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Article 4 Subdivision Standards

24.4.1 General Provisions

(a) Standards

(1) This article establishes standards for any subdivision plat subject to the City's jurisdiction.

(2) Subdivision plats shall comply with Sections 24.3.2 (Access Management), 24.3.3 (Blocks, Lots and Yards), 24.3.6 (Landscaping & Tree Preservation), 24.3.8 (Riparian Buffers), and 24.3.9 (Site Design) of Article 3.

(b) Standard Technical Specification Manual

Purpose: the Standard Technical Specification Manual provides standardized procedures and materials for the orderly construction and installation of public improvements.

(1) Applicability. The Standard Technical Specification Manual (the "Manual") applies to all public improvements. Divisions A, B, C, and D of the Manual applies to any public improvement to be awarded or constructed by the City of Laredo. Divisions A, C, and Sections B-1, 2, 3, and 5 do not apply to public improvements associated with the private platting of properties.

(2) Optional Specifications

a. Where circumstances warrant, or at the request of the engineer of record, a separate set of specifications for development or public improvements may be submitted to the City Engineer for approval.

b. The City Engineer shall not approve specifications less restrictive than those provided in the Manual.

c. If the Manual does not address a facet of a proposed development or public improvement, a separate set of specifications shall be submitted by the engineer of record for approval by the City Engineer.

(c) Tax Payment. Before a plat is finally approved, the applicant must provide the Planning Commission a statement from each governmental taxing unit showing that taxes on the property are not in arrears and a statement from the City of Laredo that any special assessment previously levied, if any, is not in arrears.

(d) Lots. The lot size, width depth, shape and orientation, and the minimum building setback lines shall conform to the dimensional standards of the applicable zoning district (see Article 2).

(e) Monuments

(1) *Generally*

a. Monuments shall be placed properly and referenced at all block corners, subdivision boundary corners and angle points, points of curves in streets, and intermediate points, as required by the City Engineer.

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b. The description and location of all block corners and permanent survey monuments shall be shown on the plat. The corners and monuments shall meet the standards in this subsection.

(2) *Lot Corners*. Lot corners need not be marked with monuments. However, lot corner marking shall be done as required by the private engineer and/or owner.

(3) *Block Corners*. All block corners shall be marked with concrete monuments and properly referenced. Block angle points and intermediate points shall be marked with concrete monuments as required by the City Engineer.

(4) *Concrete Monuments*

a. Monuments shall have a ½-inch diameter by 12 inches long iron rod centered and imbedded in a 6-inch diameter by 24 inches long concrete cylinder. This iron rod shall be flush with the top of the concrete cylinder and the cylinder buried firmly in place at least 12 inches below existing ground surface.

b. Where concrete monuments will be covered by concrete sidewalks or obliterated during construction, the private engineer shall coordinate with the City Engineer for approval of alternative methods of subdivision monumentation.

(5) *Alternative Monumentation*. Alternative methods of subdivision monumentation include spike, tin and washer, (2) 1/2" diameter brass rings, and lead and tag. Monumentation may be placed on an offset from the required location. However, the private engineer must obtain prior approval from the City Engineer.

(6) *Accuracy of Survey*. Closures of all boundary survey work and survey work within the subdivision shall be within an error of one in seven thousand five hundred (1/7,500).

(f) Laboratory Testing

(1) *Generally*. All materials to be used in new land development construction is subject to testing. The preponderance of testing to be performed in new developments is directly related to public improvement construction, and a series of laboratory tests normally associated with public improvement construction is required in new developments.

(2) *Testing Laboratory*

a. An independent testing laboratory shall be perform these tests by using qualified personnel.

b. The developer may select the testing laboratory up to 5 working days from the date of final plat approval by the Planning and Zoning Commission. The selection shall be submitted to the City Engineer in writing from a list of testing laboratories approved by the City. If no qualified laboratory is selected within the specified time period, the City shall select the testing laboratory from the approved list on a rotational basis.

c. The laboratory firm, once selected, shall not be changed. If unforeseen circumstances arise, and an alternative laboratory is required, the City Engineer

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shall select the replacement laboratory from the list of approved laboratories on a rotational basis.

d. The testing laboratory shall bill directly to the developer.

(3) *Testing Ratios*

a. It is assumed that the preponderance of testing required in the development is related directly to street construction. For this reason, the following ratio of testing is established:

Table 4.1-1 Ratio of Testing

Subgrade	Minimum 1 per 150 feet of street
Under curb and gutter	Minimum 1 per 150 feet of curb
Caliche Base	Minimum1 per 150 feet of street
Lime stabilized base	Minimum 1 per 150 feet of street
Sand base	Minimum 1 per 150 feet of street
Backfill density control	Minimum of ten (10)
Proctor (Moisture/Density Relationship):	
Subgrade (new)	1 per development, unless material changes
Lime stabilized base	1 per development, unless material changes
Caliche	1 per 5,000 cubic yards material or less
Atterberg Limits and Gradation:	
Caliche	1 per 5,000 cubic yards material
Sand base	1 per 2,500 cubic yards material
Hot-Mix Control:	
Surface course design	1 per development
Base course design	1 per development
Extractions	2 per day run/minimum 1 per 500 ton
Densities (in place)	1 per 1,000 feet of street
Concrete:	
Curb/gutter	1 set (3) per 500 feet
Sidewalk	1 set (3) per 4,000 square feet
Inlets	1 set (3) per 6 inlets

b. The above schedule is a minimum schedule for testing. Failures are not included. In the event of failures, additional tests will be taken. If excessive rain occurs on a previously tested section, the City may order re-testing as necessary.

(4) *Testing Procedures*

a. The contractor shall notify the City of Laredo Engineer at least 24 hours prior that he is ready for testing.

b. The City's representative shall inspect the work and concur with the Contractor before testing is authorized.

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c. The City Engineer or its representative shall notify the testing laboratory when tests are to be taken. If neither the City Engineer nor its representative is available for inspection of the work within 4 hours, the contractor may order the laboratory testing. However, if there are failures, re- testing shall occur at the contractor's expense.

d. Except as otherwise provided above, the contractor shall not contact the laboratory for the purpose of requesting routine tests.

e. All testing in accordance with these requirements will be performed in accordance with the American Society of Testing Materials (ASTM) latest revision.

f. All development test reports shall be certified by a Registered Professional Engineer (Texas Registration)

g. The provide shall provide the following to the City:

1. at least 2 copies of testing reports, and

2. a set of plans and specifications for the testing laboratory and a tabulation showing the estimate of quantities of material in the development.

(5) *Materials*. The materials incorporated in new development construction are not limited to those tests outlined in this subsection. If there are unusual conditions or factors which give the City reason to question the quality of the materials in any portion of the development, the City may order any tests needed at the developer's expense. However, the City will consult with the project engineer on reasons for the additional tests before engaging a testing laboratory to conduct the test.

(g) Infill Plats. The following exceptions apply to a replat in the Eastern or Western Division of the City of Laredo of less than 20,000 square feet:

(1) The applicant is not required to install sidewalks, landscaping, or street lights,

(2) If a street is opened for traffic and contains a substantial base of caliche or gravel:

a. In lieu of immediate street paving, the present record owner or owners of abutting properties shall file a covenant to participate and pay any corresponding share of paving costs of any future street paving assessment program involving that street along the abutting properties.

b. The applicant shall file the covenant at the County of Webb Deed Record Office.

c. The covenant shall run with the land and bind the present record owners, their heirs, devises, successors and assigns.

d. The assessments constitute a lien on the property until fully discharged. (As amended on 7/2/85, Ordinance # 85-0-98)

24.4.2 Amenity Space Standards

Purpose: This provides recreational areas in the form of parks, open and civic spaces and neighborhood parks as a function of subdivision and site development in the City of Laredo. This section is enacted in accordance with the home rule powers of the City of Laredo, granted under the Texas Constitution, and states including Texas Local Government Code Chapter 212. The City Council finds that parks, open and

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civic spaces are necessary and in the public welfare, and that the only adequate procedure to provide them is to integrate that requirement into the procedure for planning and developing property or subdivisions in the City, consisting of new construction when development creates a net increase in density

(a) Applicability

(1) This section applies to:

a. Any residential subdivision, and

b. Any subdivision or site plan for commercial or mixed-use development that exceeds 5 acres.

c. Replatting of lots proposing an increase in density to ensure public improvements will have capacity to serve.

(2) Requirements for parks, open space and civic spaces and related improvements (referred to collectively as "amenity space") include all park or land dedications (including park or land dedications pursuant to subsections (e) through (j) of this section), areas legally reserved and restricted as amenity space consistent with this section, and park improvement fees for parks for all types of residential, commercial and mixed-use development. Any amenity spaced provided pursuant to this development is credited toward the amenity space requirements of the applicable zoning district. Any amenity space provided to fulfill the applicable zoning district requirements must comply with this section, and are credited toward the amenity space requirements of this section.

(3) For any multi-phased development:

a. The applicant shall provide all dedications in the first phase of the development; or

b. Provide a bond (pursuant to Section 24.4.3 of the UDC) for any amenities not dedicated along with any fees required by subsection (g) below when the first phase of the development is recorded. Applicants shall not substitute a letter of credit for bond to comply with this subsection.

(b) Park and Open Space Master Plan

(1) *Description*. The City will prepare a *Parks and Open Space Master Plan*.

a. The *2020 Parks, Recreation and Open Space Master Plan* (adopted April 19, 2021)(the "*Master Plan*") consists of a map of the corporate limits of the City of Laredo and the extraterritorial jurisdiction of the City of Laredo. Additionally, the *Parks and Open Space Master Plan* includes the most current version of the City's recreational needs assessment and summary of priority items for Laredo Parks and Open Space.

b. The *Master Plan* shall include a graphical representation (map) of the site of developed park, undeveloped parks, arterials, parks subject to annexation agreements, proposed parks and rivers, creeks, arroyos, streams, and power line easements 60 feet in width or greater.

1. The **Linear Park System** refers to the parks and linear linkage system which connects parks.

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2. The **Linear Linkage System** refers to rivers, creeks, arroyos, streams, power line easements 60 feet in width, or other easements or conveyances of 60 feet or wider which are intended to connect parks.

(2) *Adoption*

a. The Planning and Zoning Commission and the Laredo Parks and Recreation Board shall review and comment on the *Master Plan* prior to its submission to City Council.

b. The *Master Plan* shall be reviewed and adopted as an appendix of the Comprehensive Plan by the City Council through a resolution.

(3) *Effect*. Park location is based on the *Parks and Open Space Master Plan* map.

(c) Level of Service Standard. The following level of service (LOS) standard is adopted to provide certainty in the development approval process, ensure that required amenities are proportionate to a development's impacts, and to calibrate amenity types to the character of a development's neighborhood and future land use planning objectives:

(1) Table 4.2-1 provides the minimum amount of amenity space required per increment of development. This is based on the standard for park space adopted by the *Parks and Open Space Master Plan*, adjusted by zoning district or areas to consider the character and built environment of each area.

(2) Subsection 24.4.2(d) below describes the amenity types that an applicant may provide to fulfill the LOS standard. Each amenity type is assigned a score based on its relative value, the cost of providing and improving the amenity, and its compatibility with the land use patterns in the applicable zoning district.

Table 4.2-1 Amenity Level of Service (LOS)

	Amenity LOS *(1 equivalent dwelling unit [EDU] = 1 dwelling unit or 800 sf of non-residential gfa)*
Agriculture (AG)	950 sf / edu (residential subdivision, base option only)
Residential Suburban (R-S)	950 sf / edu (residential subdivision, base option only)
Single Family Residential (R-1)	950 sf / edu (residential subdivision, base option only)
Single Family Reduced Area (R-1A)	250 sf / edu (projects of at least 15,000 sf)
Single Family High Density (R-1B)	100 sf / edu (projects of at least 15,000 sf)
Residential/Office (R-O)	75 sf / edu (lots of at least 30,000 sf)
Limited Business (B-1), Community Business (B-3)	75 sf / edu (lots of at least 30,000 sf)
Central Business (CBD), Arts and Entertainment (AE)	50 sf / edu (lots of at least 40,000 sf)
Highway Commercial (B-4)	120 sf / edu
Light Manufacturing (M-1)	n/a
Heavy Manufacturing (M-2)	n/a
Planned Unit Development (PUD)	950 sf / edu
ETJ (Subdivision Plat)	950 sf / edu

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(d) Amenity Types and Criteria

(1) *Generally*. The following amenity classification standards define the type, size and character of each amenity classification used in this section. Actual design and configuration of new facilities will be influenced by property size, topography, surrounding land uses and design criteria for the specific park to be developed. The amenity design criteria shall consider specific needs of the population within a given service area. Standards for park design should be carefully followed to ensure quality of facilities and recreation program services for each park.

(2) *Credit*. Table 4.2-2 assigns a credit for each amenity type provided. The area of each amenity type is multiplied by the credit to determine the area available to fulfill the park LOS. *[Example: assume that a subdivision zoned R-S requires 6 acres of park to meet the LOS standard. The proposed subdivision includes 2 acres of parks, 4 acres of qualifying natural areas, and a 1.3-acre community garden. The application meets the LOS because it includes 6 qualifying acres:*

Natural Area: 5 acres x 0.6 = 3 qualifying acres
Community Garden: 1.3 acres x 0.75 = 1 qualifying acre
Parks: 2 acres x 1.0 = 2 qualifying acres
3 + 1 + 2 = 6 qualifying acres

Table 4.2-2 Park Types

Category	Description / Standards	Where Available	Credit
Landscaping			
Median Landscaping	Median landscaping as required by section 24.3.6. Subject to subsections (5), (9) and (11) below.	R-1A, R-1B, R/O, B-1, B-3, B-4, PUD	0.4
Parking Lot Landscaping	Perimeter parking lot landscaping as required section 24.3.6. Subject to subsections (5), (9) and (11) below.	R-1A, R-1B, R/O, B-1, B-3, B-4, PUD	0.4
Stormwater management	Detention improvements may be accepted by the Laredo City Council upon recommendation of the Parks and Recreation Director and the Park and Recreation Board if the area to be considered is greater than 30 feet wide and meets the gradient requirements for parks, and does not exceed 50% of the total park area to be dedicated. Subject to subsections (5), (9) and (11) below. If accepted as part of a park or park dedication, the following uses will be allowed for detention areas: • Hike / Bike Trails • Soccer Fields • Practice Fields • Other uses as approved by the Parks and Recreation Director.	R-1A, R-1B, R/O, B-1, B-3, B-4, PUD	0.5
Wetlands	Natural wetlands reasonably visible from walkways provided in and through the wetland. Subject to subsections (5), (9) and (11) below.	R-1A, R-1B, R/O, B-1, B-3, B-4, PUD	0.4
Common Open Space			

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Category	Description / Standards	Where Available	Credit
Natural Area	Natural are of local, regional, or statewide significance, which may be used in a sustainable manner for scientific research, education, aesthetic enjoyment, and appropriate use not detrimental to the primary purpose (other than wetlands as provided above). These areas are resource rather than user-based, but may provide some passive recreational activities such as hiking, nature study, and picnicking. Natural Areas may include floodplains (section 24.2.20) or riparian buffers (section 24.3.8). Subject to all applicable suitability criteria in subsection (3) – (11) below.	Any	0.6
Greenway	A series of connected natural areas (including areas protected by state or federal law) such as ravines, creeks, streams,[i] woodlands, floodplains, or protected tree canopy that connect buildings or gathering spaces with trail systems, or that buffer the site from streets or neighboring areas. Subject to all applicable suitability criteria in subsection (3) – (11) below.	Any	0.75
Agricultural Preserve	An area designated for active farming in the form of crop cultivation, the keeping of livestock, or equestrian facilities. Agricultural Preserves protect areas of agricultural and rural heritage and promote compatible active agricultural operations.	AG, R-S, R-1, R-1A, PUD, ETJ	0.75
Community Garden	A site operated and maintained by an individual or group to cultivate trees, herbs, fruits, vegetables, flowers, or other ornamental foliage for personal use, consumption, donation or off-site sale of items grown on the site. Subject to subsections (5), (9) and (11) below.	Any	0.75
Parks	Any mini-park, neighborhood park, community park, metropolitan park, regional park, special use park or school-park as defined by the *Master Plan*, and that complies with all applicable suitability criteria in subsection (3) – (11) below. This includes any park or land dedications pursuant to subsections (e) through (j) of this section.	AG, R-S, R-1, R-1A, PUD, ETJ	1.0
Trails and Pathways	Any trail or pathway as defined by the *Park and Open Space Master Plan*, and that complies with all applicable suitability criteria in subsection (3) – (11) below.	Any	0.5
Wet areas	The surface area of perpetually impounded water (wet ponds and / or lakes) located in the floodplain and natural drainage areas of riparian buffer requirements if that there is sufficient land available for recreational amenities and subject to subsection (10) below.	R/O, B-1, B-3, B-4, PUD	0.75
Historic Buildings	An existing building or buildings that has historical or cultural significance and is designated as a landmark may be located in a common open space and open to the public.	R/O, B-1, B-3, B-4, PUD	0.25
Civic Space ***(may be privately owned and not dedicated to the City)***			
Plaza	An open area with seating that is adjacent to, or part of, a building. A Plaza may be combined with the Courtyard frontage type. Plazas function as gathering places and may incorporate a variety of non-permanent activities such as vendors and display stands. A plaza requires a minimum depth and width of 10 feet and a minimum total area of 300 square feet. Subject to subsections (5), (9) and (11) below.	R/O, B-1, B-3, B-4, PUD	1.5
Square	Areas that are improved with a combination of lawn, landscaping and seating areas, and that are accessible to the public or the project's tenants or customers. A Square shall be: • bounded by streets on at least one side and pedestrian walkways on at least 2 sides, or • not bounded by streets, but accessible to the public Subject to subsections (5), (9) and (11) below.	R/O, B-1, B-3, B-4, PUD	1.25
Courtyard	A courtyard is a contiguous open area, open to the public, that – • is surrounded on at least two sides by building walls with entryways, and • is at grade.	R/O, B-1, B-3, B-4, PUD	1.25

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Category	Description / Standards	Where Available	Credit
Rotary or Circle	A circular area containing a monument or similar feature, and which organizes buildings or movement around a center. Buildings facing a rotary are concave, while those facing a circle are convex.	R/O, B-1, B-3, B-4, PUD	0.9
Pedestrian Pathways	Protected customer walkways or easily identifiable building pass-throughs that contain window displays and are intended for general public access. Subject to subsections (5), (9) and (11) below.	R/O, B-1, B-3, B-4, PUD	0.9
Green	A common open space available for unstructured recreation, its landscaping consisting of grassy areas, trees, shrubs, and other landscaping. Subject to subsections (5), (9) and (11) below.	R/O, B-1, B-3, B-4, PUD	0.75

(3) *Suitability for Parks and Trails*

a. Any land dedicated to the city under this section as a park must be suitable for park and recreation uses.

b. If existing trails (maintained by the City of Laredo), park (maintained by the City of Laredo), or public schools abut the property, preference for the land to be dedicated in fulfillment of this section should be given to the land abutting the existing trail or school.

c. All park dedications and park development that are dedicated to the city in fulfillment of the requirements of this section must be fully accessible to the general public without hindrance.

d. Parks shall be easy to access and open to the public view, enhance the visual character of the city, protect public safety and minimize conflict with adjacent land uses. The following guidelines should be used in designing parks and adjacent development.

1. Where physically feasible, park sites should be located adjacent to greenways (the linear linkage system), other parks, and/or schools to encourage both shared facilities and the potential co- development of new sites.

2. A proposed subdivision adjacent to a park may not be designed to restrict reasonable access to the park from other area subdivisions. Street and linear linkage system connections to existing or future adjoining subdivisions may be required to provide reasonable access to parks.

3. Where a non-residential use must directly abut a park, the use must be separated by a screening wall or fence and landscaping. Access points to the park may be allowed by the Planning and Zoning Commission if public benefit is established. This subsection does not apply to service areas that that provide a public benefit for the park, such as cafes or other activities that the Parks and Recreation Director determine will provide a public benefit.

4. At least 40% of the perimeter of a park should abut a public street. In all cases, the Planning and Zoning Commission shall approve the proposed street alignment fronting on city parks.

5. Streets abutting a park shall be built in accordance with the thoroughfare plan and the standards of this Chapter. However, the City may require any

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residential street built adjacent to a park to be constructed to collector width to ensure access and prevent traffic congestion.

(4) *Proportions*. The land to be dedicated in fulfillment of this section shall have an overall property proportion ratio (width by depth) of two to one (2:1), unless otherwise approved by the Parks and Recreation Director. At least one side of the park shall have at least 150 feet of frontage on a public street. Floodplain areas or park dedications along drainage ways/creeks/arroyos and power line easements greater than 100' in width are exempt from this requirement.

(5) *Grade*. At least 75% of the land to be dedicated in fulfillment of this ordinance must be less than an 8% gradient in any direction.

(6) *Creekside Areas*. The land to be dedicated in fulfillment of this section along an unimproved creek shall not be cleared or altered except that the understory may be removed for purposes of public health, safety and welfare.

