

4.6 Site and Building Design

COMMENTARY

The general focus for this section is to improve the quality of site and building design through more detailed standards, while also offering flexibility in meeting the requirements through menus of options.

Building materials. Content from 144-5.22-4, Exterior Building Materials, is not carried forward on account of HB2439, which prohibits regulation of building materials except in narrowly defined circumstances (e.g., historic districts).

Trash receptacle: Content has been updated with new standards that no longer reference what materials must be used for construction of the container.

Standards for Industrial Buildings: This draft proposes that industrial structures should not be exempt from design standards. However, if staff disagree, the requirements could be adjusted to be lesser for industrial buildings (particularly in industrial districts or over a certain size), or it could revert to no requirements. If that is the direction for the Public Draft, we will restore the requirement for enhanced landscaping for metal buildings, which has not been carried forward here.

Common Open Space: Chapter 144 has limited open space requirements. Though mentioned in 144-3.5, Planned Development Districts, open space is not required for multi-family development or mixed-use development. The Districts and Uses installment included Common Open Space requirements for multi-family, mixed-use, attached single-family dwellings (townhouses), and cottage home developments. This draft explains what forms of common open space can fulfill those requirements. (Because subdivisions are required to dedicate parkland, we do not suggest that common open space also be required; however, in many communities, it is not unusual to do so. If staff would like to see that requirement added, it can be included in the public draft.)

Appeal Procedures (144-5.22-10) was not carried forward. Appeal procedures should be standard across all code sections. As such, there is no need to repeat the content in individual sections. Appeals will be covered in the Administration and Procedures installment, and will apply to any instance where an appeal may be filed.

4.6.1 Purpose

This section is intended to promote high-quality development and construction; protect property values; encourage visual variety and architectural compatibility; and promote the unique character of both residential and commercial neighborhoods in New Braunfels. Specifically, these standards:

- A. Promote new residential developments that are distinctive, have character, fit within and connect to established neighborhoods;
- B. Provide variety and visual interest in the exterior design of buildings;
- C. Enhance the streetscape and diminish the prominence of parking areas and garages along street frontage; and
- D. Improve the compatibility of infill projects, particularly attached and multi-family residential development, with the character of surrounding neighborhoods.

4.6.2 Applicability

A. General

Unless exempted in subsection B below, this §4.6 shall apply to the following:

1. Development of any new structure; and
2. An addition or renovation to an existing structure where the total gross floor area of the proposed addition is 50 percent or more than that of the total gross floor area of the existing structure before addition or renovation. In cases where modifications are subject to these standards, only the modification shall be subject to compliance with this Section.

- a. For purposes of this standard, "modifications" shall not include routine maintenance and repair of a building, changes to signage, or general repairs to a surface parking area, changes to landscaping, or other features on the parcel.
- b. The Planning and Development Services Department shall determine if a modification shall be subject to these standards.

4.6.3 General Standards

A. Common Open Space

COMMENTARY

This is a new section intended for the city's consideration, based on discussions with staff and in the Assessment Report. In contrast to public park land, common open space is not required to be publicly dedicated and is intended primarily for the users and occupants of individual developments (though such areas may be open to the public). For this first draft, we have included the standards within the overall Site/Building Design section, but an alternative location might be to have the section stand on its own as a new Section 4.8.

1. Purpose

The purpose of this section is to ensure that residential development of five or more units includes or contributes to the provision of common open space for the use and enjoyment of the development's occupants and users, while minimizing urban sprawl.

2. Applicability

- a. This section shall apply to:

- i. Multi-family development of five or more units;
- ii. Mixed-use developments with five or more residential units;
- iii. New manufactured home parks of five or more units;
- iv. Planned Development (PD) district rezonings with five or more residential units; and
- v. Commercial development.¹³⁴



- b. This section shall not apply to:

- i. New subdivisions of one- to four-family dwelling units;
- ii. Townhomes of five or more attached units;
- iii. Cottage home developments; and
- iv. Industrial development.

3. Areas Counted as Common Open Space

The following features and areas shall be credited towards the common open space requirements of this section:

¹³⁴ Use-specific standards specify the extent of open space for multi-family and mixed-use development. What extent of open space should be required for iii through v?

**Table 4-13: Allowable Common Open Space Areas**

Area Counted as Common Open Space	Description	Design and Maintenance Requirements
Natural Resource and Hazard Areas		
	Natural water features (including lakes, ponds, rivers, streams, rivers, wetlands, drainageways), riparian buffers, flood hazard areas, existing tree canopy and specimen trees, steep slopes, and wildlife habitat protection areas	<ul style="list-style-type: none"> Preservation of any existing natural resource and hazard areas shall have highest priority for locating open space. Maintenance is limited to the minimum removal and avoidance of hazards, nuisances, or unhealthy conditions.
Active Recreation Areas		
	Land occupied by areas and facilities used for active recreational purposes, such as pools, playgrounds, tennis courts, jogging trails, ball fields, and clubhouses	<ul style="list-style-type: none"> Land shall be compact and contiguous unless used to link or continue an existing or planned open space resource. Areas shall have at least one direct access to a building or to a street, bikeway, or walkway accessible to the public or the development's occupants and users.
Passive Recreation Areas		
	Land occupied by areas and facilities used for passive recreation, including but not limited to walking and/or biking paths, picnic areas, preservation of natural areas and scenic resources, environmental education areas, and wildlife habitat protection	<ul style="list-style-type: none"> To the extent possible, access to natural areas and walking or biking paths should be public. But features such as picnic areas may be restricted for use only to residents of the development.
Stormwater Management Devices		
	One hundred percent of land area occupied by stormwater management devices (including retention and detention ponds and other bioretention devices, and drainage easements), when such features are treated as an open space site amenity; or 25 percent of land area occupied by stormwater management devices that are not treated as amenity areas	<ul style="list-style-type: none"> To qualify for 100 percent credit, stormwater management devices shall support active or passive recreation uses by providing access and amenities including pedestrian elements such as walking paths and benches. Stormwater management devices that use concrete basins without landscaping and amenities, or that are surrounded by fencing, shall only be eligible for 25 percent credit.

Table 4-13: Allowable Common Open Space Areas

Area Counted as Common Open Space	Description	Design and Maintenance Requirements
Formal Plantings and Gardens		
	Formally planned and regularly maintained open areas that provide passive recreation opportunities, including arranged plantings, gardens, gazebos, and similar structures, as well as roof gardens	<ul style="list-style-type: none"> Formal plantings and gardens shall have at least one direct access to a building, or to street, bikeway, or walkway accessible to the public or the development's occupants and users. Such features shall be oriented to surrounding development.
Squares, Plazas, Courtyards, Roof Decks, and Outdoor Dining Areas		
	Squares, plazas, courtyards, roof decks, and outdoor dining areas that provide gathering places or active and passive recreational opportunities	<ul style="list-style-type: none"> Squares, forecourts, plazas, courtyards, and outdoor dining areas shall be at least 200 square feet, but no more than one acre, in area. Such features shall have at least one direct access to a principal building, or to a street, bikeway, or walkway accessible to the public or the development's occupants and users. Surrounding principal buildings shall be oriented toward the square, forecourt, plaza, or outdoor dining area where possible.
Required Buffer and Landscape Areas		
	All areas occupied by required buffers and landscaping, except interior parking lot landscaping and planting strips between the sidewalk and street. Buffers required within front setbacks or along public rights-of-way to screen parking shall count as common open space	<ul style="list-style-type: none"> See landscaping standards in §4.2, <i>Landscaping</i>.

4. Areas Not Credited

Lands within the following areas shall not be counted towards required common open space:

- Public or private streets or rights of way;
- Open parking areas and driveways for dwellings; and
- Land covered by structures not intended solely for recreational uses.

5. Design

Land set aside for common open space shall meet the following design criteria, as relevant:

- The lands shall be compact and contiguous unless the land shall be used as a continuation of an existing trail, or specific topographic features require a different configuration. An example of such topographic features would be the provision of a trail or private open area along a riparian corridor.
- Where open space areas, trails, parks, or other public spaces exist adjacent to the development site, the common open space shall, to the maximum extent feasible, be located to adjoin, extend, and enlarge the existing trail, park, or other open area land.

- c. In larger projects, open space should flow through the site linking recreation facilities to dwellings with uninterrupted green belts.
- 6. Location**
 - a. Open space areas shall be located to be easily accessible and useable by residents throughout the development, unless the lands are sensitive natural resources and access should be restricted.
 - b. Where possible, the open space should be designed as a single, continuous space, rather than multiple smaller spaces.
- 7. Ownership and Maintenance**
 - a. All common open space areas shall be owned jointly or in common by the owners of the development, a homeowners' or property owners' association, or by an organization chosen by the property owners.
 - b. The property owner, homeowners' or property owners' association, or other organization chosen by the property owners shall be responsible for the on-going maintenance and upkeep of the common open space, which shall be kept in workable order and a clean and usable condition.
 - c. Failure to maintain common open space is a violation of this LDO, subject to punishments and remedies as described in §**XX**, *[Violations and Penalties]*.

