

## ORDINANCE NO. 2020-05

**AN ORDINANCE AMENDING THE CITY OF BOERNE SUBDIVISION ORDINANCE NO. 2007-56, DATED NOVEMBER 13, 2007, ARTICLE 1. GENERAL PROVISIONS, SECTION 04. DEFINITIONS, ARTICLE 3. PLANNING AND COMMUNITY DESIGN STANDARDS, SECTION 06. LOW IMPACT DEVELOPMENT FACILITIES, ARTICLE 6. DRAINAGE AND FLOOD HAZARDS, SECTION 01. GENERAL REQUIREMENTS, SECTION 03. DRAINAGE EASEMENTS, SECTION 05. FLOOD HAZARDS, SECTION 06. PROTECTION OF SURFACE WATER SUPPLIES; AND RELATED REFERENCES THROUGHOUT**

**WHEREAS**, the City Council has received recommendations of the Planning and Zoning Commission concerning matters herein, which recommendations were made after holding a public hearing before said Commission and;

**WHEREAS**, the City Council held various workshops and public meetings on this matter and;

**WHEREAS**, the City Council of Boerne has determined that it is in the best interest of the Boerne community to take into consideration the public health, safety and welfare to adopt the amendments included herein;

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOERNE, TEXAS:**

The following sections of the aforementioned Ordinance are hereby amended to read:

### **ARTICLE 1. GENERAL PROVISIONS**

#### **SECTION 04. DEFINITIONS**

**Development** - buildings, roads and other structures; construction; and excavation, dredging, grading, filling and clearing or removing vegetation associated with residential, recreational, commercial, industrial or institutional construction.

**Redevelopment** - any development on previously-developed land, other than rebuilding activity.

**Drainageway** - a route or course along which water moves or may move to drain a region.

**Drainageway Protection Zone**: an area that extends horizontally landward a specified distance from the center line of a route or course along which water moves or may move to drain a region. Area that contains the Protection Zones as detailed in Section 6.03.004.

**Low Impact Development:** LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. Methods prescribed by the City of Boerne edition of the San Antonio River Authority (SARA) for Low Impact Development design may be incorporated into the development of a site. These methods are outlined in the City of Boerne edition of the SARA LID Technical Guidance Manual (also called LID Manual) outlining standard practice for design and implementation.

**Stream:** A natural water course - A natural intermittent or perennial stream flowing in a well-defined bed or channel; one formed by the natural flow of the water, as determined by the general surfaces or conformation of the surrounding country, as distinguished from an "artificial" water course, formed by the work of man, such as a ditch or canal.

**Stream Bank:** The portion of the channel which tends to restrict lateral movement of water. It often has a slope less than 90° and exhibits a distinct break in slope from the stream bottom. Also, a distinct change in the substrate materials or vegetation may delineate the bank.-

~~**Stream Corridors:** Area included in the two stream setback zones as required by the City of Boerne Zoning Ordinance. The corridor extends from outside to outside boundary of the required stream setbacks which vary from 70 to 200 feet (total) depending on the size of the water shed. Trails constructed within stream corridors shall be constructed in Stream setback Zone 2 as defined in the City of Boerne Zoning Ordinance.~~

**Subdivider:** An individual or company (the applicant) that subdivides parcels of land into smaller lots, but may also mean an individual or company that plats an individual property or parcel (development plat).

**Replace multiple references to stream corridors with Protection Zones**

**Delete references to stream corridor plan throughout the document until such time as the plan is prepared.**

## ARTICLE 3. PLANNING AND COMMUNITY DESIGN STANDARDS

### SECTION 06. LOW IMPACT DEVELOPMENT FACILITIES

#### 3.06.001 Specific Intent.

It is the specific intent of this Section to:

- A. Value the design, function, appropriate application of LID features and BMPs either incorporated into areas of open space or constructed separately
- B. Design features in accordance with the LID Manual to reduce stormwater runoff volume and flow rate to pre-development conditions. ~~and with the intent to treat a minimum of seventy percent (70%) of the projected overall stormwater runoff~~
- C. For new development and redevelopment, a portion of the annual stormwater runoff volume shall be adequately treated prior to discharge from the site. This performance standard is presumed to be met if the stormwater quality management system is sized to treat the water quality treatment volume from the impervious and disturbed portions of the site. The water quality treatment volume is defined as:
  - a. For new development, the runoff volume resulting from the first 1.66" of rainfall.
  - b. For redevelopment, the runoff volume resulting from the first 1.35" of rainfall.
- D. Adequate treatment of the water quality volume shall be defined as removal of 60% of the bacteria load and 80% of the calculated TSS particles.
- E. Consider the context and multiple functions that open spaces can serve to support development.
- F. Provide criteria for LID construction documents and engineering reports that meet the intent of the LID Manual.
- G. Manage stormwater runoff both at the source and at the surface using plants and soil to slow, filter, cleanse and infiltrate runoff. ~~by designing facilities that are simple, low-cost and aesthetically enhance the community~~