(7) *Utilities*. Water, sanitary sewer and electric improvements shall be readily accessible to the park from an adjacent street right-of-way or public easement.

(8) *Detention Areas*. Recreation facilities built by a landowner or developer within detention areas can be accepted pursuant to subsection 24.4.2(h)below. Additional requirements apply to recreation facilities built within detention areas, including:

a. All improvements must be built 1 foot higher than the area inundated by a 2-year storm event. Hydraulic and hydrology models used to calculate those areas must use hydrology generated by ultimate built-out of the contributing watershed (a.k.a. "ultimate hydrology").

b. The area within the detention area that is lower than the area inundated by a 2-year storm event must be designed to drain completely. Use of trickle channels is encouraged.

c. The cost of any drainage structures, control structures, excavation (except in direct relation to construction of recreational facilities), or other drainage related features is not included as meeting the requirements of subsection (j) below.

d. Restrooms, concession stands, and similar buildings must be located out of the detention / retention area.

(9) *Maintenance*

a. The amenity site shall be free of trash and debris.

b. At the option of the City, the land shall be left in its natural condition or cleared. If the City opts to have the land remain in its natural condition and the developer disturbs the land then, if requested by the Parks and Recreation Director in writing prior to the time of final plat approval, the developer shall return the disturbed land to a condition that is as close as possible to its original natural condition.

c. Parks of less than 15 acres that are not designated on the *Park and Open Space Master Plan* shall be maintained by a homeowners association.

(10) *Floodplain*

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a. Land that is in the unimproved floodway of a 100-year storm event according to the City's floodplain administrator is not eligible for fulfilling the dedication requirements of this Section, except as provided below.

b. Land that is in a floodplain of a 100-year storm event is eligible for fulfilling up to 50% of the dedication requirements of this section, if:

1. The entirety of the floodplain that is located within the property boundaries of the development is dedicated.

2. The floodplain lands to be dedicated in fulfillment of this ordinance are suitable for recreational uses as determined by Director of Parks.

3. The floodplain lands to be dedicated in fulfillment of this section are not cleared, channelized, or altered.

(11) *Hazardous Substances and/or Underground Storage Tanks (UST's)*

a. Prior to the dedication of land, the applicant shall make full disclosure of the presence of any hazardous substances and/or underground storage tanks (UST's) of which the applicant has any knowledge. The City, at its discretion, may proceed to conduct an initial environmental test and surveys on the land, as it may deem appropriate, and the Developer shall grant to the City and its agents and/or employees reasonable access to the land as necessary to conduct those surveys and tests. If the City elects to send its agents and/or employees onto the Developer's land, it shall provide for hold harmless, indemnification and liability insurance as necessary to protect the Developer.

b. If the results of surveys and tests indicate a reasonable possibility of environmental contamination or the presence of UST's the City may:

1. require further surveys and tests be performed at the Developer's expense as the City may deem necessary prior to its acceptance of the dedication, or

2. the Developer may or the City may require that the Developer identify alternative property or pay cash in lieu of the park dedication.

(e) Park Dedication and Site Approval Process

(1) Every master plan that incorporates residential development (single family, multi-family or manufactured homes) must designate park space to be dedicated as a neighborhood park unless otherwise provided for in this section.

(2) The proposed site of the park shall be shown on the master plan and labeled "proposed park."

(3) The designation on a master plan of "proposed park" does not obligate the City of Laredo to accept the proposed park until the park site is approved, submitted and accepted by the City Council through a separate dedication instrument. The City Attorney shall approve the dedication instrument form.

(4) The applicant shall submit the master plan to the Planning Department. The Department shall immediately submit a copy of the master plan to the Parks & Recreation Department.

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(5) The Parks and Recreation Director shall review the master plan's proposed park site and present a written recommendation.

(6) The written recommendations of the Parks and Recreation Department Director shall, within two business days, be submitted to the Planning Department and shall be included with the comments on the master plan to be deliberated on and approved by the Planning and Zoning Commission. If this time frame is not possible, the Parks and Recreation Director may present their recommendation to the Planning and Zoning Commission at their meeting and submit the written recommendation within five working days after the meeting.

(7) Upon approval of the master plan and park site the Parks and Recreation Director shall submit the park site to the City Council for "Park Site Reliance Approval." The submission shall include the written recommendation of the Parks and Recreation Director and the Planning and Zoning Commission.

(8) "Park Site Reliance Approval" of the site or sites issued by the City Council is sufficient for the developer to rely on and to continue the development process. It ensures acceptance of the park by the City in compliance with the Park Site Reliance Approval. The pendency of the Park Site Reliance Approval does not prohibit a developer from proceeding with the platting of the first phase of the development.

(9) As part of the master plan review process, the Parks Director shall issue a letter of approval to the developer that stipulates the improvements to be built on the dedicated park (whether improvements are to be made by the developer or the City), and the timeline for park design and construction completion.

(10) If a Developer makes any material and substantial change to the master plan, as determined by the Planning Director, the Developer shall initiate the approval process for the park site or sites again.

(f) Land Dedication

(1) *Applicability*. This subsection applies to parks included in a final plat to be filed of record with the County Clerk of Webb County for development of a residential area in accordance this section.

(2) *Dedication*

a. A plat subsection this to this section shall show the parks to be dedicated. That parks shall be labeled "open space." The plat shall include a fee simple dedication of the area of land to the City for park purposes, or the parks may be conveyed as a park by a separate dedication instrument approved by the City Attorney. Dedication and Park Improvement fees shall be calculated as per Table 4.2-3.

b. The required land dedication of this subsection may be met by a payment of money in lieu of land when permitted or required by the other provisions of this section.

c. The developer may defer dedication of parks for the entire approved master plan prior to the final approval of the first filed plat.

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(3) *Phasing*. The following apply if a plat is phased through multiple plats and is subject to park dedication, and the initial master plan phases do not include parks:

a. *Deferment Contract.* If the proposed park is shown on a master plan and the first phase includes less than 150 residential lots or dwelling units, the applicant may plat the first phase and defer the dedication of parks. However, no further subdivision plat within the master plan or the property subject to that master plan shall be accepted or approved until parks are dedicated per the requirements of this section. The deferral shall not continue more than 18 months from the date the plat is filed of record with the Webb County Clerk. The developer shall reserve parks for dedication by entering into an enforceable contract, which shall include the provisions set forth in this section, with the City and approved by the City Attorney.

b. *Enforcement*. No development which defers park dedication shall plat a subsequent phase irrespective of ownership, transfer ownership of the remainder of the undeveloped property subject to the original approved master plan, or amend the master plan, until the provisions set forth in the preceding paragraph are met.

c. *Insufficient Dedication.* If the actual number of completed dwelling units exceeds the figure upon which the original dedication was based, additional dedication is required by Cash Payment in lieu of land as calculated in this section.

d. *Options for Multi-Family or Insufficient Dedication.* For multi-family development, development where parks were not previously dedicated nor payment made with the filing of a plat, or if the number of completed dwelling units exceeds the figure upon which the original dedication was made:

1. additional park land may be dedicated,

2. private park land and improvements may be provided to accomplish the requirements of this section (if the entire requirement of parks for the multi-family development is met by the private park), or

3. payment in lieu of land required by this section shall be made at the time of the building permit application and the funds shall be used for improvements to the original park dedication.

(g) Fees

(1) *Cash Payment in Lieu of Land*

a. A landowner or developer responsible for dedication under this section may, upon request, meet the requirements of section 24.4.2(f) in whole or in part by cash payment in lieu of land.

b. The amount of cash payment is calculated pursuant to Table 4.2-3 and amended from time to time by City Council, sufficient to acquire parks or to improve existing parks.

c. A request to make a cash payment is subject to the recommendation of the Parks and Recreation Director and approval by City Council. The recommendation is based upon the following criteria:

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1. A neighborhood park exists within the service area of the new neighborhood and has capacity to serve the new neighborhood or there is additional land adjacent to the park which will be acquired with the funds to meet the needs of the new neighborhood; or
2. The master plan or plat subject to dedication has less than 150 residential units and a community park is within the neighborhood service area which has sufficient capacity to meet the needs of the neighborhood seeking the exception within the service area for a neighborhood park; or
3. The development making request for cash in lieu of land has 35 or fewer residential units and the funds must be used to improve the nearest park.

d. The fee in lieu of land dedication is due and payable prior to plat recordation.

e. Cash payments in lieu of land may be used to acquire new parks serving the subject development, or improvements to existing parks serving the subject development, for capital replacements to existing park facilities serving the neighborhood, or any purpose reasonably related to new parks or new park facilities serving the subject development, limited to the following purposes:

1. speed humps for parks abutting roads if it is shown that the development and park activity have created an increase in auto and pedestrian traffic in the immediate vicinity;
2. traffic signals or signs after it is shown that the development and park activity have created an increase in auto and pedestrian traffic in the immediate vicinity; and
3. sidewalks abutting the park.

f. Any traffic control device installed pursuant to subsection e above shall comply with Chapter 19 of the City of Laredo Code of Ordinances.

(2) *City Option to Require Cash In Lieu of Land*

a. The City may opt to purchase land for parks or own land in or near the area of actual or potential development.

b. If the City purchases parks or owns land, the City may require subsequent park dedications in the surrounding area to be in cash if:

1. the park has the capacity to serve the development's neighborhood park requirements,
2. meets the service area requirements of a neighborhood park,
3. the cash is used for neighborhood park capital improvements or capital replacements, and
4. the land is dedicated as a park.

c. If the park is fully improved to neighborhood park standards and no capital replacements are anticipated within two years, the cash may be used for capital improvements to the neighborhood park nearest the development boundary.

(3) *Park Improvement Fee*

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a. In addition to the land dedication there shall be a Park Improvement Fee, as may be amended from time to time by City Council, to provide improvements to the park to meet the standards for a neighborhood park to serve the service area in which a development is located.

b. A park improvement fee is due when the final plat is filed, and is calculated as per Table 4.2-3.

Table 4.2-3 Park Dedication Fee Methodology

I	**Current Desired Level of Service**	
	Neighborhood Parks	1 Acre per 1,000 Population
II	**Land Requirements**	
	2000 Census Figures (Total Population)	176,576
	Person per Household (PPH) for Single Family *(based on census information for owner and renter occupied units)*	
	Single Family	3.9
	Multi-Family	2.82
	Overall average	3.7
	1,000 people / 3.90 PPH (based on decennial census)	256 Dwelling Units / residential lots or 1 Acre per 256 Units
	Dedication Requirement (min)	The minimum land requirement for park dedication is one (1) acre per one thousand population – Neighborhood parks only.
III	**Neighborhood Park Acquisition Cost *(Determines Cash Payment in Lieu of Land)***	
	Fee shall be determined on a per-acre basis	$35,000.00 per acre or fraction thereof. The City may allow an appraisal of land within the floodplain.
	The fee shall be calculated by A x V = Cash Payment in Lieu of Land; where:	• A is the required park dedication in acres, calculated to tenths of an acre. • V is the per-acre valuation based upon $45,000.00
IV	**Neighborhood Park Improvement Fee**	
	The developer is required to pay the City the following fee as a park improvement fee for each acre of park dedicated (calculated on 1000 population per acre) as per section II of this Table calculated as follows:	$80,384.00
	For every 256 dwelling units multiplied by $500.00 per dwelling unit/residential lot (see example #1).	The City may require up to 1.56 additional acres per 256 dwelling units (calculated on 1000 population per acre) by reducing

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		the park improvement fee by $35,000.00 per additional acre or fraction thereof (see examples #2 and #3).
	Example #1: A plat containing 256 Dwelling Units/residential lot (1000 Population)	
	Land Dedication per Section II of the Appendix	= 1 Acre
	Park Improvement fee per Section IV of the Appendix	
	256 Dwelling Units/residential lot at $314.00	= $80,384.00
	Example #2: A plat containing 256 Dwelling Units/residential lot (1000 Population) and the City requiring One additional Acre	
	Land Dedication per Section II of the Appendix	= 1 Acre
	Additional Land Dedication	= 1 Acre
	Total Land Dedication	= 2 Acres
	Park Improvement fee per Section IV of the Appendix	
	256 Dwelling Units/residential lot at $500.00	= $80,384.00
	Additional Land Dedication Credit 1 acre x $35,000.00	=<$35,000.00>
	Net Park Improvement fee after credit	= $45,384.00
	Example #3: A plat containing 256 Dwelling Units/residential lot (1000 Population) and the City requiring 1.56 additional Acres	
	Land Dedication per Section II of the Appendix	= 1 Acre
	Additional Land Dedication	= 1.56 Acres
	Total Land Dedication	= 2.56 Acres
	Park Improvement fee per Section IV of the Appendix	
	256 Dwelling Units/residential lot at $500.00	= $80,384.00
	Additional Land Dedication Credit 1.56 acre x $35,000.00	=<$54,600.00>
	Net Park Improvement fee after credit	= $25,784.00

(h) Park Improvements by Developer or Landowner

(1) A landowner or developer may offer to construct park improvements and dedicate the land and the improvements to the City, in fulfillment of the requirements of this section.

(2) These improvements shall comply with the needs assessment of the current Parks and Open Space Master Plan, as adopted by the City.

(3) Improvement plans and specifications are subject to the review and approval or disapproval by the Parks and Recreation Director.

(4) All park improvements are subject to inspection and approval by the City Engineering Department for compliance with the approved plans and specifications. Improvement plans and specifications must meet all applicable Federal, State, and local regulations.

(5) Once improvements are inspected and approved by the City Engineering Department, the completed park is presented to City Council for acceptance as a

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park and the landowner or developer shall deed the park and improvements to the City. The criteria listed in subsection 24.4.2(d) below applies to the resulting park.

(6) The landowner or developer shall post a financial guarantee for 100% of the cost of park improvements that are have not been completed and approved by the City Engineering Department. This guarantee shall be filed with the City prior to plat recordation. The financial guarantee will be released after the following requirements are met:

a. Improvements must have been constructed in accordance with the Approved Plans.

b. All parks upon which the improvements have been constructed are dedicated as required by this section.

c. All manufacturer warranties are provided for any and all equipment.

d. Improvements must meet all applicable Federal, State, and local regulations as of the time of the approval of plans and specifications.

e. A Certificate of Completion of the park improvements is issued by the City Engineer.

(7) Upon issuance of the Certificate of Completion, the landowner or developer shall warrant all improvements for a period of 1 year. The City Manager shall release the financial guarantee upon issuance of the Certificate of Completion. The developer remains liable to the City for any and all warranty repairs for 1 year pursuant to the certificate of warranty pursuant to Section 24.4.4.

(8) The City may draw on the financial guarantee if:

a. Landowner or developer fails to complete the improvements in accordance with the Approved Plans

b. Landowner or developer fails to dedicate the park on which the improvements are constructed.

(9) Landowner or developer shall be liable for any deficiency between the amount of the guarantee and the cost of completion of the installation of improvements and the amount of any warranty work.

(i) Time Requirements for Park Improvements Design and Completion

(1) *Single Phase Development*. The timeline for park design and construction completion for a one plat development (single phase development) begins at plat recordation, and the park improvements shall be completed within 18 months of plat recordation.

(2) *Phased Development*

a. The timeline for park design and construction completion for phased developments where the master development plan calls for several dedicated park sites, where each plat includes dedicated parks, is established in the same manner as for single phase developments.

b. If the master development plan calls for all required park dedication in one specific phase (plat) of the development, the timeline for park design and construction completion runs as of the date of recordation of the first plat in the

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series of plats subject to the approved master development plan and shall be completed within 36 months of the platting of the park.

c. The Director of the Parks Department may approve the order of phasing of the development so that development will reach the dedicated park as soon as possible.

d. No more than three phases shall be developed before the park is platted and improved.

e. The park (including any temporary easements necessary to access the park) shall be dedicated within 18 months of the date of final recordation of the first plat in the series of plats as per the approved master development plan, or prior to the final recordation of the second phase (plat), whichever occurs first.

f. For non-contiguous dedications, vehicular access may be provided by a 40 foot minimum width temporary access easement if no other access exists, subject approval of the Parks and Recreation Director.

(j) Prior Dedication

(1) Park Dedication Credit is given for land dedicated and used in accordance with Section 24.3.8 (Riparian Buffers) toward the dedication of parks required by this section, or credit will be given for dedications pursuant to this section and Section 24.3.8 (Riparian Buffers).

(2) If a landowner or developer wishes to dedicate additional park land, the park dedication in excess of the requirements of this section is deemed a Park Dedication Credit.

(3) Park Dedication Credit may be sold or transferred between projects at full credit for the requirements of this section, if the receiving project is within or crosses a 2 mile radius of the project boundary of the site from which the credit originated, and if the park dedication is made pursuant to this section.

(4) If a dedication requirement arose prior to passage of this section, that dedication requirement is controlled by the "City of Laredo Annexation Agreement and Service Plan" under which the dedication requirement was incurred and approved by the Laredo City Council by and through an Annexation Ordinance. Additional dedication is required only for any increase in density and is based on the ratio set forth in the City of Laredo Annexation Agreement and Service Plan.

(5) The origination of Park Dedication Credits and their later use must be acknowledged in writing from the Parks and Recreation Director.

(6) Parks not accessible to the general public may count towards the required park dedication if the Parks and Recreation Department is not responsible for development, construction, or ongoing maintenance of said park.[1]

(7) The receiving project shall not cross a major thoroughfare.

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(k) Special Fund

(1) There is established a special fund to deposit all sums paid in lieu of land or pursuant to this section, any preceding ordinance or annexation agreement. This fund is known as the "Park Acquisition and Park Improvement Fund".

(2) The Parks and Recreation Director shall prepare an annual budget for the expenditure of available funds in the Park Acquisition and Park Improvement Fund. The budget shall be included in the City's annual budget, the Capital Improvement Program and approved by the Laredo City Council. Prior to the preparation of any budget, the Director of Parks shall seek recommendations for the expenditure of Park Acquisition and Park Improvement Funds from the Laredo Parks and Recreation Board, and ensure the expenditures are consistent with any *Master Plan* needs assessment.

(3) The Parkland Acquisition and Park Improvement Fund shall be used exclusively to acquire, develop or improve parks or any purpose reasonably related to new parks or new park facilities serving the subject development, limited to the following purposes:

a. speed humps for parks abutting roads if it is shown that the development and park activity have created an increase in auto and pedestrian traffic in the immediate vicinity;

b. traffic signals or signs after it is shown that the development and park activity have created an increase in auto and pedestrian traffic in the immediate vicinity; and

c. sidewalks abutting the park.

(4) Expenditures from the Parkland Acquisition and Park Improvement Fund fund are subject to the restrictions contained in section 24.4.2(g)(1)e. Traffic control device installation shall comply with Chapter 19 of the City of Laredo Code of Ordinances.

(5) The City shall account for all sums paid under this section with reference to the individual developments and plats involved. Any funds paid for those purposes must be expended by the City within 36 months after the filing of the final plat, or, if a phased development, the filing of each phase or section of the contributing subdivision.

(6) Where funds or a dedication for a phased development are paid or made for the entire development at one time, and the original developer does not complete all phases of the entire development, the funds or dedication paid or made will satisfy the park and money requirements of this section for the undeveloped land. No further dedication or money is required unless there is an increase in density, in which case additional parks and fees may be required.

(l) Consideration and Approval

(1) Appeal from any decision by the Parks and Recreation Director or the Laredo Parks and Recreation Board in regards to the provisions of this ordinance shall be in writing, submitted to the Parks Director and the Planning Director and placed on the next agenda of the City Council. The City Council may make a decision contrary to

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those recommendations only by a concurring vote of a majority of the Council members present.

(m) Review of Dedication Requirements. The City shall review the requirements of this ordinance and the associated fees set forth in this section every three (3) years or more frequently as needed.

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24.4.3 Cluster

(a) Applicability. This section applies to a residential development consisting of single-family detached homes arranged in accordance with the cluster development standards established within the applicable zoning district. This design features smaller, grouped lots to maximize shared open space. Common open spaces are often designated for natural and recreational resources, including parks, woodlands, creeks, riparian areas, and floodplains. By concentrating development on the buildable portions of a site, cluster subdivisions support the preservation of environmental features and open space.

(b) Open Space

(1) Common open space shall be connected to other open spaces, greenways, and trail systems within the development and adjacent properties. Such integration should be pursued where practical and where it does not significantly impact the ecological or resource value of designated protection areas

(2) Open space shall be incorporated into the development layout to provide the greatest possible access to significant open areas for the majority of properties. Access may be restricted where necessary to support the effective management and preservation of natural resources.

(3) Distance from Residential Lots. All required common amenity or open space shall be accessible and located no further than 1,200 feet from any residential lot within the cluster subdivision, measured along a sidewalk or trail from the nearest property line of the lot to the nearest property line of the open space. Widths of public rights-of-way and pedestrian easements shall be excluded from the 1,200-foot calculation.