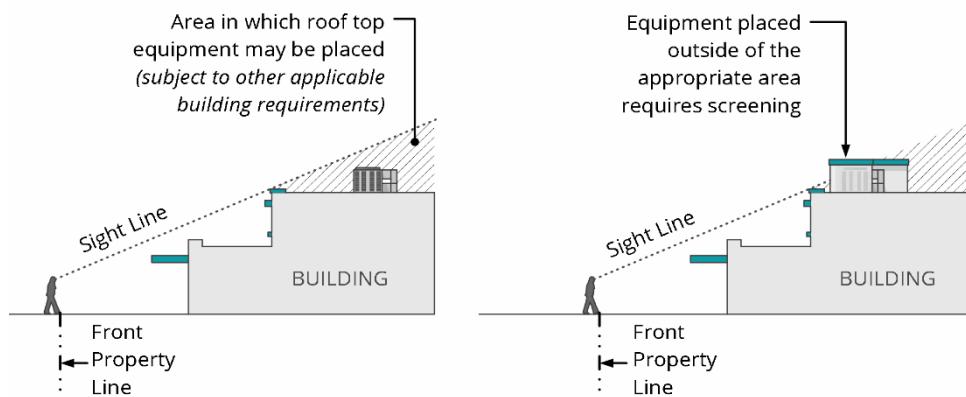
B. Utility and Mechanical Equipment Screening¹³⁵

- 1. Ground- or Building-Mounted Equipment** 
 - a. Ground-mounted mechanical equipment visible from any public street shall be screened one foot past the height of the equipment.
 - b. Screening fences, walls, or opaque landscaping may be used for screening. When landscaping is used, it must provide an opaque screen for the mechanical equipment, of sufficient height as described in (a) above.
 - c. Building-mounted utility boxes or meters visible from any public street shall be screened using architectural features, or opaque landscaping.
 - d. Use of architectural features for screening shall be integrated into the design of the building and constructed of materials similar to or compatible with the building.
- 2. Roof-Mounted Equipment**
 - a. Roof-mounted equipment visible from any public street or adjacent property within 100 feet of the building shall be screened to at least the height of the equipment.
 - b. Parapets may be used to conceal roof top equipment on flat roofs.¹³⁶
 - c. If a sight line drawing provided with the site plan shows that no rooftop equipment will be visible from a public street or adjacent property within 100 feet, then a parapet wall or other screening shall not be required.

¹³⁵ Most content in this section is new, except as otherwise indicated in footnotes.

¹³⁶ Section 144-5.22-6.

Figure 4.6.3-1: Sight Line Example



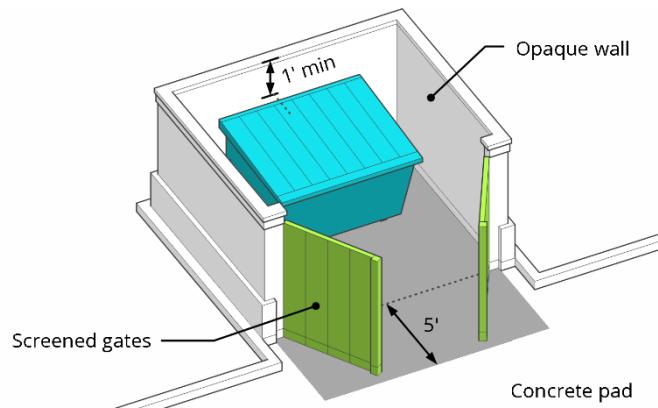
- d. Where overhanging eaves are used, overhangs shall extend no more than 18 inches beyond the supporting walls.

C. Trash and Dumpster Screening¹³⁷

All development except one- to four-family dwellings shall provide interior or exterior areas for dumpsters, trash cans, or any other refuse and recycling containers, and refuse collection areas that meet the standard of the local trash service provider. When an exterior area is provided, trash receptacles shall be stored within an enclosure that meets the following standards:

1. Walls surrounding the trash receptacle shall be at least one foot higher than the height of the trash receptacle (See Figure 4.6.3-2);
2. Walls shall be opaque and durable, and provide an opening with a screened gate;
3. Enclosure shall have a concrete floor extending five feet beyond the gates;
4. Screening gates shall not open into any drive aisle or street in a manner that would obstruct the movement of vehicles;
5. Enclosure may not be located between the building and the street, unless there is no other location option available;
6. Enclosure may be located within the building's rear setback;

Figure 4.6.3-2: Trash Enclosure



¹³⁷ New. This content is intended to replace that contained in Section 144-5.3-1(b)(7)(ii).

7. At least one enclosure shall be located within 200 feet of each multi-family residential building in a development; and
8. Ventilation shall be provided if the enclosure is covered.
9. Residential adjacency standards as described in §4.4.3E.7 may also apply.

D. Consolidated Mailbox Units

These standards shall apply when a development has a centralized, consolidated mailbox for all residents or tenants of a development.

1. A pull-out area along the adjacent public or private street, or drive aisle shall be provided. The pull-out shall be of sufficient length and width to accommodate one vehicle, without the vehicle infringing on the travel lane.
2. The mailbox unit shall be served by a sidewalk that connects to the building(s) of the development, and provides a minimum width a five feet at all points along the walkway.
3. If the adjacent street has a bicycle lane, it shall continue along roadway adjacent to the pull-out, but curb ramps shall be provided at both ends of the pull-out so cyclists can access the mailbox from the sidewalk.

4.6.4 Additional Standards for Single-Family Attached and Detached Residential¹³⁸

A. Applicability

These design standards apply to all one- to four-family residential dwellings, including attached townhome dwellings. Unless otherwise indicated, manufactured homes on individual lots are subject to these standards.

B. Architectural Features

Each dwelling shall incorporate at least two of the following architectural features on any street-facing façade (See Figure 4.6.4-1):

1. Covered entry;
2. Recessed windows with overhangs or functional shutters to shade glass;
3. Porch or balcony;
4. Patio or deck;
5. Walls off-set a minimum 3 feet;
6. Variable roof line;
7. Varied building materials;
8. Dormers on sloped roofs; or
9. Other unique or varied architectural features that meet the intent of this Section, as approved by the Planning and Development Services Department.



Figure 4.6.4-1: Examples of Design Features for Attached and Detached Single-Family

¹³⁸ New.

C. Building Additions

Building additions shall be architecturally compatible with or complementary to the existing residence, including exterior materials, colors, and architectural features.

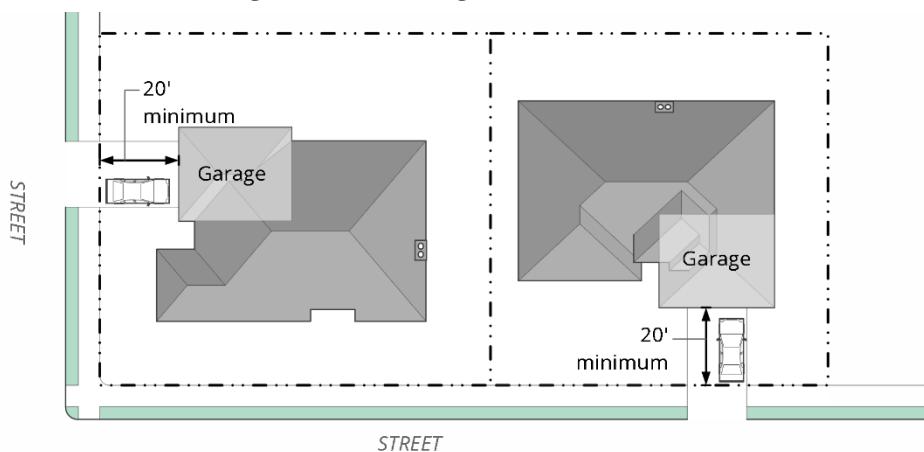
D. Common Open Space

1. Development of attached single family dwellings (townhouses) with five or more attached units shall provide a minimum of ten percent of the total site area as common open space that meets the standards of §4.6.3A, *Common Open Space*.
2. This requirement may be reduced by the provision of individual yards, balconies, decks, or patios, or any combination thereof, for the exclusive use of individual units, provided to each of the units in the development, which each may count for up to 250 square feet of open space credited against the common open space requirement.

E. Driveways and Garage Setback¹³⁹

Where a driveway is located in front of a garage, the garage shall be set back a minimum of 20 feet from the right-of-way, or the distance of driveway to the garage shall be at least 20 feet long as measured from the property line, to provide enough space for a vehicle to park without overhanging into the right-of-way or blocking the sidewalk, if the garage door is closed. See Figure 4.6.4-2.