#### 3.06.002 Obligations of Subdivider.

The subdivider shall install at his/her own cost and expense all of the improvements required by this ordinance. It shall be the subdividers responsibility to ensure that all improvements are constructed in accordance with this ordinance and the LID Manual BMPs. The subdivider shall comply with all other provisions of this ordinance prior to acceptance of the subdivision by the City.

## ARTICLE 6. DRAINAGE AND FLOOD HAZARDS

### SECTION 01. GENERAL REQUIREMENTS

#### 6.01.002 Facilities Required.

The subdivider shall provide an adequate storm drainage system to protect each individual lot throughout the subdivision from flooding. These drainage facilities may consist of a combination of natural features, swales, watercourse improvements, bridges and culverts, enclosed storm sewers and other man-made improvements to carry-off mitigate increased stormwater within the subdivision. The drainage system shall use detention ponds, retention ponds and siltation ponds, individually or in concert, to control runoff and to protect upstream, downstream, and adjacent properties from any increase in flooding originating from the subdivision. The system shall be integrated with the overall drainage system of the city, and the design of the system must be approved by the City Manager in accordance with the requirements of this ordinance.

### **6.01.003      Stormwater Management.**

Stormwater management facilities shall be provided prior to site construction or clearing, where design is required at the time of platting.

- A. Stormwater management shall be designed and constructed to prevent adverse conditions from arising on property adjoining, upstream and downstream of the subdivision site. Adverse conditions include increases in peak stormwater flows, water surface elevations and flow velocity. The applicant shall provide a drainage report that shows mitigation of the impacts of development or redevelopment on the existing downstream drainage system. Mitigation may include detention, retention, infiltration, channel improvements, and other means acceptable to the City Manager. Stormwater Management facilities shall be designed to reduce post-development or redevelopment peak flow rates of discharge to pre-development rates for the 2, 5, 10, 25, 50- and 100-year storm events at all points of discharge. The drainage report shall also include an evaluation of immediately upstream, downstream and adjacent property conditions to confirm no adverse impact.

#### **~~B. Waiver of Stormwater Management requirements in certain circumstances.~~**

~~The Planning and Zoning Commission, after considering a report from City staff, may waive the Stormwater Management requirements as outlined in Section 6.01.002, Facilities Required and approve a subdivision of land that is located within the city limits as depicted on the 2010 Flood Insurance Rate map, Community Panel No. 480418, effective date of December 17, 2010, and which is seven (7) residential lots or less or fewer than 1.5 acres.~~

#### **B. Exemptions of Stormwater Management requirements.**

The following types of development are exempt from the requirements as set forth in Section 6.01.002, Facilities Required if the following criteria is met:

1. Residential lots, whether created by metes and bounds or plat, meeting the criteria in a. or b. below:

- a. The lot is larger than 3 acres and the total impervious cover on the lot, excluding the right of way, is less than 15 percent or,
- b. The lot is less than 3 acres and the total impervious cover on the lot, excluding the right of way, is less than 20 percent.

Or;

2. An individual lot (commercial or residential - one lot) whether created by metes and bounds or by plat if the owner/applicant is adding 100 OR 500 square feet or less of new impervious cover and will direct the runoff from any new impervious cover into a vegetated area outside of the right-of-way but within the same lot using methods described in the LID Manual or as provided by the City of Boerne for residential lots.

### SECTION 03. DRAINAGE EASEMENTS

#### 6.03.005 Drainageway Protection Zone

The Drainageway Protection Zone is an area that extends horizontally landward a specified distance from the center line of a route or course along which water moves or may move to drain a region.

1. Protection Zone 1 is approximately the width of the riparian zone and is measured from the drainageway center line.
  - a. Protection Zone 1 is intended to protect or allow restoration the physical and ecological integrity of natural stream corridors.
  - b. Vegetation must remain undisturbed to the maximum practical extent in this zone to assure proper functioning of this zone. Limited access to a permanent water course is allowed in private or publicly dedicated recreational areas.
2. Protection Zone 2 is the outer protection zone and is measured from the outer edge of Protection Zone 1 and extend horizontally the remaining distance of the Total Protection Width.
  - a. The outer zone is intended to prevent encroachment into the riparian zone, and to provide distance between development activity and the riparian zone.