(c) Increased Lot Area or Setback

When a cluster subdivision is situated across a local street from an existing conventional development, it shall incorporate one of the following design approaches:

(1) Perimeter lots shall have a lot area and width equal to or greater than those of the conventional lots across the street;

(2) Lots may be oriented sideways to the local street and conform to cluster subdivision standards; or

(3) The cluster subdivision may have rear-facing lots along the local street, provided a Type B buffer yard is included.

(d) Minimum Site Area

(1) The minimum site area required for a cluster subdivision is five acres.

(e) Minimum Lot Area adjacent to existing developments (other than cluster subdivisions). The cluster subdivision lots directly abuting the existing subdivisions shall be:

(1) Equal to or greater than the lot area and width of the existing adjacent lots;

(2) Separated from adjacent lots by a buffer yard or;

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(3) The dwelling units on the perimeter cluster shall be set back from the boundary of the cluster subdivision a minimum of the following distances based on the number of cluster lots being developed:

a. One to 10 lots; 30 feet;

b. 11 to 30 lots: 40 feet; and

c. 31 or more lots: 50 feet.

(f) Buffering Requirements

(1) A buffer area along the perimeter of the cluster subdivision may count toward the required common open space. However, no more than 25 percent of the total required open space may be within the perimeter buffer area.

a. Natural buffer area. Natural buffer areas include the use of a higher density of plant materials and an earthen berm to achieve the required level of buffering and screening.

b. Structural buffer area. Structural buffer areas include the use of a wall or fence to achieve the required level of buffering and screening.

24.4.4 Commercial Condominiums

(a) Applicability. This section applies to commercial condominiums. A commercial condominium is defined as development where the land under each commercial unit is owned by the building owner(s) and common parking, ingress, egress, easements and landscaped areas are owned and maintained by a condominium association.

(b) Condominium Association

(1) The applicant shall form a condominium association.

(2) The association agreement shall be filed simultaneously with the final plat with the County Clerk's records, with the City's concurrence.

(3) The association agreement shall contain binding provisions between the property owners for the allocation of costs and responsibilities associated with the common area.

(As amended 4/21/86, Ordinance # 86-0-074)

(c) Dimensional Standards. The following standards apply to commercial condominiums:

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Table 4.3-1 Commercial Condominium Standards

Standard	Area or Zoning District					
	R/O,	B-1, B-3	CBD, AE	B-4	M-1, M-2	PUD, ETJ
Development size (*min, sf*)	10,000	10,000	5,000	31,000	31,000	31,000
Commercial unit (lot) size (*min, sf*)	n/a	n/a	n/a	1,000	1,000	1,000
Ratio of common area to floor area	n/a	n/a	n/a	2:1	2:1	2:1
Percent landscaping in common area *(min; maintained by condominium association)*	n/a	n/a	n/a	5%	5%	5%
Common area – number of separate curb cuts to public street	n/a	n/a	n/a	2	2	2

(d) Utility Easement. Utility easement requirements, design and specifications for public and private utility distribution are subject to approval of the City. In the absence of written approval, a minimum 15-foot wide utility easement is required along the outside perimeter of the land to be platted to provide services to this development and future development.

24.4.5 Improvement Guarantees

(a) Generally.

(1) *Completion or Improvement Guarantee.* The applicant shall not file an application for final plat approval until a written report is received from the City Attorney and City Engineer stating that either of the following conditions are met:

a. *Construction of Improvements*. All necessary improvements are constructed. The applicant's duly authorized representative shall inspect all construction while in progress. A certificate of that representative stating that the construction conforms to the specifications and standards in this Code must be presented to the Planning Director before the plat is recorded.

b. *Security in Lieu of Construction ("Security")*. The applicant has posted a surety bond, letter of credit or escrow as provided below.

(2) *Cost of Improvements*

a. Securities shall include an amount adequate to cover the entire cost of installing all necessary improvements as estimated by the City Engineer, plus a cost escalator as provided below. This amount of the security is based on the estimated cost of the improvements on the latest date stated for their installation, and not on the actual date of the security or the date that a cash or other instrument is deposited with the City or the bank.

b. If a subdivider submits an original security after two (2) years elapses from the date on which a plat was approved, the actual cost estimate of completing the uncompleted site improvements shall increase by an amount, based upon a locally recognized construction cost index as approved by the City Engineer, required to cover an estimated inflationary increase in the cost during the duration of the period covered by the security.

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(b) Surety Bond. This requirement is satisfied if:

(1) The applicant files a surety bond with the City Attorney:

a. payable to the City of Laredo,

b. on a form provided by City,

c. from a surety bonding company licensed to do business in the State of Texas, and

d. having a Best AAA rating.

(2) The bond shall guarantee installation of all necessary improvements within the time estimated for their completion by the City Engineer. The bond shall include a condition requiring the subdivider to complete all improvements and have them pass a final inspection within the earlier of final plat approval 3 years from the date of preliminary plat approval, or shall have received an approved extension at least 30 days prior to the expiration of the performance bond.

(3) The amount of the bond is based on the estimated cost of the improvements on the latest date stated for their installation, and not on the actual date of the surety bond.

(4) A bond shall specifically state that it remains in full force until the improvements are made by the owner and accepted by the City of Laredo.

(c) Letter of Credit. This requirement is satisfied if:

(1) The applicant files an irrevocable letter of credit with the City Attorney, on a form provided by the City.

(2) The letter of credit shall require only that the City present the credit with a sight draft and an affidavit signed by the City Attorney attesting to the City's right to draw funds under the credit.

(d) Escrow Account. This requirement is satisfied if:

(1) The applicant places cash or other instrument made payable to the City of Laredo on deposit, on an instrument readily converted into cash at face value. This includes a deposit with the City of Laredo or in escrow with a bank.

(2) The use of any instrument other than cash or the bank with which the funds are deposited an escrow account, is subject to the approval of the Planning and Zoning Commission.

(3) The applicant shall file an agreement between the financing bank and the applicant with the City Attorney, guaranteeing:

a. That the funds of the escrow account shall be held in trust until released by the City Attorney, as construction is approved by the City Engineer, and may not be used or pledged by the owner as security in any other matter during the escrow period, and

b. That if the applicant fails to complete the improvements within the agreed time limits, the bank shall immediately make the funds in the accounts available to the City for use completing the improvements.

(e) Inspection

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(1) If the applicant files one of the above three (3) types of security, the City Engineer shall inspect the construction of the improvements while in progress and upon completion of construction.

(2) After final inspection, the City Engineer shall notify the owner and the City Attorney in writing as to the acceptance or rejection of the construction.

(3) The City Engineer shall reject construction only if it fails to comply with the standards and specifications contained or referred to in this Chapter.

(4) If the City Engineer rejects construction, the City Attorney shall proceed to enforce the guarantees provided in this Section, on direction of the Planning and Zoning Commission.

(f) Release Upon Completion of Site Improvements. Upon completion of the required site improvements and final inspection, an instrument releasing the applicant from the provisions of the improvement guarantee shall be filed with the City Engineer.

(g) Maintenance

(1) *Maintenance Agreement*

a. Prior to the issuance of any building permit for which private improvements are required, the City Engineer shall require the applicant or owner to execute under oath, an inspection and maintenance agreement binding on all subsequent owners of land served by the facility. The agreement shall provide for access to the facility at reasonable times for regular inspections by the City Engineer and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any provision established.

b. The agreement shall be recorded by the applicant and/or owner in the deed records of Webb County, Texas.

c. The agreement shall also provide that, if after the notice by the City Engineer to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within a reasonable period of time (30 days maximum), the City Engineer may perform all necessary work to place the facility in proper working condition. The owner(s) of the facility shall be assessed the cost of the work and any penalties. This may be accomplished by placing a lien on the property, which may be placed on the tax bill and collected as ordinary taxes by the City.

(2) *Maintenance Responsibility*

a. All private improvements and appurtenances required for commercial or multifamily development shall be maintained by the owner of the commercial or multifamily development.

b. All private improvements required for single family or duplex residential development shall be maintained by the developer for 2 years after the final acceptance for the entire development. The City will not accept any improvements (including drainage structures) which are not complete according to the requirements of this Code.

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c. The owner of the property on which work is done pursuant to this Code for private improvements, or any other person or agent in control of that property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sediment control measures, and other protective devices and remove and properly dispose of all floatables. The repairs or restoration and maintenance shall be in accordance with approved plans.

d. A maintenance schedule shall be developed for the life of any private improvement and shall state the maintenance to be completed, the time period for completion, and who shall perform the maintenance. This maintenance schedule shall be printed on the preliminary plat or storm water management plan.

(h) Replats. The Planning and Zoning Commission has discretion as to the type of securities to be posted by the applicant for replats of property less than one block.

(i) Floodplains

(1) For properties within the floodplain and where a map revision is proposed, a surety bond, letter of credit, or escrow account as required above shall be double the estimate of the drainage improvements and shall remain in effect until the improvements are complete.

(2) Upon completion of improvements, a letter of credit shall be put up in the amount equivalent to the estimate of the drainage improvements until the Letter of Map Revision (LOMR) is approved by the Federal Emergency Management Agency (FEMA).

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24.4.6 Stormwater Management

Purpose: The purposes and objectives of this section are as follows:

- *To protect, maintain, and enhance public health, safety, and general welfare by establishing minimum requirements and procedures to control the adverse impacts associated with storm water runoff. Proper management of storm water runoff will minimize damage to public and private property, reduce the effects of development on land and stream channel erosion, assist in the attainment and maintenance of water quality standards, reduce local flooding, and maintain the pre-development runoff characteristics after development, as nearly as possible.*
- *To prevent the discharge of contaminated storm water runoff from development and/or redevelopment or construction sites into the Municipal Separate Storm Sewer System (MS4) and natural water within the City of Laredo and its extraterritorial jurisdiction.*
- *To facilitate compliance with state and federal water quality standards, limitations, and permits by owners and operators of development and/or redevelopment sites or construction sites within the City of Laredo.*
- *To enable the City to comply with all federal and state laws and regulations applicable to storm water discharges.*
- *To maintain and improve the quality of surface water and groundwater within the City of Laredo by preventing the introduction of pollutants to the maximum extent practicable (MEP) using best management practices (BMPs).*
- *To establish responsibility for the reduction of harmful and damaging effects of development-generated erosion, sedimentation, storm water runoff, and accumulation of debris on other properties and receiving waters.*
- *To minimize harm and long-term costs to the community from activities which may adversely impact water resources.*
- *To encourage the use of Regional Storm Water Detention Facilities.*

(a) Applicability

(1) *Scope and Jurisdiction*

a. This section applies the minimum storm water management requirements for development and/or redevelopment of a site within the City of Laredo and its extraterritorial jurisdiction.

b. This section is not a limitation or repeal of any other powers granted by the State statute.

c. If site characteristics indicate that complying with these minimum requirements do not provide adequate designs or protection for local property or residents, it is the designer's responsibility to exceed the minimum requirements as necessary.

d. For properties located within the City of Laredo's ETJ, the City's and County's engineering staff shall coordinate to apply the standards that are more restrictive.

(2) *Applications.* This section applies to any subdivision plat or any site plan for a building permit, except as provided in subsection 24.4.5(a)(6) below.

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(3) *Administration*. The City Engineer is responsible for the coordination and enforcement of the provisions of this section. [*See Article 5*]

(4) *Implementation of State/Federal Requirements*

a. This section sets development constraints to ensure compliance with the outlines, obligations, and responsibilities of the City of Laredo as specified in agreements, permits and jurisdictional responsibilities of state and federal governmental agencies for storm water management which may include, but are not limited to, the following:

1. TCEQ - dam safety,

2. TCEQ - water rights,

3. EPA-NPDES, and/or TCEQ-TPDES,

4. TxDOT,

5. U.S. Army Corps of Engineers,

6. State Historical Officer,

7. Parks and Wildlife,

8. IBWC,

9. FEMA.

b. This section does not abrogate responsibilities of the City of Laredo or its citizens from compliance with state and federal regulations.

(5) *Storm Water Management Guidance Manual*. A *Storm Water Management Guidance Manual* is adopted and incorporated by reference as a supplement to this section. The *Storm Water Management Guidance Manual* provides specific development and / or redevelopment design standards and criteria and information on best management practices (BMPs) and permanent storm water control mechanisms whose incorporation into a development ensure compliance with this Code. The manual shall be updated and republished periodically to reflect adopted changes in policies and/or standards, which can be found here: https://www.cityoflaredo.com/departments/engineering-department/development-services-information/stormwater-management-guidance-manual

(6) *Exemptions*. The following development activities are exempt from this section and the requirements of providing storm water management measures:

a. Land disturbing activities on agricultural land for production of plants and animals useful to man.

1. This exemption includes: forages, and sod crops, grains and feed crops, tobacco, cotton, and peanuts; dairy animals and dairy products; poultry and poultry products; livestock, including beef cattle, sheep, swine, horses, ponies, mules, or goats, including the breeding and grazing of these animals; bees; fur animals and aquaculture.

2. The construction of an agricultural structure of at least 1 acre, such as broiler houses, machine sheds, repair shops and other major buildings, which require the issuance of a building permit require the submittal and approval

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of a storm water management plan prior to the start of the land disturbing activity.

b. Land disturbing activities undertaken on forest land for the production and harvesting of timber and timber products.

c. Construction or improvement of single-family residences or their accessory buildings (less than 1 acre) separately built and not part of a multiple construction of a subdivision development.

d. There are no exemptions from the requirements imposed upon the City of Laredo as part of its MS4 obligations.

e. The City of Laredo is not exempt from the requirements of this Code.

(b) Drainage Standards

(1) *Method of Computing Runoff*

a. The basis of computing runoff is either the rational formula, or another method deemed acceptable by the City Engineer.

b. Runoff rates for areas greater than 130 acres shall use either a unit hydrograph methodology, or another method deemed acceptable by the City Engineer.

c. Where an approved study exists (i.e. FEMA, or other regulatory agency) for areas less than 130 acres, the methodology shall match that used in the study unless otherwise dictated by the City Engineer.

d. Wet antecedent conditions shall be assumed.

e. Run-off rates shall be computed on the basis of ultimate development of the proposed development/redevelopment, or construction activity.

f. Flows from off-site contributing areas draining to, and/or through, the proposed development / redevelopment or construction activity are based on the 25-year existing conditions.

g. To determine time of concentration, times are calculated on the basis of an improved drainage system upstream from the area under consideration.

h. Run-off coefficients shall be obtained from information presented in the Storm Water Management Guidance Manual.

(2) *Off-Site Drainage*

a. The owner or developer of property to be developed / redeveloped is responsible for accepting all predevelopment storm drainage flowing onto their property as calculated per subsection 24.4.5(b)(1).

b. Predevelopment storm drainage shall be adequately conveyed through, or around, the property. This responsibility includes all drainage directed to that property by prior development as well as drainage naturally flowing naturally through the property by reason of topography.

c. Adequate consideration shall be given to determine how the storm water discharge leaving the proposed development will affect downstream property. In determining downstream effects from storm water management structures and the development/redevelopment, or construction activity on receiving streams

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known to having flooding or erosion problems, the City Engineer may require (at their reasonable discretion) that hydrologic-hydraulic engineering studies be extended downstream, to a point where the proposed development/redevelopment or construction activity represents less than 10% of the total contributing watershed.

d. Any construction activity that requires off-site grading or encompasses an area in compliance with current EPA/NPDES storm water permitting provisions, where storm water runoff has been collected or concentrated, whether it be by permanent drainage systems or streets, shall not drain onto adjacent property except in existing creeks, channels, storm sewers, or streets unless the following is provided:

1. Notarized letter (which is notarized and recorded with the County Clerk) of permission from the affected property owner;
2. Proper drainage easements;
3. An owner who is unable to acquire the necessary off-site easements shall provide the City with documentation of their efforts, including evidence of a reasonable offer made to the adjacent property owner. By written request for assistance, the City may assist the negotiations to acquire off-site easements. If the negotiations are unsuccessful, the request may, at the developer's option, be submitted to the City Council for consideration of acquisition through condemnation. In either case, by the owner/developer shall pay the total cost of the acquisition and easements; or
4. A developer who is unable to obtain either 1 or 2 above and chooses not to seek assistance from the City, as outlined in 3 above shall provide the City with documentation of their efforts. The developer will then execute a notarized letter. The letter shall be in a form approved by the City Attorney and shall provide that the developer shall agree to save and hold harmless the City of Laredo from any and all claims or suits for damage arising out of the required grading and/or concentrations of flow. The City may require the notarized letter of permission or easement from the affected property owner prior to construction.

e. The subdivider shall pay for the cost of all (post-development) drainage improvements or offsite downstream upgrades required for the development of the subdivision. These include any necessary off-site channels, or storm sewers, and acquisition of the required easements. In areas where the proposed off-site improvements are made within existing City right-of-way(s), an estimate of these off-site costs shall be prepared and submitted with the drainage plans.

f. If it is anticipated that additional runoff incident to the construction activity will overload an existing downstream drainage facility, whether natural or man-made, and result in hazardous conditions, the City Engineer may withhold approval of the activity until appropriate provisions are made to correct the problem. Plans shall be provided which include all necessary off-site

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improvements including storm sewer systems, channel grading, driveway adjustments, culvert improvements, and related items.

(3) Finished Floor Requirements

a. The first-floor elevations of all residential and other structures shall be set at a minimum elevation as per the latest adopted International Residential Code.

b. The approved drainage system shall provide for positive overflow at all low points. The term "positive overflow" means that when the inlets do not function properly or when the design capacity of the conduit is exceeded, the excess flow can be conveyed overland along a grassed or paved course. The approved drainage system shall provide for positive overflow at all low points. Normally, this would mean along a street alley, or otherwise require the dedications of special drainage easements on private property.

c. Positive overflow sections shall provide at least 2 feet from the overflow invert adjacent to the structure and the corresponding first-floor elevation of all residential and other structures.

d. All lots affected by positive overflow section shall be labeled, and minimum finished floor elevation shall be provided on face of the subdivision plat. The Building Official shall require a finished floor National Flood Insurance Program elevation certificate in compliance with this ordinance as a prerequisite to obtain a Certificate of Occupancy.

e. When the drainage characteristics of a subdivision are such that a portion of the subdivision is within or adjacent to the 100-year floodplain, the minimum finished floor elevation of 18 inches above top of curb be shown on all lots contained within or adjacent to the 100-year floodplain. These elevations should be based on the most current flood plain management criteria. The elevations shall be shown on the plat prior to filing the plat for record. The following note shall be added to any plat upon which the City Engineer requires the establishment of minimum finished floor elevations:
"The City of Laredo reserves the right to require minimum finished floor elevations on any lot contained within this addition. The minimum elevations shown are based on the most current information available at the time the plat is filed and may be subject to change. Additional lots, other than those shown, may also be subject to minimum finished floor criteria."

(c) Drainage Facilities

(1) *Streets and Closed Storm Sewer Systems*

a. *Street Drainage*

1. Streets may be used for storm water drainage only if the calculated storm water flow does not exceed 10 feet per second.

2. Streets used for storm water drainage shall conform to the following. If streets are not capable of carrying storm waters as outlined below, the developer shall provide drainage facilities as required by these standards.

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a. Streets and alleys shall be designed on the basis of a ten (10)-year frequency storm event.

b. Storm sewer inlets shall be built along paved streets at such intervals that the depth of flow, based upon the 10-year storm, does not exceed the top of curb.

c. Bypass flow is allowed and shall not exceed 25% of the original discharge.

d. Valley gutters shall be placed when surface drainage crosses any local street or if the change in elevation between curbs returns exceeds 6 inches.

e. Valley gutters shall be reinforced concrete and be at least six(6) feet wide.

f. Inlets shall be located as necessary to remove the flow based on a 10-year storm.

g. At any intersection, only one street shall be crossed with surface drainage. Preferably, this street shall be the lower classified street. When an alley intersects a street, inlets shall be placed in the alley whenever flow down that alley would cause the capacity of the intersecting street to be exceeded.

b. *Closed Storm Sewer Systems*. Where closed storm sewer systems are used, the excess discharge shall be picked up at the point where the street can no longer handle the runoff flowing curb full.

c. *Closed Storm Sewer Pipe*. Closed storm sewer pipe size and grade shall be designed based on the following criteria:

1. Minimum pipe size shall be 24 inches in diameter. When circumstances do not allow for a 24-inch diameter, the City Engineer may approve an alternate size.

2. Minimum grade shall allow minimum flow velocities are at least 3 feet per second with the pipe flowing full under the design conditions.

3. Allowable "n" values for design shall be as specified in the Storm Water Management Guidance Manual.

4. Under normal conditions, pipes shall be designed assuming full flow conditions.

5. Where conditions or design cause a pipe to flow under pressure, the hydraulic grade line shall be calculated and plotted in profile. The hydraulic grade line shall not be closer than 1 foot to finished grade unless specifically authorized by the City Engineer.

6. Pipe for storm drains shall be reinforced concrete pipe (RCP) in sizes as shown on the approved plans. All RCP shall be minimum Class III. All Class III RCPs shall have a minimum cover of at least 1 foot over the top of the pipe. Where added strength of pipe is needed for traffic loads over minimum cover or for excessive height of backfill, concrete pipe shall be ASTM C14 Extra Strength or ASTM C76, Class IV or Class V.