Figure 4.6.4-2: Garage Setback from Street

**F. Variation of Garage Location¹⁴⁰**

1. Single-family detached housing projects greater than five acres shall provide a variety of garage styles, including but not limited to the following configurations:
 - a. Side-loaded garage;
 - b. Garage recessed behind the front façade, or recessed behind the front façade of a porch or courtyard wall;
 - c. Garage recessed beneath a second-floor bay with a living unit cantilevered over the garage;
 - d. Garage flush with the dwelling portion of the building; and
 - e. Detached garages offset, not flush, with the primary structure.
2. Each acre of the development shall include at least three of the five variations, and no single variation may account for more than 33 percent of the options provided.



¹³⁹ Section 144-5.1-1(h).

¹⁴⁰ New.

3. Each garage variation shall comply with the 20-foot setback requirement as described in subsection E above.

4. [Reserved for review and approval explanation]

G. Side-Loaded Garages

Side-loaded garages shall provide windows or other architectural details that mimic the features of the living portion of the dwelling on the side of the garage facing the front street.

4.6.5 Additional Standards for Multi-Family Residential

COMMENTARY

Chapter 144 applies architectural requirements to the front of multi-family structures, or when they "are adjacent to or front a public roadway, public park or residential district." This section proposes instead that four-sided architecture standards apply for multi-family development, regardless of adjacency. This change is proposed so that dwellings places meet higher quality design requirements than, for example, the Landa Street Dollar General, and also because higher quality multi-family structures can help to increase community acceptance of this type of housing.

A question for further discussion is whether affordable housing projects should be required to meet all of the standards below, or if some can be relaxed to help bring down costs on construction for such projects?

This draft proposes allowing private open space (balconies, patios, decks) to count towards minimizing the overall site requirement for common open space. Allowing this reduction – or allowing these amenities to count towards fulfilling the open space requirement – can be helpful in promoting acceptance of this new requirement. This section could also include other on-site amenities that could count towards the requirement, such as fitness centers, screening rooms, cowork spaces, game areas, grill pits, child play areas, dog grooming and/or walking areas, etc. If staff would like to see those options included as well, they can be incorporated into the public draft.



A. Applicability

1. New development of five or more units in one structure or on one parcel shall comply with the standards of this section.
2. Expansion of existing multi-family development up to and including 50 percent of existing floor area shall have the new construction comply with the standards of this section.
3. Expansion of existing multi-family development by more than 50 percent of existing floor area shall bring the entire structure into compliance with the requirements of this section.
4. Expansion is measured cumulatively, so that separate expansions that add up to a 50 percent or greater increase in floor area within a span of five years shall be required to bring the entire structure into compliance with the requirements of this section.
5. Proposals for affordable housing development may propose alternative design in lieu of provisions C through E and H below. Such proposals are subject to administrative approval if they meet the following standards:
 - a. Include at least two of the Architectural Features described in provision E below.
 - b. Provide ten percent of site area as Common Open Space, unless located within one quarter mile of an existing public park, in which case on-site Common Open Space is not required.

B. Four-Sided Architecture

Multi-family structures shall incorporate architectural features on all sides of a building. Blank walls void of architectural features are not allowed.

C. Horizontal Articulation Requirements

Façades greater than 50 feet in length shall incorporate wall plane projections or recesses extending at least 20 percent of the length of the façade, to a minimum depth or projection of two feet.

D. Variable Roof Lines

Multi-family buildings with roof lines longer than 50 feet shall include one vertical elevation change of at least two feet for every 50 feet of roofline, or portion thereof. Parapet walls should be interrupted by setbacks or varying heights to provide variety to the roof line. Use of cap treatments can provide detail and character.

E. Architectural Features

Each façade of a multi-family building shall be articulated through the incorporation of three or more of the following architectural features (See Figure 4.6.5-1):

1. Porch or balcony;
2. Patio or deck;
3. Covered entry;
4. Recessed windows, or windows with shade elements such as awnings, overhangs, or functional outdoor shutters;
5. Varied colors or building materials;
6. Window size and shape variation;
7. Vertical elements that demarcate building modules;
8. Walls off-set a minimum three feet; or
9. Other unique or varied architectural features that meet the intent of this Section, as approved by the Planning and Development Services Department.

F. Pedestrian Entrances

1. The main building entrance shall be oriented to face an adjacent public street, rather than a parking lot.
2. Buildings with multiple street frontages shall provide one building entrance along each street frontage.
3. Entrances shall be connected to a public sidewalk by a walkway not routed through a parking lot.
4. Street-facing entrances and entrances that face a surface parking lot shall incorporate at least two of the following features:
 - a. A porch or landing;
 - b. Double doors;
 - c. A roofed structure such as a portico, awning, canopy, or marquee;
 - d. Side-lights (glazed openings to the side of the door), and transom-lights (glazed opening above the door) at the entryways;
 - e. Decorative lighting; or
 - f. Enhanced landscaping.
5. Building entrances accessed from an enclosed garage or structured parking are not required to meet these standards.
6. Catwalks or long corridors fronting outdoor entrances to individual units are strongly discouraged.



Figure 4.6.5-1: Examples of Design Features for Multi-Family Structures

G. Parking and Garages

1. Surface parking lots shall not be located between a multi-family building and a street frontage.
2. If a building fronts more than one public right-of-way, parking shall not be located between the building and the primary frontage on the public right-of-way. Parking may be located along the side of the building, adjacent to the secondary street frontage.
3. If the development contains more than one building, the parking lots shall be internalized in building groups to minimize their visibility from adjacent streets, or located to the side of or behind the primary building.
4. Detached garages and carports shall use compatible architectural styles or complementary colors to the primary building, incorporating similar forms, scale, materials, color, and details.
5. When underground parking, structured parking, or parking within, above, or enclosed beneath the building it serves is provided, a reduction of up to 15 percent of the minimum required parking spaces as described in Table 4-6: *Minimum Required Off-Street Parking* is allowed.

H. Common Open Space

1. Multi-family development of five or more units shall provide a minimum of 15 percent of the total site area as common open space that meets the standards of §4.6.3A, *Common Open Space*.
2. This requirement may be reduced to 10 percent of site area with the provision of individual balconies, decks, or patios, for the exclusive use of individual units, provided to a minimum of 60 percent of the units in a development. No such feature shall be less than 60 square feet.¹⁴¹

 **Additional Standards for Mixed-Use Development****COMMENTARY**

This section proposes detailed new standards for development in New Braunfels' new mixed-use districts. Each subsection is preceded by commentary that explains why this feature or element is important in creating mixed-use development.

A. Streetscape Design**1. Sidewalks****COMMENTARY**

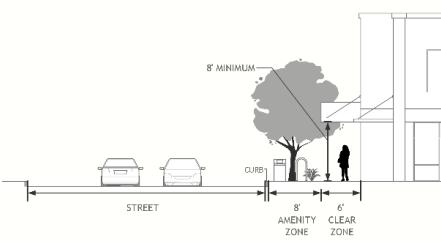
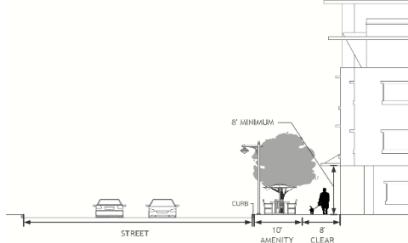
Standards that create a well-designed, pedestrian-friendly streetscape are a core element of effective mixed-use site design. Sidewalk standards for the new mixed-use districts should supplement general sidewalk standards and require specific physical layout requirements focused on walkability.

Sidewalks shall consist of two zones: a clear zone and an amenity zone. The clear zone is intended to provide a clear path of travel for pedestrian movement and the amenity zone is intended for the placement of street trees and street furniture including seating, streetlights, waste receptacles, fire hydrants, traffic signs, bus shelters, bicycle racks, public utility equipment such as electric transformers and water meters, and similar elements in a manner that does not obstruct pedestrian access or motorist visibility. The following standards shall apply to these zones.

Table 4-14: Sidewalk Zone Requirements by Zoning District

	MXT – Traditional Neighborhood Development	MXC – Corridor Mixed-Use
	MXR - Mixed-Use Regional	

¹⁴¹ This is where an allowance for other amenities could be included.

		
Clear Zone	<p>The clear zone shall be:</p> <ul style="list-style-type: none"> • A minimum width of 6 feet; • Hardscaped; • Located adjacent to the street tree/furniture zone; • Unobstructed for a minimum width of 6 feet and a minimum height of 8 feet; and • Compliant with ADA and Texas Accessibility Standards. 	<p>The clear zone shall be:</p> <ul style="list-style-type: none"> • A minimum width of 8 feet; • Hardscaped; • Located adjacent to the street tree/furniture zone; • Unobstructed for a minimum width of 8 feet and a minimum height of 8 feet; and • Compliant with ADA and Texas Accessibility Standards.
Amenity Zone	<p>The amenity zone shall:</p> <ul style="list-style-type: none"> • Have a minimum with of 8 feet; • Be continuous and uninterrupted for the full length of the lot frontage; and • Be located adjacent to the curb. 	<p>The amenity zone shall:</p> <ul style="list-style-type: none"> • Have a minimum with of 10 feet; • Be continuous and uninterrupted for the full length of the lot frontage; and • Be located adjacent to the curb.

