in Olathe. Incorporating and protecting these areas during the design of the storm drainage system enhances the appearance and value of residential subdivisions. The flexibility of conventional subdivision street design lends itself to preserving these valuable resources. The riparian areas adjacent to many streams can minimize the impact of runoff created by developments when they are preserved in their natural condition. These areas, when properly incorporated into a development, provide accessible recreational opportunities for residents. Trail systems can easily be combined with drainage areas to improve pedestrian accessibility. All open channel drainage areas, whether natural open spaces or manmade channels shall be readily accessible for inspection and to maintenance equipment.