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7. City Engineer may approve alternate pipe materials (HDPE, FIBER GLASS, CMP, etc.) within the private easement, positive overflow area and within the Right-Of-Way (ROW).

d. *Manholes.* Manholes (inlets and junction boxes) shall be provided at sewer intersections, and at a maximum of 500 feet on straight lines. Design of manholes shall conform to the City of Laredo Design Standards, as periodically amended.

(2) *Open Channels*

a. Open Channels shall be designed for subcritical flow under normal conditions. If supercritical flow exists, energy dissipation will be required to return flow to subcritical flow conditions. Open channels shall be designed to convey at least the 25-year frequency design storm event.

b. The maximum allowable velocities in constructed channels are based on the channel type. The following velocity chart is used for scour protection and to determine the maximum velocities for a given type of channel lining:

Table 4.5-1 Velocity (Maximum) for Scour Protection

Channel Type	Maximum Velocity
Grass Lined	5 fps
Concrete Lined	> 5 fps

c. Other methods of bottom and slope protection may be substituted for conditions where concrete lining is required upon the approval of the City Engineer. Requests for substitution shall be accompanied by an engineering analysis of the equivalency to concrete, reasons for substitution, and an evaluation of maintenance issues.

d. Grass-lined channels shall include slope protection in bends, unless the radius of curvature is greater than twice the channel top width.

e. Open channels shall provide a at least 1 foot of freeboard above design flow depth. Additional freeboard is required where design conditions warrant as outlined in the *Storm Water Management Guidance Manual*. All channels shall have a minimum 8 foot bottom width to facilitate maintenance operations. Where the calculated depth of normal flow is less than the required freeboard, the City may consider reducing channel widths (valley gutter, concrete swale) or alternate configurations.

(3) *Culvert and Bridge Crossings*

a. All roadway culvert crossings shall be designed for a 25-year frequency storm event.

b. Crossings located within flood hazard zones shall be designed to ensure compliance with FEMA regulations.

c. The hydraulic capacity of proposed culverts shall be such that headwater depth is at least 1 foot below the minimum roadway elevation.

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d. Proposed bridges shall have a low chord elevation at least 1 foot above the design storm water surface elevation.

e. All culverts located or expected to be located under paving and bridges shall be structurally designed for an HS-20 loading.

f. Hydrologic and hydraulic calculations for all crossings must be included in the permit application to ensure compliance with this Code.

g. All culvert and bridge crossing(s) need to have the flood gauge installed by the developer before acceptance by the City.

(4) *Hydraulic Structures - Energy Dissipation*

a. Where hydraulic structures are included in the design of storm water drainage systems, energy dissipation shall be included in the structure as outlined in the *Storm Water Management Guidance Manual*.

b. Hydraulic structures may include, but are not limited to: pipe outlets, spillways, drop structures, and culvert headwalls.

c. All energy dissipators should be designed to facilitate maintenance.

d. At the reasonable discretion of the City Engineer, the design of outlet structures in or near parks and/or residential areas must give special consideration to aesthetics.

(5) *Retention/Detention Facilities.* The following are minimum criteria for detention facilities within the City of Laredo and its extraterritorial jurisdiction. These criteria do not supersede or replace requirements established by the State of Texas for dam safety, dam construction plan review, and/or the impoundment of State Waters. Where the State of Texas requirements apply, the owner/developer and/or engineer shall provide evidence of compliance prior to final approval of the facility by the City of Laredo.

a. *Allowable Discharge - (Pre/Post Analysis for Retention/Detention Facilities)*

1. The ultimate 100-year design storm event is used to determine the required retention/detention volume for the development site.

2. The discharge rate from the facility shall be such that the pre- development discharge rate from the site is not exceeded in the post-developed condition for the design storm event. The precondition discharge rate shall be calculated assuming the proposed site is in a natural state.

3. Upstream adjacent properties shall be considered at their existing conditions, provided that the downstream receiving stream/channel/detention pond can accept additional storm water runoff volume without causing flooding as determined by the City Engineer.

b. *Storage*

1. The design storage shall be the volume of the design storm event hydrograph that exceeds the allowable discharge rate noted above.

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2. Basins without upstream detention areas and with drainage areas of 130 acres or less may calculate storage using the Modified Rational Method as described in the *Storm Water Management Guidance Manual*.
3. Basins with drainage areas greater than 130 acres, or where the Modified Rational Method is not applicable, shall be designed using an approved method as described in the *Storm Water Management Guidance Manual*.

c. *Impoundment Design Criteria*

1. The steepest side slope permitted is 4:1 for a vegetated earth embankment, 2:1 for a rock dam, or as determined by a geotechnical investigation that is certified by a licensed professional engineer and approved by the City Engineer.
2. Earth embankments used to temporarily impound the required detention volume shall be constructed according to standard specifications for fill. These specifications should be, at a minimum, adequate for levee embankments and be based on the City of Laredo standard specifications for embankment, topsoil, sodding, and seeding.
3. Where permanent impoundment is to be provided a geotechnical investigation is required. Based on the geotechnical report more stringent specifications may be required.
4. Embankments, spillways and other appurtenances shall be designed to withstand the pressures of the impounded storm water.
5. Excavated detention facilities must provide positive drainage with a minimum bottom grade of 0.3% (0.003/ft). A low flow concrete valley gutter shall also be provided.

d. *Freeboard and Emergency Spillway*

1. The top of the embankment shall be at least 1 foot above the 100-year maximum design elevation.
2. An emergency spillway, or overflow area, shall be provided above the maximum design elevation to ensure that the State of Texas Dam Safety overflow requirements or the 100-year frequency event, whichever is more stringent, does not overtop the embankment.
3. If the emergency spillway capacity is to be provided over the embankment, the spillway will be structurally designed to prevent erosion and consequent loss of structural integrity.
4. The spillway or the dam portion of the pond shall be constructed of reinforced concrete or with concrete lining. The City Engineer may approve alternate materials.

e. *Outflow Structure.* Where the outflow structure conveys flow through the embankment in a conduit, the conduit shall be reinforced concrete or other material to be approved by the City Engineer designed to support the external loads with an adequate factor of safety. It shall withstand the internal hydraulic

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pressures without leakage under full external load or settlement. It must convey water at the designed velocity without damage to the interior surface of the conduit.

f. *Fence*

1. Security fencing with a minimum height of 6 feet shall encompass the detention and maintenance area when required, as determined by the City Engineer, due to potential safety hazards created by prolonged storage of floodwater.

2. Design shall not restrict the inflow or outfall of the basin.

3. Adequate access for maintenance equipment shall be provided.

4. In basins used for recreation areas during dry periods, pedestrian access may be provided with the approval of the City Engineer.

g. *Floatable Controls*

1. Detention facilities shall incorporate some type of floatable controls (baffles, skimmers, etc.) to ensure that discharge of floatables from the facility is limited to the maximum extent practicable as determined by the City Engineer.

2. As part of the ongoing detention facility maintenance, the detention facilities shall be regularly checked and any floatables removed.

3. A maintenance regimen for the removal of floatables shall be part of the maintenance schedule submitted for permit review and approval.

h. *Maintenance Access Requirements*

1. A minimum 15-foot wide maintenance area shall be provided to serve the detention facility. The crown (top of berm) shall have a minimum width of 10 feet unless used for primary maintenance of the detention facility, in which case it shall have a minimum width of 15 feet.

2. Access must be provided into detention basins designed for periodic desilting and debris removal. Basins with permanent storage must include dewatering facilities to provide for maintenance.

i. *Municipality Participation*

1. When the City Engineer determines that additional storage capacity beyond that required by the applicant for on- site storm water management is necessary in order to enhance or provide for the public health, safety and general welfare, to correct unacceptable or undesirable existing conditions or to provide protection in a more desirable fashion for future development, the City Engineer may:

a. Require that the applicant grant any necessary easements over, through or under the applicant's property to provide access to or drainage for such a facility;

b. Require that the applicant attempt to obtain from the owners of property over, through or under where the storm water management facility is to

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be located, any easements necessary for the construction and maintenance of the facility. If the applicant fails to obtain the easement the City may, at its option, assist by purchase, condemnation, dedication or otherwise, and subject to paragraph c below, with any cost incurred to be paid by the City); and/or

c. Participate financially in the construction of such facility to the extent that the facility exceeds the required on-site storm water management as determined by the City Engineer.

d. The City may assume maintenance of the facility as a storm water management facility.

2. To implement this provision both the municipality and developer must be in agreement with the proposed facility that includes the additional storage capacity, and jointly develop a cost sharing plan which is agreeable to all parties.

j. *Fee in-lieu-of Detention.* The City Engineer may waive the detention requirement for small plats (less than 5 acres) with the options of fee in-lieu-of detention when the downstream receiving stream/channel/detention pond can accept additional storm water runoff volume without causing erosions. The calculation will be based on the combination of the construction cost and land cost of the proposed detention facility and may include the maintenance cost for 2 years.

(6) *Regional Storm Water Management Facilities*

a. *Generally*

1. For purposes of this section, a regional storm water management facility is any facility constructed on a channel or waterway whose total drainage area is greater than 130 acres and serves more than 1 development.

2. Regional storm water management facilities may be maintained by the City.

3. The design of regional storm water management facilities shall assume that all contributing areas are fully developed in accordance with approved future land use plans.

4. A plan of the contributing area will be submitted as part of the permitting process indicating conveyance easements through the property being developed sufficient to convey post development flows to the facility.

5. If the proposed development is upstream of the regional storm water management facilities, pass through conveyance systems shall be included in the design of the development.

b. *Lakes and Dams*

1. If a property owner or developer desires to modify an existing pond or lake, or desires to impound stormwater by filling or constructing an above-ground dam, thereby creating a lake, pond, lagoon or basin as part of the planned development of that property – the criteria listed below shall be met before the City approves the impoundment.

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2. Ponds or lakes created by excavation of a channel area without erecting a dam above natural ground elevation or instream, low water check dams are also subject to the criteria listed below with the exception of spillway capacity requirements.
3. The City Engineer has final authority to determine the design criteria for a proposed dam, check dam, or excavated lake.
4. The requirements of the State of Texas must also be met for the construction of dams, lakes, and other impoundments.
5. The design criteria for a dam is dependent on the size and hazard classification of the dam. The size and hazard classification will be based on Chapter 12 of the Texas Water Code. The following criteria will be used to classify a dam:

   Size. The classification for size is based on the height of the dam and storage capacity, whichever gives the larger size category. Height is defined as the distance between the top of the dam (minus the freeboard) and the existing streambed at the downstream toe. Storage is defined as the maximum water volume impounded at the top of the dam (minus the freeboard).

Table 4.5-2 Spillway Design Flood (SDF)

Hazard	Size	SDF
Low	Minor	100-year
	Small	¼ PMF
	Intermediate	¼ PMF to ½ PMF
	Large	PMF
Significant	Small	¼ PMF to ½ PMF
	Intermediate	½ PMF to PMF
	Large	PMF
High	Small	PMF
	Intermediate	PMF
	Large	PMF

In all cases, the minimum principal spillway design capacity is the 100-year design flood. In certain cases, a dam breach analysis may be required to determine the proper classification of the structure. For all structures requiring a spillway design flood equal to the Probable Maximum Flood (PMF), a dam breach analysis is required to determine the downstream consequences of a failure. All dams designed for a Spillway Design Flood (SDF) of ½ PMF or less shall be constructed with a minimum freeboard of 2 feet above the SDF elevation.

(7) *Retaining Walls in Waterways*

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a. All retaining structures/walls located within a 100-year floodplain shall be constructed of reinforced concrete or other materials approved as designed for the specific on-site conditions. Special structural designs shall be submitted with supporting calculations to the City Engineer for approval.

b. Retaining walls shall be designed to achieve a minimum factor of safety of 2 against overturning and 1.5 against sliding.

c. The criteria/parameters used in considering the adequacy of the retaining wall design shall be as outlined in the *Storm Water Management Guidance Manual*.

d. Any wall taller than 30 inches requires a building permit, and any wall taller than 4 feet in height will require a building permit and an engineer's certification that the wall is structurally sound, and built as per the plan specifications.

(d) Easements

(1) *Generally*

a. Property development/redevelopment that includes detention and/or drainage facilities shall dedicate easements to the City.

b. The minimum width of easements shall be determined by the City Engineer, based on the examples set out in the *Storm Water Management Guidance Manual*.

c. Final plats shall contain standard language addressing the easements and management areas, and on-ground monumentation as outlined below:

1. Floodway easements are to be dedicated for open waterways in nonresidential areas. The property owner shall maintain floodway easements.

2. Drainage easements shall be dedicated for manmade drainage channels, closed storm sewer systems, or drainage structures in areas not owned by the City, but to be maintained by the City.

3. Detention basins shall be maintained in detention area easements. Detention basins constructed through private development activities shall be maintained by the property owner or neighborhood association. Detention basins constructed for the City, or constructed as a regional facility approved by the City, shall be maintained by City personnel.

4. All detention easements and drainage easements shall include provisions for adequate maintenance such as dedicated and maintained access easements. These access easements shall be sufficient to provide ingress and egress for maintenance. The minimum width is 15 feet. Access easements are needed only when the area to be maintained does not border a public right-of- way.

(2) *Easements for Enclosed Storm Sewers, Positive Overflow Areas and Lot Drainage*

a. A grading plan shall be prepared and submitted to the City, which indicates typical lot grading for all lots in the subdivision using typical FHA lot grading types (A, B, and C). [*See Table 4.5-3 Typical FHA lot grading, below.*]

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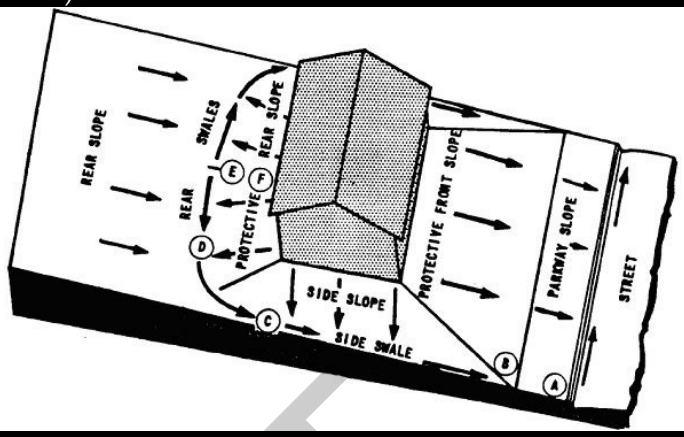
Table 4.5-3 Typical FHA lot grading

Type "A" Lot Grading (all drainage to street)

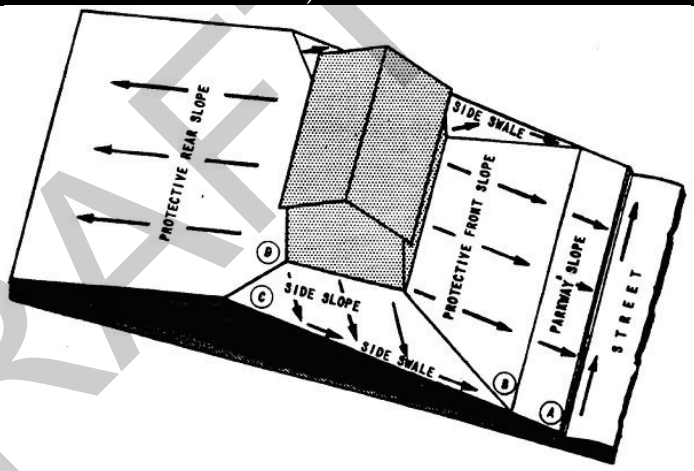
Rear yard swales behind the house carry surface water from rear yard to side yard swales (1% minimum) which carry it to street for disposal through the street gutters and the public storm drainage system.



A	Curb-top on lot line extension at highest lot corner.
A-B	Parkway slope
B-C	Side yard swale
C-D	Swale turn with 10′ radius D-E Rear swale
E-F	Protective rear slope up from high point of swales

Type "B" Lot Grading (drainage both to street & to rear lot line)

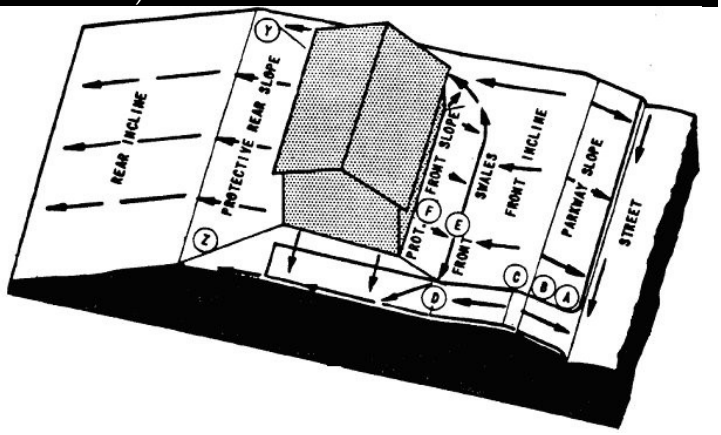
Only side swales are needed to drain both to the street and to the rear lot line. They should extend back of the line of the rear building wall; then splash blocks from rear roof downspouts should be placed to direct roof water to the side swales for drainage directly to the abutting street. Thus the amount of water carried on the rear slope to easements or other properties is kept as small as possible. This reduces erosion and disposal problems.



A	Curb-top on lot line extension at highest lot corner
A-B	Parkway slope
B-C	Side swale
C-D	Protective side slope at extension of rear wall

Type "C" Lot Grading (all drainage to rear lot line)

Front swales are essential to carry surface water from the front yard to side-yard swales which carry it to the rear for disposal in easements or across other properties. Proper cross-section of the street gutter, curb and parkway strip are essential to stop street water from flowing onto the lot.



A	Curb-top at high side of driveway near low lot corner
A-B	Parkway slope
B	Driveway grade change from upgrade drive in street to downgrade drive on lot
C-D	Driveway downgrade point out from front of building
D-E	Front swale
E-F	Protective front slope from highpoint of swales

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b. All storm sewer conduits to be dedicated to the City shall be located in an easement dedicated to the City of Laredo at the time of final platting of the property. The easement shall be at least 15 feet wide for storm sewers, or wider if the City Engineer requires it for maintenance or other purposes. Special drainage easements for positive overflows on private property shall at least 10 feet wide, or wider if the City Engineer requires it, for maintenance or other purposes.

c. Accumulated drainage from more than one residential lot (or more than one lot equivalent in the case of staggered or offset lots) shall be contained within a Special Drainage Easement. This easement shall be dedicated to the City at the time of final platting of the property. This shall be a special drainage easement on private property and shall at least 10 feet wide. The easement may be shared with underground utility easements if those facilities do not impede the calculated runoff.

d. Front to rear lot drainage shall not exceed a maximum slope of 5%.

e. No flow restricting fences, buildings, structures, or other improvements which impede flow shall be placed within these easements.

f. Single front to rear residential lot drainage, or one lot equivalent in the case of staggered, or offset lots do not require Special Drainage Easement. Front to rear lot drainage shall not exceed a maximum slope of 5%.

g. All lots draining and/or receiving runoff will be identified with a plat note.

h. Flow restricting fences or other structures installed between these lots shall be constructed to the specifications of the engineer of record. Those specifications shall be located on the recorded grading plan.

i. Flow restricting fences shall be reinforced at the time of building permit submittal.

j. The applicant shall install a 20' wide sod strip along entire rear property line of lots draining onto other lots (5 foot strip on upgradient lot and 5 foot strip on downgradient lot).

(e) Temporary Erosion and Sediment Control

(1) *General Requirements*

a. All operators of construction sites shall use best management practices (BMPs) to control and reduce the discharge, to the MS4 and to waters of the United States, of sediment, silt, earth, soil, and other material associated with clearing, grading, excavation, land filling, and other construction activities to the maximum extent practicable.

b. Any BMPs capable of installation and/or implementation prior to commencement of construction (for example, structural measures) shall be installed and/or implemented prior to commencement of construction at the site or in compliance with a schedule for installation and/or implementation in an applicable Storm Water Pollution Prevention Plan (SWPPP).

c. The BMPs used at construction sites may include:

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1. Ensuring that existing vegetation is preserved where feasible and that disturbed portions of the site are stabilized as soon as practicable in portions of the site where construction activities have stopped for 14 days, and no further construction is anticipated for an additional 7 days, or have permanently ceased;
2. Use of structural practices to divert flows from exposed soils, to store flows, or to otherwise limit runoff and the discharge of pollutants from the site to the maximum extent practicable;
3. Minimization of the tracking of sediments off-site by vehicles, the generation of dust, and the escape of other windblown waste from the site;
4. Prevention of the discharge of building materials, including cement, lime, concrete, asphalt, or mortar, to the MS4 or waters of the United States;
5. Measures to prevent and contain spills of paints, solvents, fuels, septic waste, and other hazardous chemicals and pollutants associated with construction, and to assure proper cleanup and disposal of any of those spills in compliance with state, federal, and local requirements;
6. Implementation of proper waste disposal and waste management techniques, including covering waste materials, minimizing ground contact with hazardous chemicals and trash, and installing and maintaining covered receptacles for rubbish and garbage to assure that those waste materials are not blown or carried by rainfall runoff from the site;
7. Timely maintenance of vegetation, erosion and sediment control measures, and other BMPs to maintain them in good and effective operating condition; and
8. Installation of structural measures during the construction process to control pollutants in storm water discharges that will occur after construction operations are completed. Structural measures should be placed on upland soils to the degree attainable. Installed structural measures may include, but are not limited to:
   a. storm water detention structures (including wet ponds);
   b. storm water retention structures;
   c. flow attenuation by use of open vegetative swales and natural depressions;
   d. other velocity dissipation devices;
   e. infiltration of runoff on site; and
   f. sequential systems which combine several practices.
9. Operators of construction sites are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have terminated.