Drainage Area (Acres)	Protection Zone 1	Protection Zone 2	Total Protection Width (each side)
≥25 acres and less than 128 acres	35'	20'	55'
≥128 acres and less than 320 acres	55'	30'	85'

≥320 acres and less than 640 acres	70'	50'	120'
≥640 acres	100'	50'	150'

### 3. Restrictions in Drainageway Protection Zones.

Drainageway protection zones shall remain reasonable free of all construction activity. Protection zone 1 may allow those street crossings as identified in 6.06.004. Protection zone 2 shall remain free of all construction activity, development and alterations accept as allowed in 6.06.003.

## SECTION 05. FLOOD HAZARDS

### 6.05.002 Flood Plain Designations and General Restrictions

Local Flood Plains shall be designated as the area inundated by the 100-year flood for all watersheds draining 25 acres or more that do not have a regulatory floodplain and are defined as a drainageway per this ordinance (Article 1, Section 04). Local floodplains are further defined by a minimum 1-foot flow depth to exclude shallow concentrated or sheet flows from being identified as elevated risk zones per FEMA guidelines. Base flood elevation data shall be generated for all local floodplains and submitted to the City of Boerne for review with any proposed development. Development is prohibited within the local floodplain, except where allowed by subsection 6.06.003. Redevelopment within the local floodplain may be allowed according to the provisions in the subdivision code.

### 6.05.003 General Requirements in Floodplains.

~~The minimum building slab elevation in the 100 year flood plain shall be one foot above the 100 year flood plain. The limits of the 100-year flood plain and the limits of the floodway shall be shown on the preliminary and final plats as applicable.~~

The limits of the 100-year FEMA or 100-year local floodplain and the limits of the floodway shall be shown on the preliminary and final plats as applicable. The minimum building slab elevation for lots in or that abut the 100-year floodplain shall be based on the following table.

Basis of Study	Minimum building slab elevation
Atlas 14 Rainfall Elevation	1 foot above 100-year floodplain Base Flood
Rainfall other than Atlas 14 Flood Elevation	2 feet above the 100-year floodplain Base

## SECTION 06. PROTECTION OF SURFACE WATER SUPPLIES

### 6.06.002 Water Supply Protection Zones.

There is hereby established a buffer zone, to be known as a "Water Supply Protection Zone," on both sides of every stream, watercourse or drainage channel which drains an area of 100 acres or more into a lake which is used or intended to be used by the City as a surface reservoir for drinking water, including the tributaries of such streams, watercourses and drainage channels which drain areas of 100 acres or more, and on all sides around the shores of any lake which is used or intended to be used by the City as a surface water reservoir. This zone extends perpendicular to the main channel of a stream or watercourse in its natural state or perpendicular to the centerline of an improved stream, watercourse or drainage channel. The width of the zone shall be measured from the center of the main channel of a stream, watercourse or drainage channel under low flow conditions, and from the normal operating high water level of a lake. The outer perimeter of the zone shall be based on the average slope of the first 50 feet at the interior of the zone, according to the following table.

TABLE 6-11: WIDTH OF WATER SUPPLY PROTECTION ZONE	
Percent Slope	Zone Width (feet)
0 — 2.5%	60
>2.5 — 5.0%	70
>5.0 — 7.5%	80
>7.5 — 10.0%	90
>10.0%	100

Water Supply Protection Zones within the area draining into a lake which is used or intended to be used by the City as a surface reservoir for drinking water shall be defined as the Drainageway Protection Zones established under 6.03.004. On all sides around the shores at normal pool of any lake which is used or intended to be used by the City as a surface water reservoir, the buffer zone shall be a minimum of 200 feet.

### 6.06.007 Stormwater Treatment Retention/Detention in Zone Drainage Areas.

All stormwater management facilities in drainage basins upstream of a City water supply reservoir shall be designed as Low Impact Development Facilities to treat 95 percent of the annual stormwater runoff volume as defined in Section 3.06.001 C. The water quality volume in Zone Drainage Areas is defined as the runoff resulting from the first 2.35" of rainfall. at least the first one half inch of rainfall runoff. Any subsequent runoff in excess of the design capacity of the basins shall bypass the basins and remain segregated from the contained runoff waters including those waters in a detention basin if required. Input to and release from the basins drainage facilities required by this

subsection for water quality protection shall be designed according to the requirements in Section 3.06.001 and utilize vegetated swales and/or overland flow dispersion measures where possible before release into the reservoir or a contributing stream.

PASSED, APPROVED AND ADOPTED on this the first reading the \_\_\_\_ day of January, 2020.

APPROVED:

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Mayor

ATTEST:

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City Secretary

APPROVED AS TO FORM:

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City Attorney