B. Pedestrian Amenities

COMMENTARY

Similar to the sidewalk requirements, standards requiring pedestrian amenities are intended to help create an inviting, pedestrian-friendly streetscape. The pedestrian amenities described below may be placed within the "amenity zone" described above or elsewhere on the site.

1. Applicability

This section sets forth a range of options for pedestrian amenities to enhance the streetscape and foster a pedestrian-oriented built environment. For all development subject to this section, applicants shall select amenity options from Table 4-15 below to achieve the minimum number of points required for that development.

2. Incentives

If additional pedestrian amenities are included beyond the minimum required, the Planning and Development Services Department may approve no more than one of the following incentives:

- Increase in building height of up to 10 percent;
- A reduction in minimum required parking of up to 10 percent;
- **[reserved]**¹⁴²

3. Pedestrian Amenity Options

COMMENTARY

As a starting point for discussion, the table below includes a total of 13 amenity options and 20 potential points. This draft proposes a base requirement of 10 points for new development and redevelopment (50% of potential points) and 5 points for minor expansions (25% of potential points). The points attributed to each amenity are generally weighed based on a number of factors including cost of construction and overall public benefit.

¹⁴² What other incentives may be considered appropriate here?

Table 4-15: Menu of Pedestrian Amenity Options

Amenity Description	Points
Spaces and Areas	
An enhanced landscaped area, provided such landscaped area has a minimum depth and width of 10 feet and a minimum total area of the lesser of 650 square feet or two percent of the net site area. Enhanced landscaping includes: additional plant quantity and varieties, pedestrian accommodations, raised beds, landscape walls or similar hardscape elements, or any improvement that goes beyond the minimum requirements	1 point
A playground, patio, or plaza with outdoor seating areas, provided the playground, patio, or plaza has a minimum depth and width of ten feet and a minimum total area of 300 square feet.	3 points
Site Features	
At least one blank wall treatment: <ul style="list-style-type: none"> Install trellises with climbing vines or plant materials along wall; Provide a planting bed with plant material that screens at least 50 percent of the wall surface; or Provide artwork on the surface. 	1 point
Creative, ornate or decorative art installations, sculptures, murals, or other intentional artwork	2 points
Pedestrian-scaled lighting poles or bollards, no more than 15 feet in height installed at intervals of 50-70 feet on center and located an equal distance from street trees	1 point
Rain gardens, street-side swales, soil and turf management or other appropriate storm water infiltration system(s) to capture and infiltrate a minimum of 25 percent of site-generated stormwater (subject to approval by the Transportation and Capital Improvements Department)	3 points
Seating every 30 feet along the building frontage, provided such seating includes a variety of seating types and configurations, accommodates solitary and social activities, and provides a safe, comfortable seating surface with smooth, even surfaces and curved edges. The following kinds of seating may be used to meet the requirement: moveable seating, fixed individual seating, fixed benches with and without backs, and seating designed into architectural features (e.g., walls, planter ledges, and seating steps).	1 point
Shade structures such as awnings, screens, or other architectural devices on at least 50% of the south- and west-facing glazing	2 points
Street trees in an amount that at least doubles the base requirement of §X.X. ¹⁴³	2 points
Trash and recycling receptacles installed every 250 feet along the building frontage and at each building entrance adjacent to a pedestrian walkway	1 point
Enhanced Connectivity	
Block faces ranging between a minimum of two hundred feet (200 feet) and a maximum of six hundred feet (600 feet)	1 point
Clear and continuous pedestrian paths from every primary building entrance to all crosswalks directly adjoining the site	1 point
Where a sidewalk must cross a parking lot, internal street, or driveway to make a required connection, the crosswalk is clearly marked using a change in color, change in materials, change in elevation, or some combination of those techniques	1 point

¹⁴³ To be removed if street tree requirements not included.

4. Pedestrian Amenities Required for Large/Multi-Building Developments

Developments in the MXR district with more than 100,000 square feet shall be organized to create pedestrian-friendly spaces and streetscapes. This shall be accomplished by using the buildings to frame and enclose at least one of the following:

- a. The corners of street intersections or entries into the development site;
- b. A "main street" pedestrian or vehicle access corridor within the development site; and/or
- c. A plaza, pocket park, square, or other outdoor gathering space for pedestrians.

Figure 4.6.6-1: Pedestrian Amenities for Large/Multi-Building Development

**C. Building Design****1. Building Orientation and Entrances****COMMENTARY**

Building orientation requirements address where building entrances are located, helping to ensure they are facing pedestrian access points and sidewalks, and not turned inward towards auto-oriented areas.

- a. Each building and separate lease space at grade along the street edge shall have a functioning primary entry from the sidewalk. Corner entries may count as a primary entry for both intersecting street frontages.
- b. Primary building entrances shall be defined and articulated with architectural elements such as:
 - i. Pediments or columns;
 - ii. Portico, awning, canopy, or marquee;
 - iii. Porche or landing;
 - iv. Double doors;
 - v. Side-lights (glazed openings to the side of the door), and transom-lights (glazed opening above the door) at the entryways;
 - vi. Decorative lighting; or
 - vii. Enhanced landscaping.
- c. For buildings with multiple tenant entries, each entrance shall be defined and articulated with architectural elements.

- d. All ground-floor pedestrian entrances shall be covered or inset.

Figure 4.6.6-2: SAMPLE GRAPHIC (numbering under revision) Building Entrances



- e. Building entries shall be oriented towards the primary street frontage, unless direct pedestrian access is provided that connects the primary street frontage to all building entrances fronting courtyards or plazas, or internal pedestrian walkways, as shown in Figure 4.6.6-28.
- f. Corner lots may have buildings oriented to the side property line if direct pedestrian access is provided from the primary street frontage and the façade along the primary street frontage is located at the front setback line.

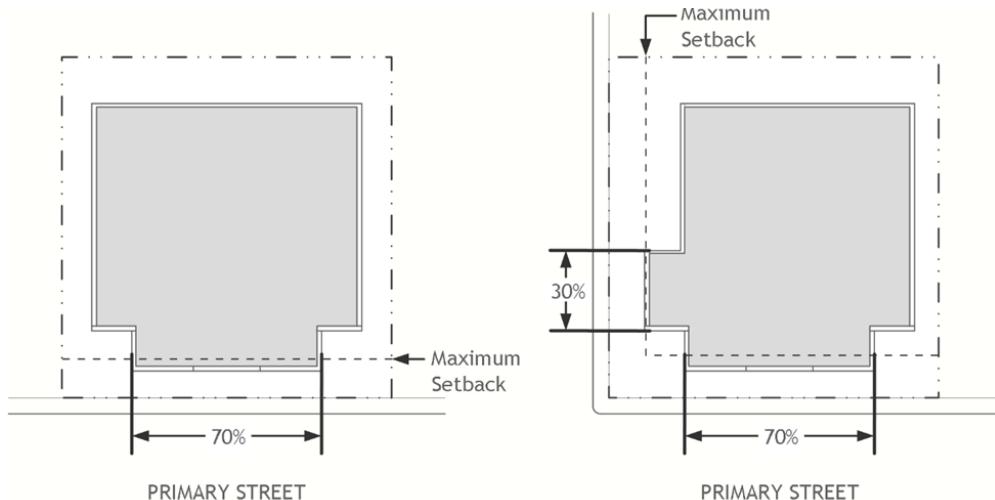
2. Minimum Street Frontage

COMMENTARY

The intent of requiring building street frontage is to encourage a more prominent and continuous street that promotes a multi-modal, pedestrian friendly environment while reducing the visual dominance of large surface parking lots.

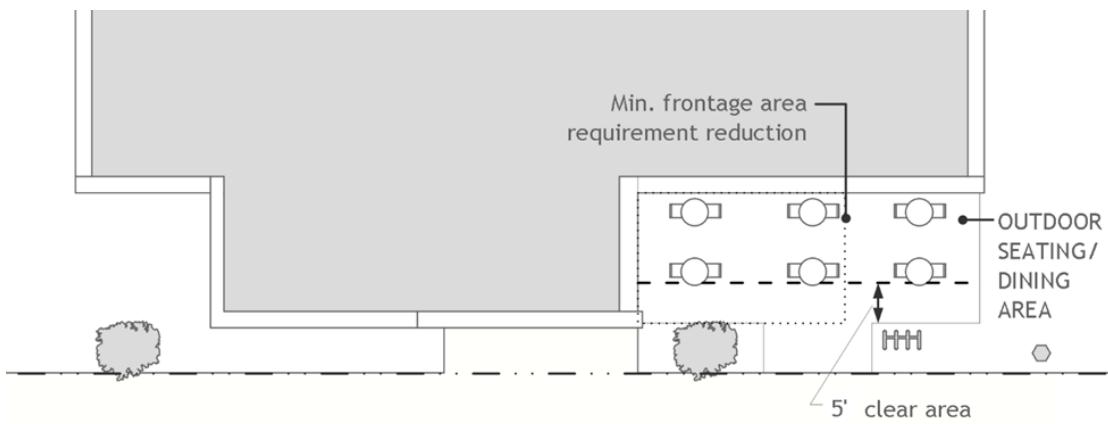
- a. Building facades shall be located within the area between the property line and the maximum setback for a minimum of 70 percent of the primary street frontage of the parcel.
- b. On corner lots, building facades shall be located within the area between the property line and the maximum setback for a minimum of 30 percent of the side street frontage of the parcel.