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d. Qualified personnel (provided by the operator of the construction site) shall inspect disturbed areas of any construction site are not finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site, at least once every 7 calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. All erosion and sediment control measures and other identified BMPs shall be observed in order to ensure that they are operating correctly and are effective in preventing significant impacts to receiving waters and the MS4. Based on the results of the inspection, best management practices BMPs shall be modified as appropriate, and as soon as practicable.

e. Any owner of a site of construction activity, whether or they are an operator, is jointly and severally responsible for compliance with the requirements in this subsection 24.4.5(e)(1).

f. Any contractor or subcontractor on a site of construction activity, who is not an owner or operator, but who is responsible under their contract or subcontract for implementing a BMP control measure, is jointly and severally responsible for any willful or negligent failure to adequately implement that control measure.

(f) Storm Water Quality Management

(1) *Applicability*

a. Except as provided in subsection 24.4.5(f)(1)a.2 below, a site specific storm water quality management plan is required for all residential, commercial, and industrial development and/or redevelopment of 1 acre or more within the City of Laredo and its jurisdictional areas.

1. For the purpose of this section, the area of the development must include all contiguous land owned by the responsible party, regardless of the amount of land affected by the development activity.

2. A storm water quality management plan is not required when a portion of a previously developed tract of land is redeveloped, unless the redevelopment will result in the conversion of more than ¼ acre from a porous surface to an impervious surface.

b. The storm water quality plan must be submitted at the time of preliminary plat submission, or submission of a site plan with an application for a building permit (if the site is more than 1 acre).

c. The storm water quality management plan must identify the location of the ultimate outfall from the City's MS4 into the receiving water and any environmentally sensitive areas that will receive any pollutants carried by storm water pollution from the site.

d. The storm water quality management plan must state whether an NPDES storm water pollution prevention plan or a pollution control plan will be submitted to the City Engineer.

e. The storm water quality management plan must be signed and sealed by a professional engineer licensed to practice engineering in the State of Texas.

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(2) *Special Land Use Requirements.* A storm water quality management plan and any plans submitted for a building permit for the development of property that will be used for one of the uses listed below must identify the appropriate best management practices (BMPs) to prevent pollutants being discharged into the City's MS4. The owner of a site within City that is currently used for one of the activities described below is not required to physically alter the existing facility to comply with this section, unless alterations or repairs to the facility require the facility to be brought into compliance with the current City of Laredo building code. The uses are as follows:

- **a.** Fueling stations.
- **b.** Vehicle/equipment washing and steam cleaning facilities.
- **c.** Facilities engaged in harmful liquid materials loading and unloading.
- **d.** Facilities engaged in harmful liquids storage in aboveground storage tanks.
- **e.** Facilities engaged in container storage of harmful liquids (such as oil, chemical, and hazardous substances), food wastes, and hazardous wastes.
- **f.** Facilities engaged in outdoor storage of raw materials that are subject to leaching and transport by erosion and sedimentation, such as gravel, sand, topsoil, compost, sawdust, wood chips, building materials, including lumber, which are subject to leaching; and concrete and metal products, which are subject to chemical erosion, corrosion, and leaching.

(3) *General Requirements*

- **a.** *Preliminary Plan (Platting).* A layout of the proposed water quality management system and calculations showing it meets the requirements of subsection 24.4.5(f)(4) below shall be submitted with the other requirements outlined in Article 11.
- **b.** *Final Construction Plans*. Final construction plans and specifications, and calculations showing that the water quality management system meets the requirements of subsection 24.4.5(f)(4) below shall be submitted with the other requirements as outlined in Article 11.

(4) *Design Criteria*

- **a.** *Quality Management Criteria*
  - **1.** *Generally.* The criteria of the water quality management for the new development and redevelopment is that the water quality effects of the development should not be significantly different from the water quality effects of the same site before construction. Development/redevelopment within the City of Laredo shall provide, at the minimum, one of the following methods for storm water treatment, if the discharges meet the requirements of the City's stormwater NPDES permit and state water quality criteria. The City Engineer may require more stringent treatment methods if discharges fail to meet water quality goals. The drainage area for determining treatment volumes includes all areas draining to the facility (on-site and off-site). If off-

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site flows are not commingled with on-site flows prior to treatment, they should not be included in the treatment volume.

2. *Method Treatment Volume and Recovery Rate*
   a. *Wet Detention*: Wet detention treatment volume shall be, at a minimum, the first 1 inch of runoff. No more than ½ of the volume may be discharged in the first 24 hours.
   b. *Off-line Retention*: Off-line retention diverts the first flush of storm water runoff to a facility separated from the main line storm water conveyance system. The treatment volume for off-line retention shall be ½ inch of runoff. The treatment volume shall again be available within a minimum of 24 hours and a maximum of 72 hours following a storm event, with appropriate on-site soils tests submitted to verify the infiltration rate.
   c. *Online Retention or Detention*: For online retention or detention with under drained filtration, treatment volume shall be provided equal to 1 inch of runoff. Only bottom underdrain systems planted with grass that are capable of recovering the treatment volume within 24 hours are allowed, to the satisfaction of the City Engineer, to exceed the capabilities of a bottom underdrain system.
3. *Design*. Design criteria and design specifications for the water quality treatment methods described above are outlined in the *Storm Water Management Guidance Manual*.

b. *Floatable Controls.* All detention facilities shall incorporate floatable controls (baffles, etc.) to ensure that no floatables are discharged from the facility. The detention facilities shall be regularly checked and any floatables removed as part of the ongoing detention facility maintenance.

c. *Spill Control*. All detention facilities shall incorporate in the design of their discharge structures a method for stopping all discharges in case of an accidental spill occurring within the detention facilities drainage area. This discharge control device shall be periodically checked to ensure its continued operation as part of the ongoing detention facility maintenance.

d. *BMPs.* For residential development/redevelopment areas of more than 1 acre, and with the approval of the City Engineer or his/her authorized representative, the water quality requirements as stated in subsection 24.4.5(f)(4) may be waived in favor of a series of permanent BMPs, i.e., swales, vegetated buffers, small impoundments, etc. that are shown to provide sufficient water quality enhancements to meet the intent of subsection 24.4.5(e).

e. *Discharges To The Rio Grande.* For sites discharging directly into the Rio Grande the runoff amounts used for the determination of water quality treatment volume are 50% greater than those indicated in subsection 24.4.5(e)[2]. The only

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treatment method for water quality shall be off-line retention unless otherwise approved by the City Engineer and the IBWC.

(g) Low-Impact Development (LID) or Light Imprint (LI) Practices. The storm water concept plan, storm water management plan, and site-specific storm water quality management plan may incorporate Low-Impact Development (LID) or Light Imprint (LI) Practices where provided by the *Storm Water Management Guidance Manual.*

(h) Warning and Disclaimer of Liability

(1) The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions.

(2) Flood Heights may be increased by manmade or natural causes.

(3) This article does not imply that land outside the area of special flood hazards or uses permitted within such areas will be free from flooding or flood damages.

(4) This section does not imply that properties are always free from flooding or flood damage, surface water stagnation or nonpoint source pollution or that all flood control and water treatment projects to control the quantity and quality of runoff can be constructed effectively.

(5) This section does not create additional duties, on the part of the city, or to hold the city liable for any damages incurred in a flood or from adverse water quality, due to drainage runoff.

(6) This section does not waive the city's immunity under State law or reduce the need or necessity for flood insurance.

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24.4.7 Streets

(a) Generally

(1) The arrangement, character, extent, width, grade, access to, and location of all streets shall conform to the City Comprehensive Plan and the Future Thoroughfare Plan and are considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed land uses to be served by streets.

(2) The Building Official shall not issue any permit for any development that does not access a street right-of-way compatible with the requirements of this Section, or a private access easement that complies with the minimum width requirements.

(3) If the right-of-way or pavement width or base required by the City Comprehensive Plan is in excess of the minimum right-of-way or pavement width, then the subdivider may request the participation of the City in the additional cost of street construction over and above the costs which would be required for residential street construction. In that instance, a written contract with the City is required as part of the application for final plat approval. The written contract shall be considered part of the application for final plat along with the other information and data required by the subdivision procedures.

(b) Street Arrangement

(1) *Generally*. Where streets are not shown in the City Comprehensive Plan and Future Thoroughfare Plan, the arrangement of streets in a subdivision:

a. Provide for the continuation of appropriate projection of existing streets in surrounding areas; or

b. Conform to a plan for the neighborhood to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impracticable.

(2) *Integration of Existing Streets*. If a subdivision abuts or contains an existing or proposed street, the Commission may require:

a. Marginal access streets;

b. Reverse frontage with screen planting contained in non-access reserve strips along the rear property line;

c. Deep lots with rear service alleys, or minimum distances between intersecting driveways and streets, or other treatment necessary for adequate protection of residential properties and to afford separation of through and local traffic;

d. Minimum spacing between intersecting driveways onto a street or arterial to conform to the Comprehensive Plan, the Future Thoroughfare Plan, or Access Management Guidelines adopted by the City.

(3) *Railroad Right-of-Way*. If a subdivision borders on or contains a railroad right-of-way, the Commission may require a buffer zone between the railroad right-of-way and the residential development to a distance of 300 feet minimum suitable for the

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appropriate use of the intervening land, for park purposes. These distances consider grade approaches and future grade separations.

(4) *Permanently Designed Dead-End Streets*

a. These streets are not longer than five hundred (500) feet or twenty-four dwelling units.

b. These streets provide a turn-around at the closed end with an outside roadway diameter of at least one hundred (100) feet, and a street property line diameter of at least one hundred twenty (120) feet.

(5) *Connections*

a. The system of streets designated for the subdivision must connect with streets already dedicated in adjacent subdivisions.

b. Where adjacent connections are not platted, the general projection of streets in the nearest subdivided tracts must continue to the boundaries of the tract subdivided, so that other sub-dividers may connect.

c. Reserve strips of land controlling access to or egress from other property from any street or alley or having the effect of restricting or damaging the adjoining property, are not permitted in any subdivision unless those reserve strips are conveyed to the City in fee simple.

(6) *Crowns*. The crown of all streets, alleys, or access easements is based on three eighths (3/8) of an inch per foot of street width. Crowns are not less than the height of the curb nor more than twelve (12) inches. Crowns may be altered when design warrants in cases like super-elevated roadways.

(c) Street Classification

(1) *Generally*. The components of the City's street system are divided into seven major classifications with corresponding right-of-way widths. All yards or setbacks abutting a major street as designated are measured from the proposed street line, which is, from a line one-half the proposed right-of-way width from the centerline of the major street.

(2) *Context***.** Street classifications align with different development contexts within the city. There are two specific contexts:

a. Compact/Urban; and

b. Suburban.

(3) *Expressway*. An expressway is a limited access, high speed roadway with grade separated interchanges. Expressways are of regional significance and the interchanges may have a significant impact on land use due to their desirability as locations for commerce and industry. Expressways are generally controlled by the State of Texas with variable width right-of-way dimensions.

(4) *Multiway Boulevard*. A multiway boulevard is a street type that provides a direct path to distant destinations. The multiway boulevard separates through travel lanes from local access lanes to simultaneously move vehicles while providing a calm, spacious pedestrian and living environment for adjacent residences. This street type is

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generally controlled by the State of Texas or the City. There are four multiway boulevard types within one development context – compact/urban.

a. A – Residential Multiway

b. B – Commercial Multiway

c. C – Mixed-Use Multiway

d. D – Transit-Oriented Multiway

(5) *Principal Arterial*. A principal arterial is a street type that provides for longer, direct trips on relatively straight paths which often connects to expressways. This street type is generally controlled by the State of Texas or the City. There are six principal arterial types within compact/urban and suburban development contexts allocated with additional development residential and commercial characteristics.

a. A – Suburban

b. B – Compact/Urban

1. Residential

2. Commercial

c. C – Suburban

d. C – Compact/Urban

1. Commercial 1

2. Commercial 2

(6) *Minor Arterial*. A minor arterial is a street type typically found between principal arterials that provides continuous paths to intermediate destinations and alternate routes for longer trips. This street type is generally controlled by the City or County. There are 3 minor arterial types within two development contexts.

a. Suburban

b. Compact/Urban

1. Residential

2. Commercial

(7) *Collector*. A collector is a street type typically found between minor arterials that provide frequent interconnections between neighborhoods. Collectors allow local trips that avoid the arterial network. This street type is generally controlled by the City or County. There are five collector types within two development contexts.

a. Suburban

b. Compact/Urban

1. Residential

2. Commercial

3. Main Street 1

4. Main Street 2

(8) *Industrial Collector*. An industrial collector is a collector street that primarily accommodates large vehicular traffic. This street type is generally controlled by the

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City or County. Industrial collectors are located within suburban development contexts.

(9) *Local Street*. A local street is a street type interconnected within neighborhoods that adjoin to other neighborhoods. These streets discourage through traffic. This street type is generally controlled by the City or County. There are three local street types.

a. Main Street

b. Main Street (Angled Parking)

c. Yield Street

(d) Street Design

(1) *Generally*

a. Streets will follow the regulations and allocations established in each street classification's Street Design Criteria Matrix (subsections (2) through (8) below). Each matrix establishes regulations for travel lanes, median/turning lanes, transit lanes, pedestrian zones, bicycle facilities, and other elements.

b. To facilitate flexibility in design while maintaining the safety, health and welfare of the public, the Traffic Director may grant administrative exceptions to the Street Design Criteria Matrix if:

1. The Planning Director certifies that the proposed exception does not conflict with the goals and policies of the comprehensive plan; and

2. The applicant demonstrates, through documentation and/or studies, based on generally accepted engineering principles, that exceptions to the standard provided by this chapter would not pose a threat to health and safety.

c. Street jogs shall avoid centerline effects less than three hundred (300) feet.

d. Street and access easement designs shall conform with the latest American Association of State Highway and Transportation Officials publication of "A Policy on Geometric Design of Highways and Streets." A professional engineer registered in the State of Texas shall prepare and sign street design plans. For intersection design purposes, local streets and collectors assume passenger vehicles only, multiway boulevards and arterials will carry single-unit trucks and city transit buses, all industrial collectors and expressways will carry vehicles of WB-50.

e. Streets shall intersect at right angles.

f. Half streets are prohibited unless:

1. They are essential to the reasonable development of the subdivision in conformity with the other requirements of these regulations, or

2. The Commission finds it is practicable to require the dedication of the other half when the adjoining property is subdivided.

g. Wherever a half street is adjacent to a tract to be subdivided, the other half of the street is plotted within that tract.

(2) *Expressway*. Expressway shall comply with the following criteria:

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Table 4.6-1 Expressway

Street Design Criteria	
	Expressway
	Compact/Urban
ROW width (*min*)	Variable
Travel Lanes (*max*)	8
Travel Lane Width (*min*)	
outer lanes	11'
inner lanes	10'
Median / Turning Lane Elements	
Number (*max*)	1
width (*min*)	18'
Raised	Yes
Transit Lane	
Number	N/A
width (*min*)	N/A
Pedestrian Zone	
Total min width	36'
Sidewalks / Pedestrian facilities (*location / width*)	8'
Planting Strips or Sidewalk Buffer (*min*)	6' on both sides of side median / 4' along sidewalk
Streetscape Planting	Yes
Bicycle facilities (within Pedestrian Zone)	
Width	6'
Protected	Yes
Elevated / Raised	Yes
Sharrows	Yes
Other Elements	
Grade (*min*)	0.50%
Grade (*max*)	5%
Curb radius (*min*)	30'
On-street parking	8' parallel

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(3) *Multiway Boulevard*. Multiway Boulevards shall comply with the following criteria:

Table 4.6-2 Multiway Boulevard

Street Design Criteria				
	Multiway Boulevard			
	A	B	C	D
	Compact/Urban	Compact/Urban	Compact/Urban	Compact/Urban
ROW width (*min*)	140'	150'	150'	150'
Travel Lanes (*max*)	5	5	5	5
Travel Lane Width (*min*)				
outer lanes	11'	11'	10'	11'
inner lanes	10'	10'	10'	10'
Median / Turning Lane Elements				
Number (*max*)	3	3	3	3
width (*min*)	10' center / 6' side	10' center / 17' side	10' center / 18' side	10' center and side
Raised	Yes	Yes	Yes	Yes
Transit Lane				
Number	N/A	N/A	2	2
width (*min*)	N/A	N/A	11'	11'
Pedestrian Zone				
Total min width	44'	49'	48'	39'
Sidewalks / Pedestrian facilities (*location / width*)	Both sides / 10' min	Both sides / 14' min	Both sides / 12' min	Both sides / 12' min
Planting Strips or Sidewalk Buffer (*min*)	6' in side median / 4' along bike track	11' side median	6' side median	5' side median
Streetscape Planting	Yes	Yes	Yes	Yes
Bicycle facilities (within Pedestrian Zone)				
Width	6'	6'	6'	10'
Protected	Yes	Yes	Yes	No
Elevated / Raised	Yes	Yes	Yes	No
Sharrows	Yes	Yes	Yes	Yes
Other Elements				
Grade (*min*)	0.50%	0.50%	0.50%	0.50%

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Grade (*max*)	5%	5%	5%	5%
Curb radius (*min*)	20'	20'	20'	20'
On-street parking	8' parallel	8' parallel	8' parallel	7' parallel

(4) *Principal Arterial*. Principal Arterials shall comply with the following criteria:

Table 4.6-3 Principal Arterial

Street Design Criteria						
	Principal Arterial					
	A	B		C		
	Suburban	Compact/Urban		Suburban	Compact/Urban	
Development Characteristic		Residential	Commercial		Commercial 1	Commercial 2
ROW width (*min*)	100'	120'	120'	120'	120'	120'
Travel Lanes (*max*)	4	4	2	4	4	4
Travel Lane Width (*min*)						
outer lanes	12'	12'	12'	12'	12'	12'
inner lanes	12'	12'	12'	12'	12'	12'
Median / Turning Lane Elements						
Number (*max*)	1	1	2	1	1	2
width (*min*)	10'	20'	10'	10'	10'	10'
Raised	Yes	Yes	Yes	Yes	Yes	Yes
Transit Lane						
Number	N/A	N/A	2	N/A	N/A	2
width (*min*)	N/A	N/A	11'	N/A	N/A	11'
Pedestrian Zone						
Total min width	22'	22'	21'	28'	27'	19'
Sidewalks / Pedestrian facilities (*location / width*)	Both sides / 6' min	Both sides / 6' min	Both sides / 12' min	Both sides / 6' min	Both sides / 16' min	12'

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Planting Strips or Sidewalk Buffer (*min*)	2 5' min planting strip or 1 10' planting strip	2 5' min planting strip or 1 10' planting strip	5' min planting strip	2 8' min planting strip or 1 16' planting strip	5' min planting strip	5' min planting strip
Streetscape Planting	Yes	Yes	Yes	Yes	Yes	Yes
Bicycle facilities (within Pedestrian Zone)						
Width	6'	6'	9'	6'	6'	7'
Protected	Yes	Yes	Yes (adjacent to on-street parking)	Yes	Yes	No
Elevated / Raised	Yes	Yes	No	Yes	Yes	No
Sharrows	N/A	N/A	N/A	N/A	N/A	N/A
Other Elements						
Grade (*min*)	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Grade (*max*)	5%	5%	5%	5%	5%	5%
Curb radius (*min*)	25'	20'	20'	25'	20'	20'
On-street parking	None	8' parallel	8' parallel	None	8' parallel	None

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(5) *Minor Arterial*. Minor Arterials shall comply with the following criteria:

Table 4.6-4 Minor Arterial

Street Design Criteria			
	Minor Arterial		
	Suburban	Compact/Urban	
Development Characteristic		Residential	Commercial
ROW width (*min*)	90'	90'	90'
Travel Lanes (*max*)	4	2	2
Travel Lane Width (*min*)			

outer lanes	11'	10'	10'
inner lanes	10'	N/A	N/A
Median / Turning Lane Elements			
Number (max)	1	1	1
width (*min*)	10'	10'	10'
Raised	Yes	Yes	Yes
Transit Lane			
Number	N/A	N/A	N/A
width (*min*)	N/A	N/A	N/A
Pedestrian Zone			
Total min width	26'	22'	22'
Sidewalks / Pedestrian facilities (*location / width*)	Both sides, 6' min	Both sides / 6' min	Both sides / 12' min
Planting Strips or Sidewalk Buffer (*min*)	2 7' min planting strip or 1 14' planting strip	5' min	4' min
Streetscape Planting	Yes	Yes	Yes
Bicycle facilities (within Pedestrian Zone)			
Width	6'	6'	6'
Protected	Yes	Yes	Yes
Elevated / Raised	Yes	Yes	Yes
Sharrows	N/A	N/A	N/A
Other Elements			
Grade (*min*)	0.50%	0.50%	0.50%
Grade (*max*)	5%	5%	5%
Curb radius (*min*)	25'	20'	20'
On-street parking	None	8' parallel	8' parallel

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(6) *Collector*. Collectors shall comply with the following criteria:

Table 4.6-5 Collector

Street Design Criteria					
	Collector				
	Suburban	**Compact/Urban**			
Development Characteristic		Residential	Commercial	Main Street 1	Main Street 2
ROW width (*min*)	80'	80'	80'	80'	80'

Travel Lanes (*max*)	2	2	2	2	2
Travel Lane Width (*min*)					
outer lanes	11'	10'	10'	10'	10'
inner lanes	N/A	N/A	N/A	N/A	N/A
Median / Turning Lane Elements					
Number (*max*)	1	N/A	N/A	1	1
width (*min*)	11'	N/A	N/A	10'	10'
Raised	No	N/A	N/A	Yes	Yes
Transit Lane					
Number	N/A	N/A	N/A	N/A	N/A
width (*min*)	N/A	N/A	N/A	N/A	N/A
Pedestrian Zone					
Total min width	22'	22'	22'	17'	17'
Sidewalks / Pedestrian facilities (*location / width*)	Both sides / 6' min	Both sides / 6' min	Both sides / 12' min	Both sides / 17' min	Both sides / 8' min
Planting Strips or Sidewalk Buffer (*min*)	2 5' min planting strip or 1 10' planting strip	2 5' min planting strip or 1 10' planting strip	4' min	3' min	3' min
Streetscape Planting	Yes	Yes	Yes	Yes	Yes
Bicycle facilities (within Pedestrian Zone)					
Width	6'	6'	6'	10'	6'
Protected	Yes	Yes	Yes	No	Yes
Elevated / Raised	Yes	Yes	Yes	No	Yes
Sharrows	N/A	N/A	N/A	Yes	N/A
Other Elements					
Grade (*min*)	0.50%	0.50%	0.50%	0.50%	0.50%
Grade (*max*)	5%	5%	5%	5%	5%
Curb radius (*min*)	20'	15'	15'	15'	15'
On-street parking	None	8' parallel	8' parallel	8' parallel	8' parallel

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(7) *Industrial Collector*. Industrial Collectors shall comply with the following criteria:

Table 4.6-6 Industrial Collector

Street Design Criteria	
	Industrial Collector
	Suburban
ROW width (*min*)	70'
Travel Lanes (*max*)	2
Travel Lane Width (*min*)	
outer lanes	12'
inner lanes	N/A
Median / Turning Lane Elements	
Number (*max*)	1
width (*min*)	11'
Raised	No
Transit Lane	
Number	N/A
width (*min*)	N/A
Pedestrian Zone	
Total min width	10'
Sidewalks / Pedestrian facilities (*location / width*)	Both sides / 6' min
Planting Strips or Sidewalk Buffer (*min*)	4' min
Streetscape Planting	Yes
Bicycle facilities (within Pedestrian Zone)	
Width	6'
Protected	No
Elevated / Raised	No
Sharrows	No
Other Elements	
Grade (*min*)	0.50%
Grade (*max*)	5%
Curb radius (*min*)	30'
On-street parking	None

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(8) Local Street. Local Streets shall comply with the following criteria:

Table 4.6-7 Local Street

Street Design Criteria			
	Local Street		
	Main Street	Main Street (Angled Parking)	Yield Street
ROW width (*min*)	60'	90'	60'
Travel Lanes (*max*)	2	2	1
Travel Lane Width (*min*)			
outer lanes	10'	10'	10'
inner lanes	N/A	N/A	N/A
Median / Turning Lane Elements			
Number (*max*)	N/A	N/A	N/A
width (*min*)	N/A	N/A	N/A
Raised	N/A	N/A	N/A
Transit Lane			
Number	N/A	N/A	N/A
width (*min*)	N/A	N/A	N/A
Pedestrian Zone			
Total min width	13'	17’	33'
Sidewalks / Pedestrian facilities (*location / width*)	Both sides / 13' min	Both sides, 17' min	Both sides, 8' min
Planting Strips or Sidewalk Buffer (*min*)	5’ min	5’ min	8' min
Streetscape Planting	Yes	Yes	Yes
Bicycle facilities (within Pedestrian Zone)			
Width	10'	10'	10'
Protected	No	No	No
Elevated / Raised	No	No	No
Sharrows	Yes	Yes	Yes
Other Elements			
Grade (*min*)	0.50%	0.50%	0.50%
Grade (*max*)	5%	5%	5%
Curb radius (*min*)	15'	15'	10'
On-street parking	7' parallel	18' angled	8' parallel

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(9) *Streets Not Identified***.** For purposes of streets and easements not identified in the Thoroughfare Plan, the following applies:

a. Streets shall have a 50′ R.O.W. with a 30′ paving section.

b. Access easements intended for primary access to a proposed lot or building are 50′ wide with a 30′ paving section.

(e) Blocks and Street Lengths[3]

(1) *Generally*. Blocks in the incorporated areas of the City shall comply with 24.3.9(b)(Site Design). In the ETJ, blocks shall not exceed 1,000 feet long and shall have a minimum length of two hundred (200) feet.

(2) *Exception*. The Commission may approve block lengths that deviate from the typical range (200 ft to 1,000 ft) if needed to ensure the proper projection of existing major thoroughfares and existing platted blocks.

(3) *Street length*

a. For a typical street segment, street length means the distance following the centerline of the intersecting centerlines of the improved roadway between traffic control devices or cul-de-sacs that halt vehicular movement (Figure 4.6-1 Measuring Street Length). The City Engineer or designee may approve a different street length than required by this subsection in the M-1 or M-2 districts if the modified street lengths are needed to accommodate safe and efficient truck movements and do not cause a violation of the fire code (see Section 12-2 of the Laredo Code).

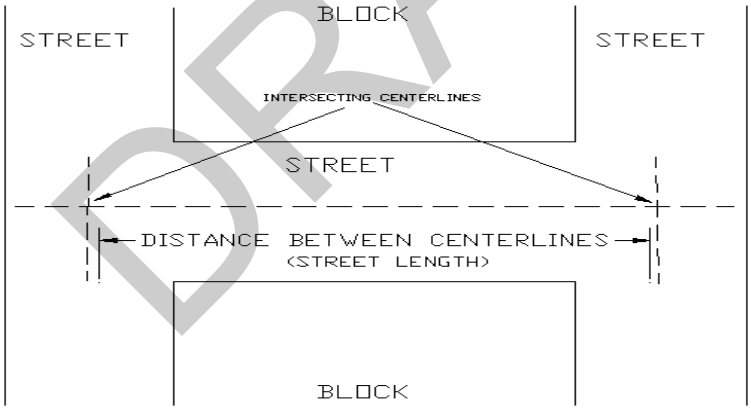

Figure 4.6-1 Measuring Street Length

b. An L-shaped (elbow type) intersection is an intersection formed by the roadway centerlines of two different non-continuous street lengths where the interior angle formed by these intersecting street lengths is at least 72 degrees and no greater than 120 degrees (Figure 4.6-2 L-Shaped Elbow). Each leg of an L- shaped (elbow type) intersection is considered a separate street section in determining street length.

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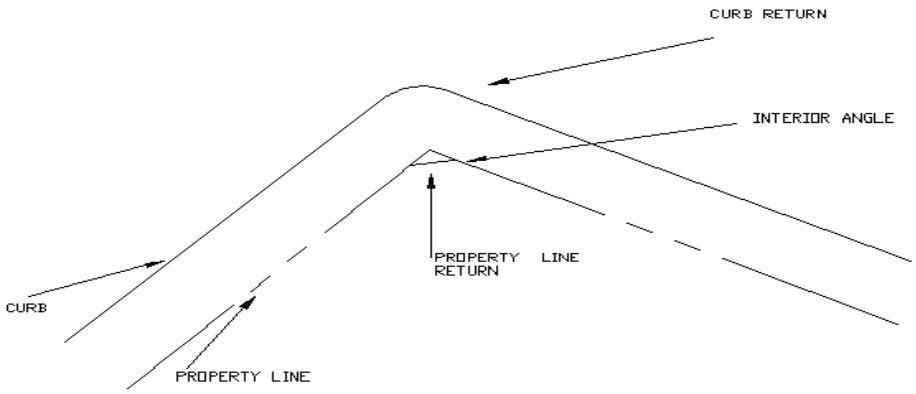

Figure 4.6-2 L-Shaped Elbow

c. *Street Segment*. A street segment means the section of the street length that results from the placement of traffic calming devices (Figure 4.6-3 Street Segments).

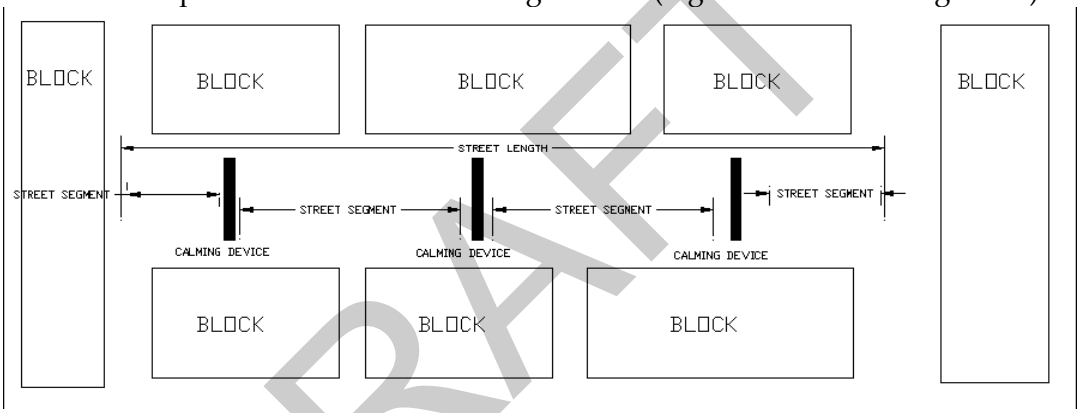

Figure 4.6-3 Street Segments

d. *Maximum Continuous Street Length.*

1. The continuous street length shall not exceed 1,000 feet for streets classified as local residential and 2,000 feet for other streets not classified as collectors. A longer street length than permitted by the maximum street lengths may be allowed through placement of an approved traffic calming device(s) as described in subsection 24.4.6(f)(1)b and Table 4.6-8.

2. The continuous street length shall not exceed 1,200 feet for streets classified as collectors. A longer street length may be allowed through the placement of an approved traffic calming device/s as described in 24.4.6(f)(1)b and Table 4.6-8.

3. The street length shall not exceed 700 feet for a local and 1,000 feet for a collector, and a longer street length is allowed through the placement of approved traffic calming device(s) as described on 24.4.6(f)(1)b and Table 4.6-8, if:

a. the street intersects an arterial roadway, or

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b. the street serves as an entrance street to the proposed neighborhood, or

c. the street provides an opportunity for traffic to pass from a street of a higher classification to another street link, or

d. the street width is at least 40 feet.

e. *School Street Length.* For a new school development, all collector and local streets fronting the school require the placement of approved traffic calming devices, including signs and striping maintaining a street segment length of 200 to 400 feet.

(4) *Waivers.*

a. The Planning and Zoning Commission may waive block lengths and street lengths if the waiver is requested in writing and incorporates traffic impact mitigation measures into a site plan. This waiver is submitted in conjunction with a preliminary plat/replat application.

b. The Planning and Zoning Commission may not grant a block length waiver unless traffic impact mitigation measures comply with standards (adopted here as minimum standards) of the Institute of Transportation Engineers, *Manual of Transportation Engineering Studies* (2nd Edition, 2010).[4]

c. A block length waiver shall not modify the City of Laredo Comprehensive Plan or the Thoroughfare Plan addressing expressways, multiway boulevards, arterials, collectors, and local streets or of the proper extension of any street.

d. A block length waiver shall not compromise safety.

(f) Traffic Calming

Purpose. Long streets, wide street cross sections and uninterrupted traffic flows can encourage speeding on local streets. Traffic calming is a combination of physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users. Traffic calming and street design standards slow traffic while allowing flexibility and design and offering applicants the choice of treatment that works best for the streets in a proposed development. Traffic control devices, notably stop signs and speed limits, are regulatory measures that require enforcement. Traffic-calming measures are self-enforcing.

(1) *Streets, Street Length, and Traffic Calming*

a. Different street types and varying street lengths require traffic calming devices to help reduce travel speeds, improve safety, and promote walkability.

b. If the street segment criteria in subsection 24.4.6(e)(3)d.1-3 are surpassed, the applicant shall install a traffic calming device(s) including signs and striping, designed and approved by the City. The applicant shall follow the standards prescribed in Table 4.6-8. This table allocates traffic calming devices according to different street types and their varying street lengths.

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Table 4.6-8 Streets, Street Length, and Traffic Calming

Street Type	Street Length (ft)	Required Traffic Calming Device
Local Street	1,000	Must maintain 250 to 500 ft segments
Other streets not classified as collectors	2,000	Must maintain 500 to 1,000 ft segments
Collectors	1,200	Must maintain 500 to 800 ft segments
Local Street and Collectors	700 / 1,000	Must maintain 300 to 400 ft segments

(2) *L-shaped (elbow type) Intersections.*

a. These intersections require a traffic calming device if the street length to the center of the intersection, measured from the point where the projection of the center lines for the two street sections intersect, exceeds 600 feet.

b. Each leg of an L-shaped (elbow type) intersection is considered a separate street section.

c. When required, the traffic calming device(s) must maintain a maximum of 400 feet from the center of the L-shaped (elbow type) intersection.

d. Any proposed street section that includes an L-shaped intersection is measured beginning at the center of the intersection.

e. L-shaped intersections with interior angles less than 72 degrees are not permitted.

f. Intersections with interior angles greater than 120 degrees are not considered an L-shape (elbow Type).

g. Where the interior angle exceeds 120 degrees, a smooth curve roadway design with a minimum radius conforming to the standards for the particular geometric section are used.

h. Where two L-shaped (elbow type) intersections are used to determine the street length, street length shall not exceed 1,000 feet.

i. A longer street length may be allowed through the placement of an approved traffic calming device(s) at distances described in subsection 24.4.6(f)(1)b and Table 4.6-8.

(3) If traffic calming is necessary on a roadway adjacent to a school, a raised platform will be used as a crosswalk.

(4) Required traffic calming devices shall be located at least 100 feet from any intersecting street, cul-de-sac, and L-shaped elbow type intersections (except those devices specifically designed for intersections and crosswalks).

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(5) The plat shall clearly identify driveway locations for lots affected by any proposed traffic-calming device during the platting process to restrict driveway location to that particular location. The City may also require modification of lots fronting a proposed traffic calming device to minimize impact to these residential lots.

(6) *Installation*.

a. When a series of traffic calming devices needs installation, the same type of device(s) may be used for a particular street or area. The exact placement of any required traffic calming device is subject to the Traffic Safety Department's review and approval.

b. The Traffic Safety Department reviews and approves intersection approaches that require stop sign installation.

(7) *Permitted Traffic Calming Devices*. The following provisions describe and establish permitted traffic calming devices where traffic calming measures are required by the City. These devices allow design flexibility and offer applicants the choice of treatment that works best for streets in a development subject to the City's review and approval. Defined street traffic calming devices include:

a. *Chicane*: curb extensions that alternate from one side of the street to the other, forming S-shaped curves.

b. *Speed Table:* flat-topped speed humps often constructed with concrete or other textured materials on the flat section.

c. *Pedestrian Crosswalks*: a ten foot wide painted strip on street pavement that connects a sidewalk to another sidewalk which provides circulation, or access to schools, playgrounds, shopping centers, transportation, or other community facilities.

d. *Pinchpoint*: curb extensions on both sides of the street that reduce pavement width.

e. *Traffic Circle*: raised islands, placed in intersections, around which traffic circulates.

f. *Roundabouts*: intersection where traffic flows in a circular direction around a central island. Drivers entering the roundabout must yield to traffic already circulating within it.

g. *Street Plantings*: Trees and shrubs placed along the street to narrow a motorist's visual field.

h. *Bollards*: a vertical device that provides a physical barrier between different uses.

i. *Raised intersection platform*-flat raised areas covering entire intersections, with ramps on all approaches and often with concrete or other textured material on the flat section.

j. *Temporary Traffic Calming Device*: an unspecified device used in special circumstances upon approval by the Traffic Engineer as a temporary solution. It could be in any form or shape as the devices listed above and must conform to the norms and specifications listed in the specification book. Temporary traffic

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calming devices are easy to install, remove, and use a rubber type material that can withstand the natural elements and the constant strain caused by motor vehicles. This device is strictly for temporary use and is the responsibility of the developer to maintain it until a decision is made to install a permanent traffic calming device.

(g) Pedestrian Zones and Sidewalks

(1) *Generally*. Pedestrian Zones are areas within a street right-of-way that restrict vehicular through-traffic and designates space for pedestrian activities like walking and cycling. Sidewalks are required on both sides of streets within pedestrian zones, including cul-de-sacs, in conformance with the American Disabilities Act (ADA) and the following standards.

(2) *Pedestrian Zone Standards*.

a. Pedestrian Zones are required for any development or structure.

b. Pedestrian Zones include but are not limited to sidewalks, street plantings, patios, bollards, lighting, street furniture, on-street parking, bicycle lanes, and cycle tracks.

c. Pedestrian Zones shall include drought-tolerant trees on both sides of the street planted:

1. at 1 per every 40 linear feet maximum,

2. to provide shading for pedestrians,

3. to avoid conflict with overhead utilities, and

4. at least 5 feet from the street curb.

d. Pedestrian Zones shall be well lit by providing lighting along streets. Pedestrian Zones require street lighting that:

1. Uses light fixtures that directs at least 85% of light downwards;

2. Uses a two-sided opposite lighting arrangement or two-sided staggered lighting arrangement;

3. Limits light pole heights to a 15 foot maximum; and

4. Places light poles at least 3 feet from the street curb.

e. Pedestrian Zones provide on-street parking, bicycle lanes, sharrows, and cycle tracks by the regulations established in the street classification matrixes.

f. If on-street parking is required per the street classification matrixes, then parking must encompass at least 25% of the street length.

g. All site plans, plats, and associated development plans show Pedestrian Zone features.

(3) *Sidewalk Standards*

a. Sidewalks are required of any development or structure. They are required as part of the platting improvements for land subdivision in all zoning districts.

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b. Sidewalks shall be provided along all public and private streets abutting any development or redevelopment and any addition to a non-residential structure exceeding 500 square feet in gross floor area.

c. Sidewalks shall be continuous. Subdivision warranties will not be released until all sidewalks are completed (and continuous).

d. Sidewalks shall be constructed directly away from a curb, except where the continuation of any existing sidewalk on adjacent property requires alternate placement.

e. Sidewalks will meet the standards prescribed in the street classification matrixes. If those standards are not met, a sidewalk must provide a minimum width of 8 feet unless specifically mentioned elsewhere in this Article.

f. Sidewalks shall be constructed of 4" concrete (3000 psi) with #6 - 6x6 welded wire fabric or rebar.

g. Mailboxes, street lights, fire hydrants shall be 4 feet of sidwalk behind mailbox with no obstructions.

h. Construction in CBD district shall include 8 foot wide unobstructed sidewalks.

i. Commercial developments shall provide additional sidewalk width at established transit stops in accordance with the requirements of the transit operator based on the location of the transit stop.

j. Handicap ramps and driveway cuts conform to engineering design requirements established in Appendix G.

k. The requirements for sidewalks in new subdivisions are:

Table 4.6-9 Sidewalks in New Subdivisions

	AG	R-S	R-1	R-1A	R-1B	R-O	B-1, B-3	CBD	B-4	M-1	M-2
Expressway	8	8	8	8	8	8	8	8	8	8	8
Multiway Boulevard	8	8	8	8	8	8	8	8	8	8	8
Principal Arterial	8	8	8	8	8	8	8	8	8	8	8
Minor Arterial	6	6	6	6	6	6	6	8	6	6	6
Collector	6	6	6	6	6	6	6	8	6	6	6
Industrial Collector	8	8	8	8	8	8	8	8	8	8	8
Local Street	4	4	4	4	4	4	4	8	4	4	4

l. The requirements for sidewalks in subdivisions established by plat approval prior to July 1, 1995 are:

Table 4.6-10 Sidewalks in Existing Subdivisions

	AG	R-S	R-1	R-1A	R-1B	R-O	B-1 B-3	CBD	B-4	M-1	M-2
Expressway	None	None	None	None	None	8	8	8	8	8	8
Multiway Boulevard	None	None	None	None	None	8	8	8	8	8	8

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Principal Arterial	None	None	None	None	None	8	8	8	8	8	8
Minor Arterial	None	None	None	None	None	6	6	8	6	6	6
Collector	None	None	None	None	None	6	6	8	6	6	6
Industrial Collector	None	None	None	None	None	8	8	8	8	8	8
Local Street	None	None	None	None	None	4	4	8	4	4	4

(4) *Alternative Proposals*. The Planning and Zoning Commission may authorize alternative proposals for pedestrian circulation in certain circumstances. Alternate proposal applications are submitted as part of the preliminary plat.