Figure 4.6.6-3: Minimum Street Frontage



- c. Required street frontage shall apply only to the ground floor of the building.
- d. The minimum frontage requirement may be reduced for an outdoor seating or dining area, provided the area is designed and located:
 - i. To avoid interference with any pedestrian access ramp from any abutting street onto the sidewalk, and to avoid all areas required for maneuvering of wheelchairs and other ambulatory devices at the top of any pedestrian access ramp; and
 - ii. To meet the standards for a clear zone set forth in Table 4-14: *Sidewalk Zone Requirements by Zoning District*.

Figure 4.6.6-4: Minimum Frontage and Outdoor Seating/Dining Areas



3. Grade-Level Design

COMMENTARY

A pedestrian-oriented streetscape also requires an active grade or ground floor-level.

- a. **Residential At-Grade**
 - i. All buildings that have residential unit floor plates within six feet of finished grade shall include a primary front door entrance into the unit accessible from the sidewalk.
 - ii. The entry shall be located a minimum of two feet above the sidewalk elevation and include a minimum 24 square foot stoop.

- iii. Units shall also include windows that provide residents a view of the street and sidewalk area.
 - iv. Lobbies that provide access to upper stories may be located at grade level.
 - v. Balcony and patio railings and fences shall be constructed of wrought iron or metal. Wood fences and railings and chain-link fencing are prohibited. Masonry columns may be used on patios provided that they are used as accents.
- b. Non-Residential At-Grade**
- i. The ground floor entry shall be located at the approximate elevation of the adjacent sidewalk.
 - ii. Non-residential uses adjacent to the sidewalk at grade shall:
 - a. Comply with meet fire code separation requirements from any other uses constructed above;
 - b. Have a minimum clear height of 16 feet between finished floor and the ceiling or top plate. Mezzanines within the retail space shall be allowed per building code; and
 - c. Have an awning or canopy that extends at least six feet over the sidewalk for at least 75 percent of the frontage on any portion of a building. Such awning or canopy shall maintain a minimum seven and one-half foot clearance over the sidewalk; or
 - d. Have an arcade that:
 - i. Is open and unobstructed for a height of at least 12 feet;
 - ii. Is open for its entire length with the exception of columns;
 - iii. Is open to a street or to a public open space on the property;
 - iv. Extends at least 50 feet or the full length of the street frontage if less than 50 feet; and
 - v. Is accessible to the public at all times.

4. Building Form

COMMENTARY

Building mass requirements are intended to mitigate the negative impacts created by the scale and bulk of large buildings and promote variety and visual interest in the exterior design of buildings. They ensure a variety of buildings in a mixed-use development that are compatible with other buildings in the development and the surrounding area.

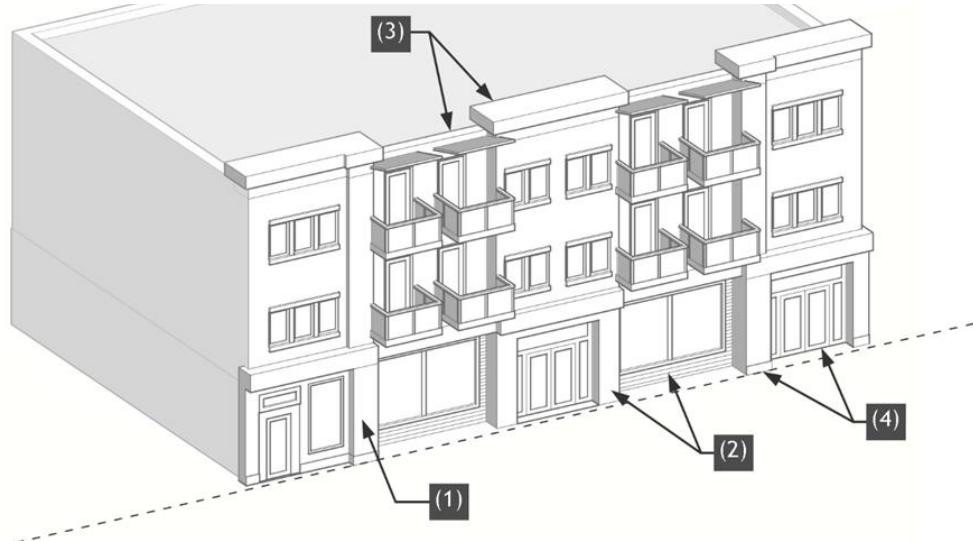
a. Four-Sided Architecture

Mixed-use structures shall incorporate architectural features on all sides of a building. Blank walls void of architectural features are not allowed.

b. Horizontal Articulation

Each street-facing façade shall incorporate at least three of the following elements within each 50 horizontal feet of building façade:

- i. Use of vertical piers or columns;
- ii. Providing vertical building modulation of at least 12 inches in depth;
- iii. Projections, recessions, or reveals such as, but not limited to, columns, pilasters, cornices, and bays, and having a change of wall plane that is a minimum of six inches in depth; and/or
- iv. A change in building material, siding style, or color.

Figure 4.6.6-5: SAMPLE GRAPHIC (numbering under revision) Horizontal Articulation**c. Vertical Articulation¹⁴⁴**

Buildings of three stories or more shall reduce mass with a clearly identifiable base, middle, and top to the structure, with horizontal courses separating these components. The body or middle must constitute a minimum of 50% of the total building height. See Figure 4.6.6-33.

Figure 4.6.6-6: Vertical Articulation**d. Building Transparency****COMMENTARY**

Providing fenestration (windows) encourages interaction between the pedestrian and the ground-floor space and allows pedestrians to view activities inside the building or displays related to those activities.

¹⁴⁴ This draft does not propose vertical articulation requirements for one- and two-story structures; however, we believe that the combination of horizontal articulation requirements plus architectural feature requirements should suffice to prevent more Dollar General-type structures.

Article 4: Development Standards

4.6 Site and Building Design

4.6.6 Additional Standards for Mixed-Use Development

i. Ground-Floor Transparency

- a. If the ground floor of the building is occupied by non-residential uses, and located within 10 feet of the sidewalk, at least 40 percent of the ground floor, street-facing façade between four and eight feet above the sidewalk, shall be transparent.
- b. If the ground floor of the building is occupied by non-residential uses, and located between 10 and 20 feet from the sidewalk, at least 25 percent of the ground floor, street-facing façade between four and eight feet above the sidewalk shall be transparent.
- c. If the ground floor of the building is occupied by residential uses, at least 15 percent of the street-facing façade (all vertical surfaces generally facing the street) shall be transparent.

Figure 4.6.6-7: SAMPLE GRAPHIC (numbering under revision) Ground Floor Transparency



ii. Other standards

- a. Upper floors of each façade facing a public street shall contain a minimum of 20 percent windows.
- b. Windows and other materials intended to meet the minimum transparency requirements shall not be reflective.
- c. Windows shall be individually defined with detail elements such as frames, sills and lintels, and placed to visually define the building stories.

D. Parking Location

COMMENTARY

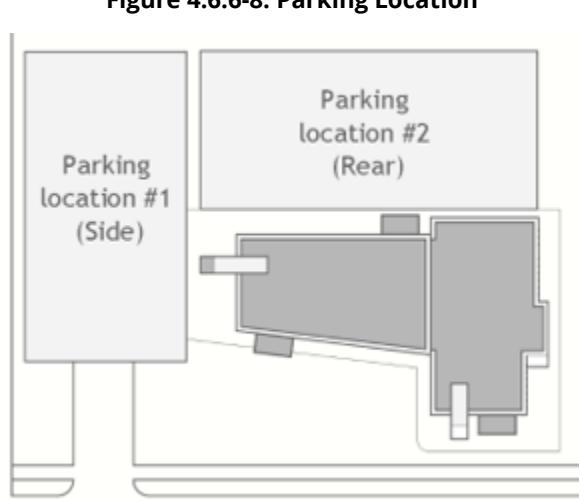
Parking location requirements are intended to ensure that the siting and orientation of buildings creates a comfortable pedestrian environment, limiting the potential conflict between pedestrians and vehicles while also enhancing the visual character and definitions of streets.

1. Any surface parking area for mixed-use development shall not be located between the front building façade and the street. Parking shall be located beside or behind the building.
2. **Parking located beside a structure shall occupy no more than 20 percent of the linear street frontage of the lot.**
3. Structured parking that is located within the building shall not occupy the ground floor street frontage. Ground floor parking may be accessed from the primary street frontage, but shall be fronted by liner space of a sufficient depth to accommodate street-facing nonresidential uses.
4. Parking areas shall comply with §4.5.6, Design of Off-Street Parking Areas, §4.2.6, Parking Lot Landscaping, and where applicable, §4.4, Buffering and Residential Adjacency.