(5) *Exceptions*

a. Sidewalks are not required on local streets if the smallest lot in a new residential subdivision is more than 15,000 square feet in area.

b. Sidewalks are not required in industrial park developments exceeding ten acres, where each lot within the development exceeds one acre provided, however, that the sidewalks are required along public streets, industrial collectors and access roads abutting the development if necessary to provide direct pedestrian access from residential neighborhoods to transit, shopping or neighborhood schools as determined by The Planning and Zoning Commission.

c. Sidewalks are not required for replats in existing residential subdivisions where the total area being replatted does not exceed 20,000 square feet.

(6) **Double Frontage Lots**. In the event double frontage lots are created for the purpose of separating residential property from arterials and collectors, the shoulder and sidewalk area of the arterial or collector conform to the following standards:

a. Street tree planting conforms to the provisions established in this Article and Section 24.3.7 (Landscaping and Tree Preservation) of this Code.

b. If the City proposes to maintain an unpaved shoulder area, it will consist of an impervious material. The developer may also provide a low maintenance landscape plan. The proposed plan is subject to the Planning and Zoning Commission's approval. A pervious radius in compliance with Section 24.3.6(d)(1)c of this Code for tree planting remains.

(h) Street Medians

(1) **Generally.** A street median is a roadway divider that separates opposing travel lanes. Street medians are typically provided for in most street types.

(2) **Standards.** In addition to the requirements in the street classification matrixes, the following regulations apply to street medians.

a. Street medians are raised

b. Required street medians have a 10-foot minimum width

c. Raised street medians have drought-tolerant trees planted at a 1 per every 50 linear feet ratio. Tree canopies will not encroach travel lanes.

d. Raised street medians provide lighting for vehicular movement. This lighting:

1. Uses light fixtures that directs at least 75% of light downwards;

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2. Uses one light pole attached with either one or two lamps;
3. Limits light pole heights to a 20-foot maximum'; and
4. Spaces light poles 300 feet.

(3) **Street Medians with Turning Lanes.** Street medians may have turning lanes. These lanes within street medians may be raised or unraised but have a 10-foot minimum width.

(4) **Unraised Street Medians and Turning Lanes**. Unraised street medians are permitted and may include turning lanes. These medians have an 11-foot minimum width. No trees or lighting are permitted in unraised street medians.

(i) Pavement Standards

(1) **Generally**. Streets must safely service emergency response units, high traffic volumes, and transit vehicles by reliable pavement standards.

(2) **Pavement Structure**. Pavement structure design shall follow the American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures latest approved edition. A professional engineer registered in the State of Texas prepares and signs the pavement design report. Pavement design requirements follow the regulations prescribed in this section.

(3) **Length of Service Life**. Pavement shall be designed for a twenty-year service life.

(4) **Traffic Load, Reliability and Pavement Structures**. The traffic load is the cumulative expected 18-Kip equivalent single axle loads (ESAL) for the service life. The following 18-Kip ESAL Reliability Level and Pavement Structure are required for each street classification:

Table 4.6-11 Street Pavement Specifications

Street Classification	18-KIP ESAL	Reliability Level	Minimum Pavement Structure	Maximum Pavement Structure
Major, Minor Arterials, Industrial Collector	3,000,000	R-95	SN = 3.80	SN = 5.76
Major Collector, Industrial Street	2,000,000	R-90	SN = 2.92	SN = 5.08
Local Collector (See note below)	270,000	R-70	SN = 1.98	SN = 4.20
Local Street and access easements intended for primary access to a proposed lot or building (See note below)	50,000	R-70	SN = 1.54	SN = 3.18
Local Street less or equal to 500 feet. (See note below)	25,000	R-70	SN = 1.54	SN = 3.18

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Note: Local Collectors, Local Streets, and Local Streets less or equal to five-hundred (500) feet shall provide a two (2) year warranty period after acceptance of the improvements by the City of Laredo. In addition, the City of Laredo will track the cost savings to the end user. In the event the savings are not there this issue shall be readdressed at such time.

Note: *Traffic loads for expressways, multiway boulevards, principal arterials, minor arterials, collectors, and industrial collectors include bus traffic*.

Flexible and rigid pavement repair within the warranty period shall follow TxDOT Maintenance Operations Manual and/or AASHTO latest revision as recommended by the project engineer and approved by the City Engineer.

(5) **Serviceability**. Pavement serviceability is the pavement's ride quality and its ability to serve the type of traffic (automobiles and trucks) which uses the facility. The initial serviceability index (p0) for flexible pavements is 4.2 and for rigid pavement is 4.5. The minimum terminal serviceability index (Pt) for local streets are 2.0 and for collectors and arterials are 2.5. A standard deviation (S0) for flexible pavement is 0.45 and for rigid pavement is 0.35.

(6) **Roadbed Soil**. A soil investigation must be performed for the design of pavement structures. The number of borings and locations are sufficient to accurately determine the stratum along the route. Any existing soil information that is available either from the City or from private sources are evaluated and, if determined applicable and valid, are allowed in place of new soil tests.

a. Roadbed soil with a plasticity index (P.I.) greater than twenty (20) are treated with lime to reduce the P.I. below twenty (20). The application rate of lime is determined by laboratory testing. In no case will the lime be less than fifteen (15) pounds/S.Y. for six (6) inches of lime treated subgrade. Lime treated subgrade includes a "structural layer" within the pavement design calculations. Proposals for stabilization alternatives in place of the use of lime are considered upon submittal of an engineering report verifying adequate stabilization of the highly plastic soil (particularly in soils high in sulfates where lime and cement are deemed inappropriate).

b. Where the roadbed is in a rock excavation a "structural layer" within the pavement design calculations can be used that is equivalent to a structural layer for lime stabilized subgrade. If a roadbed structural layer is used in the pavement calculation for rock subgrade an engineering report provided to public works addressing the consistency of the subgrade prior to base placement.

(7) **Pavement Layer Material**. Alternative pavement materials may be used where the existing soil or subsurface conditions, or the alternative materials, provide a level of drivability comparable to the materials otherwise required by this section. Proposals for alternative pavement materials with supporting engineering documentation may

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be submitted to the City for consideration. The combination of the following materials are allowed for pavement structure:

a. Lime treatment for subgrade.

b. Flexible base (crushed limestone or caliche).

c. Prime coat.

d. Tack coat.

e. Hot mix asphaltic concrete pavement.

f. Asphalt treated base.

g. Reinforced concrete.

h. Base reinforcement (Geogrids).

Note: The City Engineer approves the pavement combination.

(8) **Minimum Layer Thickness (Compacted).** If the following components are utilized in proposed pavement sections, the minimum thickness for the components are:

a. Hot mix asphaltic concrete pavement no less than two (2) inches thick for surface course (Type D).

b. Hot mix asphaltic concrete pavement no less than two and one-half (2 1/2) inches thick for a leveling-up course (Type B).

c. Asphalt treated base no less than four (4) inches thick.

d. Flexible base no less than eight (8) inches thick.

e. Lime treatment for subgrade no less than six (6) inches thick.

(9) **Curb and Gutter**. Concrete curbs or monolithic curbs and gutters constructed in accordance with the City of Laredo standard details shall be provided where indicated on the typical cross sections and shall conform to the City of Laredo *Standard Specification Manual*. Where the street upon which the lot or lots abut is a state numbered highway as defined in the Texas Highway and Public Transportation Commission Regulations of the Texas Administrative Code, and has a rural design or cross section, the owner of the lot or lots are not obligated to construct adjacent curb and gutter, provide security in lieu of construction, or place the cost of these improvements in a trust account for the City's cost of improvements when the abutting street is converted to an urban design.

(10) **Medians and Dividers**. Medians and dividers with curbs shall be constructed in accordance with the approved cross section. Divider strips on primary and secondary streets constructed without curbs shall be graded to a slope of ¼ inch per foot from the center of the divider strip to a point 7 inches from above the edge of pavement and from that point to the edge of pavement.

(11) **Arterials**. Arterial slopes shall be ¼ inch per foot toward the street except in heavy cuts, where a maximum of one (1) inch per foot are permitted. Landscaping, walls, or fences placed in the parkway for aesthetic purposes cannot obstruct sight distance.

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(12) **Industrial Intersections**. Industrial park, truck route, and industrial collector intersections, turning locations, and queuing lanes shall be constructed with reinforced concrete.

(j) Street Names and Building and Unit Numbering

Purpose: this subsection provides for the assignment of street names and building and unit numbers to provide a logical pattern that facilitates the location of buildings by citizens, visitors, and emergency vehicles. The intent is to ensure quick and easy location of properties for public safety, postal, and utility services by:

- *Creating standards for street naming*
- *Creating standards for address numbering and assignment*
- *Providing guidelines on the addressing process*
- *Preventing duplicate street names and allowing only approved street types*

(1) *Applicability.* This subsection applies to applications for subdivision plat approval, and to developers, contractors, and building occupants applying for street names and addresses.

(2) *Street Naming*. The Planning Commission shall assign street names at the time of subdivision plat approval. No proposed street names will duplicate, relate, or mimic any existing street name.

(3) *Street Naming Procedures*

a. *Master List*. The Planning Department shall maintain a master list of all existing and proposed street names.

b. *Initiation.* A list of proposed street names and/or a plat with all proposed street names are sent to the Planning Department for review. The Planning Department, in consultation with the Police Department (PD), and United States Postal Service, reviews and approves all street names.

c. *List of Street Names.* The applicant shall submit a list of street names to the Planning Department as part of the subdivision review process. The Planning Department and Police Department will check the names based on subsection (4) below and transmit a list of approved and denied names to the applicant. The applicant must re-submit the denied street names, until all names are approved.

d. *Addressed Plat.* Once street names are approved and the applicant sends a stamped plat stating that it is ready for addressing to the Planning Department, address assignments are completed and the addressed plat (plat with situs numbers) is sent back to the Planning Department and applicant.

e. *Changes to Address Assignments.* Any changes to the address assignments must be sent to the Planning Department before the final plat is filed. Once the plat is filed, any address changes are approved as provided in the street renaming standards below. The applicant must coordinate with the Planning Department and submit either a replat or a certificate of compliance for the changes.

f. *Recording Street Names.* All streets are entered into the GIS system as "Proposed" and are changed to "Existing" when the streets are built, inspected and final

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acceptance is given for the project. Any unused street names is deleted and no longer be reserved for that project after a maximum period of three (3) years.

(4) *Street Naming Standards*

a. *Applicability*

1. Within the city limits, only approved street names will be used. County designated road names are not used.

2. Any unnamed arterial street or unnamed street on the Future Thoroughfare Plan will be named by City Council.

3. The following are not assigned a street name:

a. Fire Lanes.

b. Alleys.

b. *Accepted Street Types*. Only accepted street types are allowed. Accepted types are not permitted in the street name. (e.g., Delores Trail Rd is not acceptable, as a Trail is an accepted street type). Most street types with 4 characters or less are not abbreviated. Street types with more than 4 characters are abbreviated based on the standards set by USPS. Any Street types not on the list are reviewed and approved on a case by case basis.

Table 4.6-12 Approved Street Types

Street Type	USPS Abbreviation	Guidelines
Avenue	AVE	A street not limited to a single Subdivision
Boulevard	BLVD	See subsection (c) of this section
Circle	CIR	A looped or circular street having two intersections on the same road.
Court	CT	Dead-end street terminating in a cul-de-sac with a circle
Cove	CV	Local streets designated with "COVE" as the type
Drive	DR	A curvilinear street or arterial
Expressway	EXPY	See subsection (c) of this section
Hill	HL	
Landing	LNDG	
Lane	LN	Local street within a subdivision
Loop	LOOP	
Parkway	PKWY	Typically an arterial
Pass	PASS	
Place	PL	Dead-end street
Point	PT	
Ramp	RAMP	
Ridge	RDG	

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Street Type	USPS Abbreviation	Guidelines
Road	RD	Typically an arterial
Run	RUN	
Square	SQ	Discouraged; usually reserved for non-motorized areas andpaths
Street	ST	Thoroughfare not limited to a single subdivision
Terrace	TER	
Trace	TRCE	
Track	TRAK	
Trail	TRL	Generally limited to use on non-vehicular trailsand recreational trails
View	VW	
Way	WAY	A curvilinear street

c. *Naming Conventions*

1. Proposed street names shall not conflict with already established street names. Duplicate name values are not allowed (e.g., if there is an existing Delores Pl, then Delores Dr, Trl, or Ln are not allowed).

2. Continuations of existing streets must maintain the existing name and type, except as approved by the Planning Department and Police Department.

3. All names shall be simple to pronounce, spelled according to a standard dictionary and use the common spelling for a word.

4. Proposed names shall not sound like or approximate the name of an existing street.

5. Names cannot be homonyms or phonetically like existing names. (e.g., Marlin - Marlyn).

6. Cardinal directions cannot be used in the name. (e.g., North Road)

7. No special characters or punctuations are allowed in street names. Only alphabetical symbols A through Z and blank spaces may be used in street names (e.g., O'Brien Lane is not acceptable, but Obrien lane is acceptable).

8. Names cannot contain numbers or spelling of numbers (e.g., Three Lane).

9. Names cannot begin with articles (a, an, the, or, of) (e.g., The Grand Parkway).

10. Names cannot contain initials, abbreviations, or single letters. (e.g., TJ Lane).

d. *Directional Changes.* If a street makes a directional change of approximately ninety degrees (90°), the street name must change. The only exception is a freestanding street terminating in cul-de-sacs on both ends, with only a single access point (Figure 4.6-4).

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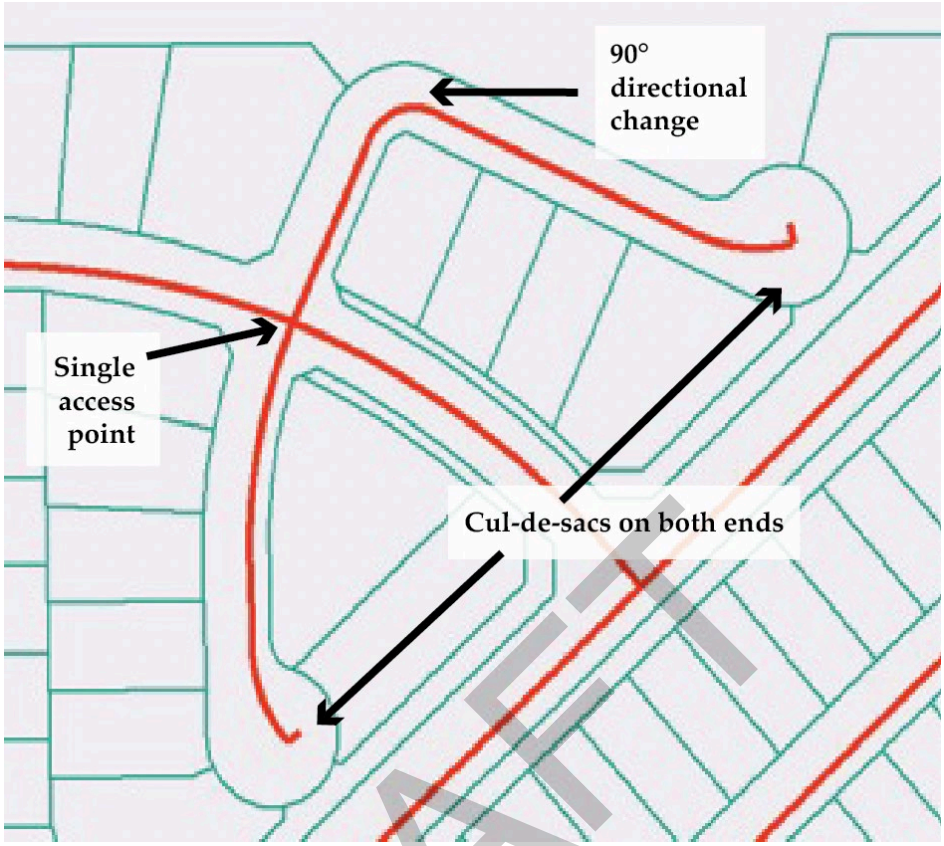

Figure 4.6-4 Single Street Name with 90° Directional Change (Source: City of McKinney, Texas)

(5) *Renaming Streets*

a. *Applicability.* Street name changes are allowed only if the existing street name interferes with the accurate dispatch of emergency vehicles or postal delivery.

b. *Duplicate Names*. If a duplicate name exists, the City will consider the following factors in deciding which street to assign the name:

1. The road originally assigned the name; and

2. The road with the most addresses using the name; and

3. The longest road; and

4. The most heavily travelled road; and

5. Any other factors consistent with public safety objectives.

c. *Procedures for Street Name Changes*

1. Any street name changes must be coordinated with the Engineering Department, Planning Department, Police Department and USPS.

2. If a applicant initiates a street name change, the applicant shall inform all affected parties of the change so there are no issues receiving mail. Parties include existing homeowners, property owners, and the USPS. If the City initiates the change, the City will inform all affected parties.

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3. Any platted street name change is subject to approval by City Council. All street name changes approved by City Council must be approved in a City Ordinance.
4. Any street name change requests in the ETJ must be routed to Webb County. (*Note: the City rarely has jurisdiction over street names outside the City limits [for example, Municipal Utility Districts]*).
5. TxDOT roadway changes must be coordinated with the Engineering Department, Planning Department, Police Department, Webb County and the applicant.
6. After the City Council approves a street name change:
   a. The applicant must coordinate with the Planning Department and submit either a replat or a Certificate of Correction.
   b. When the replat or certificate of correction issued, the Planning Department will change the street name in the GIS system and notify USPS, Webb County, and the Webb County Elections Administration.
   c. Street signs are updated after a street name is changed. Generally, the City provides street signs for City streets within the city limits, and TXDOT provides street signs on State roads in the City. The City Engineer will notify applicants when they are responsible for street sign changes.
   d. Streets signs outside the city limits are coordinated with Webb County, TxDOT and the applicant.
7. If an arterial or roadway on the Future Thoroughfare Plan is named or changed, the City will update the Comprehensive Plan to reflect this change.

(k) Addressing (Building and Unit Numbers)

Purpose: this subsection provides for the assignment of building and unit numbers to provide a logical pattern that facilitates the location of buildings by citizens, visitors, and emergency vehicles. The intent is to ensure quick and easy location of properties for public safety, postal, and utility services by creating standards for address numbering and assignment.

(1) *Applicability.*

a. The Planning Department approves and assigns all street names and addresses. Street names are approved before building and unit numbers are assigned. Addressing requests are categorized as follows:
   1. New Residential Subdivision addressing; and
   2. Ad-hoc addressing (e.g., utility meters, grading permits and development permits), and stand-alone commercial and residential addresses.

b. Addresses are only provided on roads that have an approved street name.

(2) *Address Numbering Process*

a. *New Residential Subdivision.* Addresses for new residential subdivisions are initially assigned at the time of plat approval.

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b. *Ad-Hoc Addresses*. Requests for ad-hoc residential and commercial addresses originate from the City Engineer. The Planning Department will assign the address and notify the respective department.

(3) *Address Numbering Standards*[5]

a. *Reference.* Addresses are assigned off the public street from which driveway access is located. For double frontage lots, the address is assigned off the public street where the mailbox is located.

b. *Address Structure*. Addresses have four main component parts: address number, the directional, primary name, and type (Figure 4.6-5). The street address should always be presented in the following order: address number, directional prefix (if any), street name, street type, and apartment or suite number (if any).

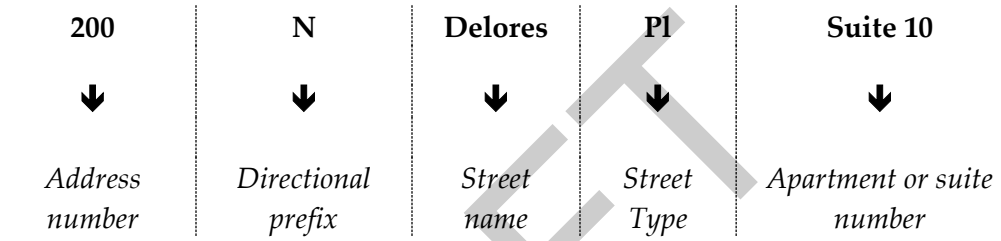

Figure 4.6-5 Address Structure

c. *Sequencing.* The Planning Department shall determine the point of origin for all addresses in Laredo in consultation with the USPS. From this point of origin, addresses will increase either to the north, south, east, or west depending on the predominant direction a street travels, starting at 100 and/or 101.

d. *Address Conventions.*

1. The direction a street travels determines odd and even addresses. Addresses on the left (determined from the point of origin) are odd while addresses on the right are even.