E. Common Open Space

1. Mixed-use development that has five or more residential units shall provide a minimum of ten percent of the total site area as common open space that meets the standards of §4.6.3A, *Common Open Space*.
2. This requirement may be eliminated with the provision of individual balconies, decks, or patios, for the exclusive use of individual units, provided to all of the residential units in the development. No such feature shall be less than 60 square feet.

Figure 4.6.6-8: Parking Location



4.6.7 Additional Standards for Non-Residential Development

COMMENTARY

Generally, this section carries forward requirements for vertical and horizontal articulation, though with a more straightforward approach for applying those requirements, and proposes some additional, more detailed standards for non-residential development.

This draft does carry forward the allowance that if a building façade is not visible from a parking lot or "a public roadway, public park or residential district," it is not required to comply with these standards.

A. Applicability

1. All facades of a non-residential building that are visible from or adjacent to a parking lot, public roadway, public park, or residential district or use shall comply with the standards of this section.
2. Structures for industrial uses in industrial zoning districts shall comply with the standards of this section, or shall be subject to the provision of enhanced landscaping, as described in §X.X.

B. Horizontal Articulation Requirements¹⁴⁵

Façades greater than 50 feet in length shall incorporate wall plane projections or recesses extending at least 20 percent of the length of the façade, to a minimum depth or projection of two feet.

C. Vertical Articulation¹⁴⁶

Buildings of three stories or more shall reduce mass with a clearly identifiable base, middle, and top to the structure, with horizontal courses separating these components. The body or middle must constitute a minimum of 50% of the total building height. See Figure X.X.



Figure 4.6.7-1: Vertical Articulation

D. Architectural Features

Each façade of a building that is visible from or adjacent to a parking lot, public roadway, public park, or residential district or use, shall incorporate at least two of the following components (See Figure 4.6.7-2):

1. Awnings;
2. Canopies;
3. Alcoves;
4. Windows;
5. Recessed entries;
6. Ornamental cornices;
7. Engaged columns or pillar posts;
8. Variations in roof line or variations in roof height of two feet or more;
9. Variations in the arrangement and recessing of windows;
10. Recognizable changes in texture, material, or surface colors;
11. Minimum 2-foot parapet return; or



Figure 4.6.7-2: Examples of Design Features for Non-Residential

¹⁴⁵ This section carries forward the intent of 144-5.22-3.c.1; however, the method for determining the frequency with which articulation is required is simplified.

¹⁴⁶ This draft does not propose vertical articulation requirements for one- and two-story structures; however, we believe that the combination of horizontal articulation requirements plus architectural feature requirements should suffice to prevent more Dollar General-type structures.

12. Other building elements that contribute to the human scale of a building.

E. Building Entrance Treatments and Pedestrian Routes¹⁴⁷

1. Any front entry shall be set back from the drive a minimum distance of 15 feet.
2. Single-use or multi-tenant buildings over 60,000 square feet in size must provide clearly defined, highly visible customer entrances that include an outdoor patio area, at least 200 square feet in area, that incorporates the following:
 - a. Benches or other seating components;
 - b. Decorative landscape planters or wing walls that incorporate landscaped areas;
 - c. Structural or vegetative shading; and
 - d. Pedestrian routes between parking areas and buildings. See §X for pedestrian circulation requirements.

F. Building Height Stepdown in Transitional Zones

1. When a non-residential structure in a non-residential zoning district shares a common lot line with an existing dwelling in a one-to four-family residential zoning district, the height of the non-residential building within 100 feet of that common lot line is limited to the height permitted in the residential zoning district. Portions of the non-residential structure that are more than 100 feet from the shared lot line may be taller, as permitted by the applicable non-residential zoning district.

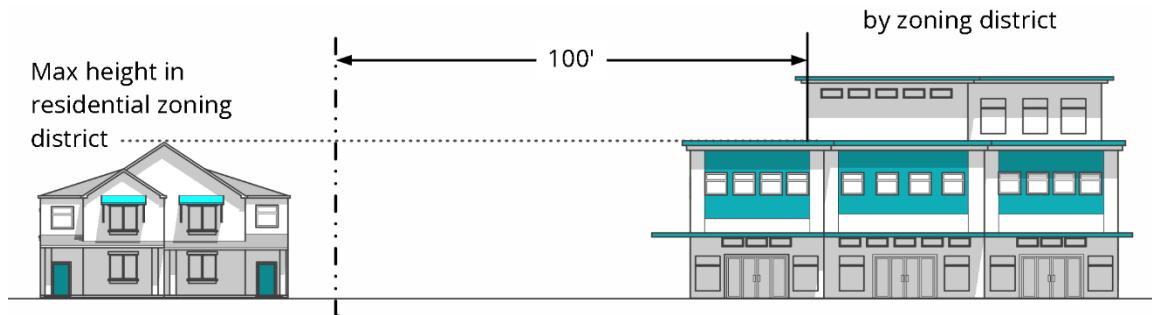


Figure 4.6.7-3: Height Stepdown Adjacent to Residential

2. If the height limits are the same in the adjacent districts, the non-residential structure may build to the full height permitted as permitted by the applicable non-residential zoning district.

G. Schools¹⁴⁸**1. Purpose**

This section is intended to establish building height allowances and clarify landscaping, fencing and articulation requirements for public and private schools to ensure schools can achieve their public purpose of education in a safe environment while minimizing potential impacts on surrounding land uses.

2. Height

- a. The height of any point on a structure on a school property must have at least an equal distance setback from an adjacent property used or zoned for one- to four-family residential.

¹⁴⁷ 144-5.22-8. These requirements are carried forward from the current code. If edits are needed, please advise.

¹⁴⁸ In the Consolidated Draft, this section will be relocated to use-specific standards.

- a. Awnings extending 50 percent or more along the wall;
 - b. Windows comprising 35 percent or more of the façade;
 - c. Balconies;
 - d. Vertical breaks;
 - e. Columns;
 - f. Arches;
 - g. Pediments;
 - h. Pilasters;
 - i. Terracing to accommodate topographic elevation changes; or
 - j. Other decorative or functional elements approved by the Planning and Development Services Department.
- ii. If the specific depth or height requirements for each required horizontal or each required vertical offset cannot be achieved, then the requirements can be met if the cumulative depth or height of all horizontal or all vertical offsets equal the dimensions that would have been required otherwise.
 - iii. Horizontal offsets do not have to be precisely perpendicular.

4.7 Sensitive Area Protection

COMMENTARY

This section proposes regulatory protections in the areas of the city over the Edwards Aquifer. The proposed regulations are intended as a starting point for discussion about the possibility of regulating development in these areas.

Question to consider:

-Are there other sensitive zones that should be included in this section? Other communities regulate waterfront/riverfront development, wildlife habitat or sensitive natural areas, areas with views that are to be preserved, development over certain kinds of delicate soil, view protection zones, among others.

-Are there uses that should not be allowed in this zone? A truck stop is one use that could be harmful, along with other vehicle-related uses such as repair or paint shops, as could uses such as exterminator that require storage of chemicals on-site.

4.7.1 Edwards Aquifer

A. Purpose

This section is intended to protect water quality and prevent infiltration of pollutants into the water supply by applying regulations to proposed development within New Braunfels city limits that are atop the Edwards Aquifer.

B. Applicability

The standards of this section apply to land designated as recharge zone, transition zone, and contributing zone by the Texas Commission on Environmental Quality, and shown on the TCEQ Edwards Aquifer map, accessible at

<https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=2e5afa3ba8144c30a49d3dc1ab49edcd>.

C. Geologic Assessment

- 1. Prior to any earthmoving activities on a site within the aquifer recharge, transition, or contributing zones, a geologic assessment prepared by a qualified professional geologist shall be submitted to the Planning and Development Services Department.



2. This assessment shall contain all information required for Geologic Assessments under the TCEQ Edwards Aquifer rules and shall identify any **sensitive features¹⁵⁰** on the proposed development site, including caves, solution cavities, solution enlarged fractures, sinkholes or other karst surface expressions.

D. Excavation and Construction

If, during the process of excavation or construction on the development site, new sensitive features are discovered in the recharge or transition zones, or the extent of identified sensitive features is greater than indicated in the Geologic Assessment, the following actions are required:

1. Construction and excavation activities shall be immediately suspended;
2. A qualified geologist shall be retained to inspect the sensitive feature and make recommendations on how it should be treated in on-going construction on the site;
3. The geologist recommendation shall be submitted along with an updated site plan to the Planning and Development Services Department;
4. If the property owner intends to comply with the geologist recommendation, construction or excavation may resume when an updated permit is approved by the Planning and Development Services Department; and
5. If the property owner is unable to or does not intend to comply with the geologist recommendation, approval by the City Council is required as described in §X. Such approval shall only be granted after consideration of input provided by TCEQ, New Braunfels Utilities, the geologist, the City's Watershed Management department, and the City's Watershed Advisory Committee, when applicable.

E. Development Limitations**1. Sensitive Features**

- a. Development proposals shall describe how any sensitive features identified in the Geological Assessment will be treated in the process of development.
- b. Sensitive features should not be sealed, but instead protected from the potential impacts of pollutant infiltration from stormwater runoff or other point source pollutants from any new development in the area.

2. Impervious Cover Limits**a. Sensitive Features**

Sensitive features identified on any development site shall not be covered with impervious surfacing.

b. Recharge Zone

- i. Sites within the recharge zone shall have an impervious cover limit of 25 percent of the total site area.
- ii. Parking lots in this zone containing 25 or more vehicle spaces shall install stormwater mitigation measures to include some combination of sedimentation, filtration, and adsorption designed to treat stormwater runoff prior to infiltration.

**c. Transition Zone**

- i. Sites within the transition zone shall have an impervious cover limit of 40 percent of the total site area.
- ii. Parking lots in this zone containing 50 or more vehicle spaces shall install stormwater mitigation measures to include some combination of sedimentation, filtration, and adsorption designed to treat stormwater runoff prior to infiltration.

¹⁵⁰ This has been added as a new defined term.

d. Contributing Zone

Sites within the transition zone shall have an impervious cover limit of 40 percent of the total site area.

**3. Individual Wastewater Systems**

- a.** Any lot within 500 feet of access to a public wastewater system shall connect to that system.
- b.** Lots that cannot connect to a public wastewater system shall use sewage disposal systems that are installed in accordance with applicable state regulations.

**4. Underground Storage Tanks**

In the recharge and transition zones, underground storage tanks shall not be used to store hazardous materials, including gasoline.

4.8 Exterior Lighting

COMMENTARY

The current lighting standards in Chapter 144-5.3-4 are, according to stakeholders and staff, inadequate and outdated. As a result, this section replaces the current regulations, proposing more robust and modern exterior lighting regulations for the City.

Lighting regulations can become very complicated and detailed, but this draft proposes a basic approach to regulation, with lighting intensity (low, medium, high) tied to zoning districts. To respond to concerns regarding stadiums and other recreation fields, and vehicle fuel station canopies, new content is included with standards for both of those uses.

4.8.1 Purpose

The purpose of this section is to provide for exterior lighting that enhances safety, preserves the city's nighttime character, and improves the ability to view the nighttime sky from within city limits. This section is intended to decrease light pollution, increase energy efficiency, and promote high quality lighting design as it relates to the built environment. The lighting regulations are also intended to:

- A.** Ensure that parking areas, public gathering places, and other public places have adequate outdoor illumination;
- B.** Ensure that light levels are uniform to enhance night vision and security;
- C.** Minimize adverse impacts on public safety and neighborhood enjoyment due to excessive glare;
- D.** Minimize spillover of light onto adjacent or nearby properties; and
- E.** Minimize the effects of skylight.

4.8.2 Applicability

A. New Lighting

New exterior lighting within city limits shall be installed in conformance with the requirements of this section, the building code, the electrical code, and other applicable City regulations.

B. Existing Lighting

Existing exterior lighting that does not meet the provisions of this ordinance and requires luminaire or electrical investment to conform, shall be considered a legal nonconforming site feature.



Article 4: Development Standards

4.8 Exterior Lighting

4.8.2 Applicability

C. Change of Use

A change of use on a property where exterior lighting is considered a nonconforming site feature shall be required to bring the site lighting into compliance with these standards for the change of use to be approved.

D. Redevelopment

Exterior lighting as described in this section is required for redevelopment of a lot that involves the demolition of 50 percent or more of an existing primary structure, and its replacement with any new construction, whether to the same, greater, or lesser extent than the building footprint that previously occupied the lot.

E. Expansion of Parking Area

1. Exterior lighting as described in this section is required for an existing parking lot that is being expanded or altered to an extent between 25 and 50 percent of the lot's surface area prior to expansion. Only the parking lot area being added shall be required to meet the standards of this section.
2. When a parking lot is expanded by more than 50 percent of its surface area, the entire parking lot shall meet all of the requirements of this section.
3. Expansion is measured cumulatively, so that separate expansions that add up to a 25 percent or greater increase in parking lot surface area within a span of five years shall be required to meet the requirements of this section.

F. Exemptions

The following are exempt from the requirements of this section:

1. Emergency Lighting

Lighting used only under emergency conditions.

2. Seasonal Lighting

Temporary seasonal lighting, provided such lighting does not create glare to motorists or result in light trespass onto adjacent properties.

3. Lighting Required by FAA or FCC

Lighting required by the Federal Aviation Administration or the Federal Communications Commission.

4. Special Events

Special events that have been issued a special event permit pursuant to Chapter 91, shall be allowed temporary lighting for the duration of the event, provided such lighting does not create glare to motorists or result in light trespass onto adjacent properties.

5. Street Lighting

These requirements shall not apply to street lighting within City, County, or state rights-of-way.

6. Underwater Lighting

Underwater lighting used for the illumination of swimming pools and decorative water fountains shall not be subject to this section, though they must conform to all other provisions of this LDO.

7. String Lighting

Permanently exposed string lighting typically used for patio or roadway ambience, provided such lighting does not create glare to motorists or result in light trespass onto adjacent properties.

8. Lighting Required by Building Code

Any lighting that is required by the building code for life safety purposes such as stairway lighting, walkways, and building entrances, shall not be prohibited by this section, but shall be subject to the lighting standards contained herein.

4.8.3 Lighting Types Not Permitted

The following types of exterior lighting are not permitted:

- A. Unshielded lights, lamps, or floodlights that produce glare and light trespass in excess of that allowed in Table 4-16: *Maximum Light Trespass at Property Line*;
- B. Lights affixed to the top of a roof, except where required by building code;
- C. Lights that flash, move, revolve, blink, flicker, vary in intensity, change color, or use intermittent electrical pulsation, except for temporary Seasonal Lighting, as described in §4.8.2F.2;
- D. Searchlights and rotating beacons;
- E. Mercury vapor and low-pressure sodium lighting; and
- F. Upward-directed lighting that allows spillage into the sky.

4.8.4 Lighting Plan Required

- A. Unless lighting is expressly exempt by §4.8.2F, all new multi-family, mixed-use, or non-residential developments shall submit a lighting plan as part of the applicable land use application and/or building permit request.
- B. **Option 1:** The lighting plan shall include sufficient information to enable the Planning and Development Services Department to determine whether proposed lighting complies with this LDO.
- C. **Option 2:** Lighting plans shall include the following:
 - 1. The location and height above grade of light fixtures;
 - 2. The type of light source (such as incandescent, fluorescent, high pressure sodium, metal halide, LED), rated lumens, and wattage of each light source;
 - 3. The type of fixture (such as full-cutoff, cut-off, lantern, wall pack);
 - 4. Calculations for site illumination resulting from the lighting, including minimum and maximum;
 - 5. If building walls are to be illuminated, or if façade-mounted fixtures are to be used, drawings of all relevant building elevations showing the fixtures and the portions of the walls to be illuminated calculated point-by-point and light levels; and
 - 6. Other information deemed necessary to document compliance with the provisions of this section.

4.8.5 Exterior Lighting Standards

A. Hours of Illumination

Hours when outdoor lighting may be operated at maximum illumination are between 6 a.m. and 11 p.m., unless otherwise specified by this section. Outside of those hours, all outdoor lighting shall be dimmed by at least 50 percent or turned off, with the following exceptions:

- 1. Street lighting, and other Department of Transportation lighting.
- 2. Code-required lighting for public steps, stairs, walkways, and building entrances.
- 3. Security lighting.
- 4. Parking lot lighting, which may be equipped with motion detecting sensors to temporarily illuminate the lot outside of business hours.
- 5. Other permitted exceptions, such as lighting for flags, seasonal, sports fields, and businesses which operate during overnight hours; such lighting may remain illuminated only while the establishment is open for business.

B. On-Site Lighting Level

Maximum on-site illumination, including spillage from doorways, signs, and windows, shall not exceed 10 footcandles, unless otherwise allowed in this LDO.

C. Light Trespass**1. Maximum Light Trespass Levels**

The maximum measured light levels (footcandles) shall not exceed those provided in the following table:

Table 4-16: Maximum Light Trespass at Property Line

Intensity Level	Zoning District	Footcandles at Property Line
High intensity	MXC MXR CBD CG CR LI HI	3.0
Medium intensity	AG MIXT CN RC PO	1.0
	RMF1 RMF2 RMF3 RMH	0.5
Low intensity	R12 R8 R6.6 R5.5 R4 R2.5 RMX	0.25

2. Measurement

- Light trespass shall be measured at grade level unless otherwise noted.
- Lighting measurements shall be taken under normal conditions. Measurements to determine compliance shall not be taken when conditions are present that will influence the outcome of measurements including snow, snowpack, rain, fog, or other influences.
- Light sources from a property shall be measured as cumulative of all sources on the subject property, except for internally illuminated signs.

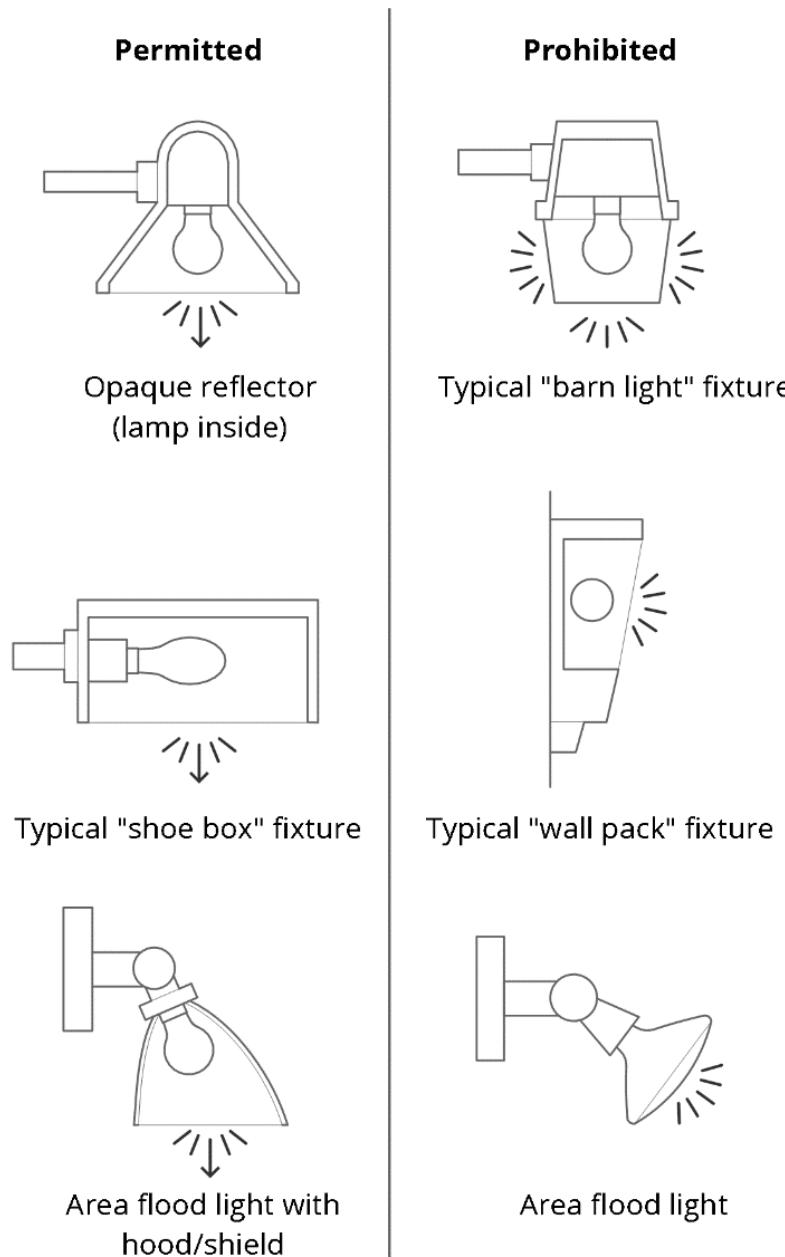
3. Transitions between Zoning Districts

The maximum level for light trespass when a more intense zoning district borders a less intense zoning district shall be the lower of the two values, along that border only. Where separated by a public street or right-of-way, the levels shall apply at the center line of the street adjacent to the light source.

D. Shielded Light Source Required

1. All luminaires located shall be designed so that the light source (bulb or lamp) is completely shielded from direct view at a point three feet above grade on a property line abutting a residential zone or use.
2. In all other instances, the light source must be completely shielded from direct view at a point six feet above grade on a bounding property line.
3. Examples of shielded or cutoff fixtures are shown in Figure 4.8.5-1:

Figure 4.8.5-1: Acceptable Light Source Shields



E. Cutoff Angle

1. All luminaires must have a total cutoff angle equal to or less than 90 degrees, unless a more restrictive standard is specified by this code.

2. The use of exterior lighting with a cutoff angle greater than 90 degrees shall be permitted only when the Planning and Development Services Department finds the following:
 - a. That the proposed lighting is not in conflict with the Purpose of this section;
 - b. That the proposed lighting will not have a negative impact on adjacent properties; and
 - c. The proposed lighting will not result in an impairment of vision creating a hazard for vehicular or pedestrian traffic.

F. Height for Freestanding Luminaires

1. The maximum permitted height for freestanding luminaires is as follows:
 - a. Low Intensity Areas: 12 feet.
 - b. Medium Intensity Areas: 20 feet.
 - c. High Intensity Areas: 30 feet.
2. Lighting mounted higher than 30 feet may be approved as a minor deviation or a variance, as described in **SX.X**.
3. The standards of this subsection do not apply to lighting for Outdoor Recreation Facilities, or canopies over Vehicle Fuel Sales.

G. Pedestrian-Scale Lighting

Low-level pedestrian lighting may be used along walkways pursuant to the following:

1. Light shall be directed downward;
2. Shatterproof lamp coverings are required;
3. Lighting shall not cause the site to exceed the maximum trespass levels described in Table 4-16: *Maximum Light Trespass at Property Line*;
4. Light shall not be located to present hazards for pedestrians or vehicles; and
5. Post or bollard-type lights shall be painted dark colors such as black, dark gray, dark brown, or dark earth tone.

H. Security Lighting

1. Applicability

Security lighting shall be allowed in all lighting districts. The need for security lighting shall be demonstrated as part of any development permit application package.

2. Standards

a. Examples of Appropriate Security Lighting Techniques

- i. Recessed lights under a canopy.
- ii. Full cut-off fixtures on parking lot poles.
- iii. Fully shielded wall packs or other fixtures.
- iv. Floodlights that are down-directed, fully shielded, and are controlled by motion sensors.

b. Fixtures

- i. Security lighting fixtures shall be fully shielded and directed only to the designated area.
- ii. Security lighting shall not be directed above a horizontal plane through the top of the lighting fixture.
- iii. Security lighting fixtures shall include shields that prevent the light source from being visible from adjacent properties and roadways to the maximum extent practicable.

c. Light Levels

- i. Security lighting may illuminate building entrances and exits up to a level eight feet above grade or the bottom of doorways, windows, or entries, whichever is greater.



Article 4: Development Standards

4.8 Exterior Lighting

4.8.5 Exterior Lighting Standards

- ii. Security lighting for entrances, stairways, and loading docks shall not exceed five footcandles at the designated area illuminated. Parking lot lighting used for after-hours security shall not exceed three footcandles at the designated area illuminated.
- iii. Security lighting on a parcel in a higher-intensity district that shares a common lot line with a parcel located in a lower-intensity district shall comply with specifications for light levels and maximum mounting heights in the lower intensity district, unless the Board of Adjustment approves a variance, as described in §X.X, upon finding that higher-intensity lighting will have no negative impact.

I. Canopy Lighting for Vehicle Fuel Sales

Canopies shall be illuminated so that the minimum horizontal illuminance at grade level is at least five footcandles, and the maximum horizontal illuminance under canopies is 25 footcandles.

- 1. Light fixtures mounted on canopies shall be installed so that the lens cover is recessed or flush with the bottom surface (ceiling) of the canopy or the fixture.
- 2. Lights shall not be mounted on the top or sides of the canopy. The sides (fascias) of the canopy shall not be illuminated for any purpose, with the exception of internally illuminated signage, which shall comply with §X.X [*Internally Illuminated Signs*].

J. Lighting of Outdoor Recreation Facilities

Because of their unique requirements for nighttime visibility and their limited hours of operation, outdoor recreation uses, such as stadiums, playing fields, and baseball diamonds, are exempt from §4.8.5, *Exterior Lighting Standards*, and are instead subject to the following standards:

- 1. Lights at outdoor recreation uses may not exceed a maximum permitted post height of 60 feet.
- 2. Lighting fixtures shall be mounted and directed no higher than 62 degrees up from vertical so that no direct illumination extends off the site.
- 3. No flickering or flashing lights are permitted.
- 4. Unless an hour for extinguishing illumination is otherwise specified, lights may not remain illuminated for more than one hour after the end of an event.
- 5. Lighting shall be designed, to the maximum extent practicable, to minimize adverse impacts on traffic safety and nuisance impacts on residentially zoned property.
- 6. Lighting plans must be provided prior to approval of any request for recreation facility lighting, and as-built plans are also required upon the completion of the project.
- 7. Mitigation, when necessary, can be required via extra landscaping, limited hours of operation for the lights, the use of cutoff fixtures or shields (where practicable), and other techniques as determined necessary by the Planning and Development Services Department.