2. Building and Unit/Suite numbers must be numeric. Building designations are permitted if there are multiple structures on a parcel lot or site. Unit/Suite designations are used if there are multiple addressable spaces within a building. Fractional, alphanumeric and hyphenated address numbers (e.g., 101 ½, 101B, 101-5) are prohibited and unless needed to accommodate a legacy address, or as provided below for Duplex/Triplex Residences.

3. Address numbers for lots generally start with a '00' or '01' at the beginning of an address range and maintain a standard interval of 4 integers.

4. Addresses on opposite sides of a street must be sequential and follow a consistent numbering pattern.

e. *Blocks*

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1. Block ranges for streets change at street intersections. The Planning Department may grant exceptions to accommodate legacy addressing issues or keep numbering ranges consistent with nearby streets.
2. Block ranges may also change in the middle of a street to keep street numbering ranges consistent with nearby streets.

f. *Cul-De-Sacs*. A street that intersects only one access point and terminates in cul-de-sacs on both ends shall maintain a single street name from end to end (see Figure 4.6-4).

g. *Corner Lots*

1. Address assignment is made based on driveway access to the front of a structure.
2. If driveway access cannot be determined, the address is assigned from the shortest lot frontage.
3. The applicant shall determine the orientation of a structure and driveway for corner lots as early as possible in the planning process to assign a correct address.
4. Plat maps shall clearly indicate lot access for corner lots or other ambiguous lot locations, so that accurate addresses can be assigned.

h. *Private Driveways*

1. Lots along a private driveway may be addressed off an existing adjoining street when it serves no more than two (2) lots.
2. A sign which clearly indicates all address numbers assigned shall be located at the entry point of the private driveway.
3. Private driveways that serve more than two (2) lots will be addressed off the private driveway.

i. *Two-Family Dwellings or Triplexes*. New duplex and triplex structures will use one primary building address with each individual unit identified by the primary address followed by a letter in alphabetical order. The letter unit designator is not part of the address number but a suffix to the number.

j. *Multi-Family Dwellings*

k. For most multi-family dwellings, one main building (generally the administrative office or community center), is assigned a primary address based on entrance access along the public right of way.

l. Multi-family buildings with multiple entrances may require separate addresses if primary access is from different streets.

m. Each multi-family building is assigned building numbers as secondary location indicators by the Planning Department or the applicant.

n. Building numbers shall follow the spatial pattern of the buildings in a logical manner, although the applicant determines the exact numbering pattern. A common pattern is to start on the right at the entry way and increase in a counterclockwise direction.

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o. Unit numbers shall represent the building, floor and unit. For example:

Building Number #1, Floor 2: 1201, 1202, 1203
Building Number #12, Floor 3: 12301, 12302, 12303

1. Public safety requires that building numbers are prominently displayed on each building and easily readable from the street or main driveway. The development shall include signs or a map of the complex that direct first responders quickly to the correct location in an emergency.

p. *Manufactured Home Parks*

1. Each manufactured home is assigned an individual address if all homes in the manufactured home park have primary driveway access from a public street.

2. If individual manufactured homes do not have driveway access from a public street, then one primary address is assigned for the entire community based on entrance access along the public right of way, followed by lot numbers for each individual home. Lot numbers shall follow the spatial pattern of the buildings in a logical manner.

q. *Offices*

1. For an office with one building, a single address based on entrance access along the public right of way is assigned.

2. For a site with multiple buildings, each office building is assigned an individual address based on the entrance access along the street range. Address numbers will follow the spatial pattern of the buildings in a logical manner.

3. If multiple offices exist in each building, individual offices will be assigned suite numbers as secondary location indicators by the Planning Department. Suite numbers must be numeric.

4. The suite number assigned must indicate the floor location. (e.g., 201 = first office on the second floor).

r. *Commercial / Mixed Use*

1. *Generally*

a. Individual commercial/mixed use buildings are assigned an address based on entrance access along the public right of way.

b. For a commercial/mixed use site with multiple buildings, each building is assigned an individual address based on the entrance access along the street range. Numbers shall follow the spatial pattern of the buildings in a logical manner.

c. A building housing more than one business or occupant or tenant is assigned suite numbers as secondary location indicators by the Planning Department. Suite numbers must be numeric.

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d. A building that houses one main commercial business with additional smaller spaces (e.g., big box store with with bank, hair salon etc.) is assigned one address for the use of all businesses located within the main store.

2. *Strip Commercial Buildings*. For commercial buildings aligned in a linear configuration on one story:

a. One address is assigned based on entrance access along the public right of way.

b. A building housing more than one occupant or tenant is assigned suite numbers as secondary location indicators by the Planning Department.

3. *Shopping Mall*. For a commercial building that has multiple tenants with primary access internal to the building:

a. One main address, with suite numbers designated for each business is assigned based on entrance access along the public right of way.

b. If the building has multiple access points from various streets, one street will be chosen for the main address.

s. *Accessory Structures*. Outbuildings or accessory buildings that have their own access point to a public street are assigned different addresses than the principal structure. Addresses are assigned based on entrance access along the public right of way.

t. *Water Tower/Wireless Tower*. Wireless towers and water towers are assigned individual addresses based off entrance access along the public right of way.

u. *Miscellaneous Addresses*. The Planning Department assigns addresses that are categorized as "miscellaneous" for structures that are typically unstaffed and for unstructured assets such as electric meters, irrigation meters, cable/ATT boxes, and gates.

v. *Community Pools*.

1. If a pool shares the same access point as an amenity center or a park then the pool will share the same address as the facility.

2. If pool access is different from the main park access or amenity center then a separate address will be assigned for the pool based on entrance access along the public right of way.

w. *Guard Station*

1. If guard station exists on a property with an existing primary address, the guard house will share the same primary address.

2. If the guard station exists as a stand-alone structure with street access, a separate address is assigned based on the street range.

(4) *Renumbering of Addresses*

a. Legacy addresses, particularly in older sections of the city, may not follow existing standards but will be accommodated for historic reasons. The Planning Department may approve address changes based on the following criteria:

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1. Safety or emergency response purposes.
2. A street name changed from a County Road (CR), Farm to Market (FM), etc. to a standard street name.
3. Correcting an existing address number that is not in sequence with the surrounding address range.
4. Re-numbering existing addresses to accommodate new buildings.

b. If an address number has been changed in the GIS system, the Planning Department will notify the USPS, any appraisal district, and the Webb County Elections Administration.

(l) Street Lighting

(1) All new subdivisions (excluding replats of tracts where the standards below are met) shall include street lighting if non existing. The applicant shall present a plan to install street lighting in conformance with the standards below to the Director of Traffic Safety for approval prior to final plat submittal in conformance to the following standards:

a. Arterial streets = 27,000 Lumens approximately every 300 feet of street length. (Amended 4/6/92, Ordinance # 92-0-080)

b. All other streets = 16,000 Lumens approximately every 300 feet of street length. (Amended 4/6/92, Ordinance # 92-0-080)

(2) The Commission may approve minor variations in positioning of lamp poles due to lot and block configuration.

(3) On streets that serve as exterior boundaries of the subdivision, the Commission may allow alternate spacings for lamp poles if the adjacent land can be expected to develop and provide for its alternate half of the Street Lighting.

(4) The owner shall install and provide the first year's electricity costs at its expense, and considered as a utility cost for bonding requirements (or alternative guarantees as may be allowed). (As amended 10/30/84, Ordinance # 84-0-178)

(m) Exceptions. A subdivision or resubdivision for residential purposes may dedicate residential right-of-way adjacent to or within the proposed subdivision if the right-of-way was designated on a recorded subdivision plat before January 1, 1980.

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24.4.8 Utilities

(a) Generally. The Building Official shall not issue any permit for any development that does not have a system for water supply, storm water drainage, street, electricity improvements and sewage disposal approved in accordance with this Section.

(b) Utility Easements

(1) *Rear Lot Utility Easements*

a. Easements are required across lots or centered on rear lot lines for utilities (hereinafter "rear lot utility easements") where necessary.

b. Rear lot utility easements shall comply with Table 4.7-1.

c. These easements may be required across parts of lots other than as described above upon recommendation of the City Engineer or Utilities Director. (As Amended 12/4/84, Ordinance # 84-0-199)

(2) *Front Lot Utility Easements*. The developer of a residential (single family R-S, R-1, R-1A, R-1B, PUD or ETJ) subdivision may locate utilities (electric, gas, telephone and cable) within the front yard setbacks of the lots within the subdivision. This easement shall meet the following minimum requirements: (As Amended 8/20/12, Ordinance # 2012-O-108; 7/6/16, Ordinance # 2016-O-075)

a. Front lot utility easements shall comply with Table 4.7-1.

b. All transformers, pedestals, boxes or any other distribution boxes or pedestals shall be placed within the easement and shall be centered on the side yard property line with the transformers placed nearest to the street and pedestals or other boxes aligned behind the transformer box.

c. Only electric utility primary and secondary cable shall be placed at the 52inch depth, or lower as may be specified by the electric utility provider and covered with a minimum 24 inches of fill.

d. Telephone, Cable and Gas shall be placed no more than 24 inches below grade within the same trench.

e. All back fill shall be at 95% compaction or as set out in the *Standard Technical Specification Manual*.

f. Flowable backfill may be used if it meets the following:

1. *Cement*. Portland Cement shall conform to the requirements of the latest revision of ASTM Designation C150, Type 1, or Type II. Only one brand or kind of cement shall be used in any one structure or trench except as permitted in writing by the City Engineer. All cement shall be delivered in bags plainly marked with the brand and name of the manufacturer.

2. *Fine Aggregate*. Provide fine aggregate that will stay in suspension in the mortar to the extent required for proper flow and that meets the gradation requirements of the aggregate gradation chart below. Test fine aggregate gradation in accordance with Tex-401-A. Plasticity Index (PI) must not exceed 6 when tested in accordance with Tex-106-A.

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3. *Mixing Water*. Use mixing water conforming to the requirements of TxDOT Item 421, "Hydraulic Cement Concrete."

g. The utility easement may extend into the lot along the side yard property line so long as it centered on the side yard lot line and does not extend past the side yard setback line (being five feet on each side of the side yard lot line) to a point where it intersects with the projection of the front of the house's foundation. This additional easement extension is to be used for the utilities service lines to the house.

h. The developer and builders shall ensure that driveways are not constructed on the same side of the lot where a transformer has been or will be placed.

i. If there is any conflict between the above requirements and the City of Laredo *Standard Technical Specification Manual*, the *Standard Technical Specification Manual* controls.

Table 4.7-1 Utility Easement Specifications

	Width	Distance from front property line		Trench	
Easement Type/Location	*(min-feet)*	Min *(feet)*	Max *(feet)*	Width *(max - inches)*	Depth *(min - inches)*
Rear Lot Utility (dry) Easements	12'	n/a	n/a	n/a	n/a
Rear Lot Utility (wet) Easements	15'	n/a	n/a	n/a	n/a
• **Along a plat boundary with adjacent unplatted land, or platted land, or platted with an adjacent utility easement**	6'	n/a	n/a	n/a	n/a
Side Lot Utility (dry) Easements	10'	n/a	n/a	n/a	n/a
Side Lot Utility (wet) Easements	7.5′	n/a	n/a	n/a	n/a
• **Along a plat boundary with adjacent unplatted land, or platted land, or platted with an adjacent utility easement**	5′	n/a	n/a	n/a	n/a
Front Lot Utility Easements	6'	4'	10'	24"	52"

(3) *Design and Installation*.

a. *Generally*. All utilities shall be designed and installed in conformance with the *Standard Technical Specification Manual*, as amended from time to time and upon the approval of the Utilities Director and City Engineer.

b. *Private Contractor*. Where the subdivider installs the utilities with a private contractor, the private contractor shall accomplish all the engineering covering plans and specifications. The private contractor shall identify driveways, sidewalks and ramp's location on the plat and confirm they are not constructed on the same side as the transformer. The Engineering Department of the City of Laredo shall approve those plans and specification prior to the start of any

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installation. All engineering work shall be accomplished by persons qualified under State of Texas laws to do that work.

c. *Private Installation.* The City Engineer shall confirm the construction of sewer and water lines within the subdivision is contracted to private companies.

d. Eastern and Western Division and older accepted subdivisions which do not have utilities may be installed by the city on a reimbursement by the land owner (i.e lien on the property).

(4) *Statement of Compliance*. The Director of Utilities shall provide the Commission with a statement that the proposed water and sewer system for the subdivision meets their current engineering standards for water and sewer service, prior to Commission approval of the subdivision.

(5) *Water Rights*. The City of Laredo has rights to the water of the Rio Grande to only a limited extent, and that it is expected that the City's demand for water will exceed its supply within the planning period that this document addresses, the following is required. Therefore, all subdivisions within the jurisdiction of this ordinance, and outside the Laredo city limits as of the date of passage of this section, shall provide to the Laredo Utilities Department those water rights (or money in lieu of water rights) that are fair and equitable for the creation of any additional lots that the system will have to serve.

(c) Electrical Service. All single-phase electrical service in new subdivisions of land be installed underground in accordance with the underground service policy of the electric utility, except that service to the perimeter lots may be underground from overhead facilities. Primary, secondary and street light conductors shall be located in dedicated utility easements located adjacent to rear or side lots lines except as otherwise permitted in subsection 24.4.7(a).

(d) Model Subdivision Rules

Purpose. The model rules provide the criteria for assuring that an adequate supply of safe drinking water and adequate safe sewer facilities are available to residential areas in accordance with state standards established by the Texas Department of Health and the TCEQ. The model rules prohibit the establishment of residential developments with lots of five acres or less without adequate water supply and sewer services, prohibit more than one single-family, detached dwelling to be located on each subdivision lot, and establish minimum setbacks to ensure proper operation of water supply and sewer services and to reduce the risk of fire hazards.

(1) *General Provisions / Scope of Chapter*

a. This chapter contains model rules which the Texas Water Development Board (board) is required to adopt in accordance with Texas Water Code Section 16.343.

b. Before an application for financial assistance from Economically Distressed Areas Program as Specified in Chapter 355, Subchapter B of the Texas Water Code or Chapter 363, Subchapter E of the same title may be considered by the board, the applicant shall provide documentation satisfactory in form and in substance that the municipality (ETJ) and county in which the applicant is located has adopted the necessary orders, ordinances or other rules that meet the requirements of the

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Model Subdivision rules contained in Chapter 16, Subchapter B of the Texas Water Code.

(2) *Subdivision Within The Extraterritorial Jurisdiction (ETJ) - Plat Required*

a. The owner of a tract of land that divides the tract in any manner that creates 2 or more lots of 5 acres or less intended for residential purposes must have a plat of the subdivision prepared. Lots of 5 acres or less are presumed to be for residential purposes unless the land is restricted to non-residential uses on the final plat and duly noted in all deeds and contracts for deeds.

b. A division of a tract is defined as including a metes and bounds description, or any description of less than a whole parcel, in a deed of conveyance or in a contract for a deed, using a contract of sale or other executory contract, lease/purchase agreement, or using any other method to convey property.

c. Every plat creating 2 or more lots of 5 acres or less for residential purposes, located within the ETJ of the City of Laredo, shall comply with the standards of Section 24.4.7(d)(3).

d. The final plat shall include on the plat or have attached to the plat by an engineering report, consistent with Section 364.52 of the Texas Administrative Code (TAC), bearing the signed and dated seal of a professional engineer registered in the state of Texas. The engineering report shall discuss the availability and methodology of providing water facilities and wastewater treatment to individual lots within the subdivision. A detailed cost estimate per lot acceptable to the Planning and Zoning Commission shall be provided for those unconstructed water supply and distribution facilities and wastewater collection and treatment facilities which are necessary to serve each lot of the subdivision. The plan shall include a construction schedule for each significant element needed to provide adequate water or wastewater facilities.

e. No subdivided land shall be sold or conveyed until the subdivider has received final approval by the Planning and Zoning Commission of the tract and has filed and recorded, with the County Clerk of Webb County, a legally approved plat.

(3) *Subdivision Within the Corporate Limits of the City of Laredo- Plat Required.* The subdivision of a tract of land into 2 or more lots of 5 acres or less for residential purposes within the corporate limits of the City of Laredo shall, at a minimum, meet the standards established in this section as well as those required in Article 5 for the filing of a plat.

(4) *Facility Standards.* The establishment of a residential development with 2 or more lots of 5 acres or less where the water supply and sewer services do not meet the minimum standards of this section is prohibited.

a. *Public Water Systems*

1. Where drinking water is to be supplied to a subdivision by the City of Laredo, the water quality and system design, construction and operation shall meet the minimum criteria set forth in 25 TAC 337.201 - 337.212, "Rules and Regulations for Public Water Systems", and 25 TAC 337.1 - 337.18,

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"Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Supply Systems."

2. Subdividers shall supply drinking water by connecting to the City of Laredo system. The written service agreement permitting the connection to the City of Laredo system shall calculate service charges based on the ultimate development and occupancy of the proposed subdivision for a minimum of thirty (30 years). The agreement must reflect that the subdivider has paid the cost of water meters and other necessary connection equipment, membership fees, water rights acquisition costs, or other fees associated with connection to the City of Laredo system so that service is available to each lot upon completion of construction of the water facilities described on the final plat.

b. *Non-Public Water Systems*

1. Where individual wells or other non-public water systems are proposed for the supply of drinking water to residential establishments, the subdivider shall have prepared and provide a copy of a groundwater availability study that complies with the requirements of 30 TAC §§ 230.1 through 230.11 for water availability for public water supply systems and certifies the water quality of the water produced from the test well must meet the standards of water quality required for community water systems as set forth in 30 TAC Section 290.104, 290.106 and 290.108 and 290.109, either:
   a. without any treatment to the water; or
   b. with treatment by an identified and commercially available water treatment system.
2. Individual water wells or non-public water systems that do not meet the water quality standards developed by the TCEQ and set out in 30 TAC Sections 290.104, 290.106 and 290.108, and 290.109 shall be prohibited.

c. *Transportation of potable water*. The conveyance of potable water by transport truck or other mobile device to supply the domestic needs of the subdivision is not an acceptable method, except on an emergency basis. Absence of a water system meeting the standards of these rules due to negligence of the subdivider does not constitute an emergency.

d. *Water Supply Systems*. All water supply systems shall be consistent with the standards developed by the Commission and as set out in 30 TAC Chapter 290.

e. *Wastewater Systems*

1. *Organized Sewerage Facilities*.
   a. Subdividers who propose the development of an organized wastewater collection and treatment system other than the City of Laredo municipal system, shall obtain a permit to dispose of wastes from the TCEQ in accordance with 30 TAC Chapter 305 "Consolidated Permits" and obtain approval of engineering planning materials for such systems under 30 TAC Chapter 317 "Design Criteria for Sewerage Systems" from the TCEQ.

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b. Subdividers who propose to dispose of wastewater by connecting to an existing permitted facility must provide a written agreement with the City of Laredo. The agreement must accommodate the total flow anticipated from the ultimate development and occupancy of the proposed subdivision for a minimum of 30 years. This agreement must reflect that the subdivider has paid the cost of all fees associated with connection to the wastewater collection and treatment system so that service is available to each lot upon completion of construction of the wastewater facilities described on the final plat. Engineering plans for the proposed wastewater collection lines must comply with 30 TAC, Chapter 317 and 31 TAC, Section 364.33(a)(12).

2. *On-site Sewerage Facilities*

a. *Lot Size and Location*. No on-site wastewater disposal or septic system shall be permitted on any lot or tract which is less than one acre in size or within 200 feet of a public wastewater collection system. No on-site wastewater disposal system shall be permitted on any tract, regardless of size. where soil conditions, flood zones, topography, or other conditions do not permit both an undisturbed septic drain field and sufficient fallow, undisturbed land for a replacement drain field.

b. *Flood Zones*. No on-site wastewater disposal or septic system shall be permitted within any 100-year flood zone identified by the Federal Emergency Management Agency on the Flood Insurance Rating Maps (FIRM).

c. *Less than 5,000 GPD*. On-site facilities which serve residential dwellings with anticipated wastewater generation of no greater than 5,000 gallons per day must comply with 30 TAC, Chapter 285 and be designed by a registered professional engineer or registered professional sanitarian.

d. *At Least 5,000 GPD*. Proposals for on-site sewerage facilities for the on-site disposal of sewage in the amount of 5,000 gallons per day or greater must comply with 30 TAC, Chapter 317 and be presented to the TCEQ for determination be presented to the Texas Commission of Environmental Quality for determination of the necessity for a wastewater permit from that agency. Each such disposal facility must be designed by a registered professional engineer.

e. *TCEQ Wastewater Permit not Required*. On-site sewerage facilities not required to obtain a wastewater permit from the TCEQ must apply for and receive a permit from the City of Laredo Health Department or its authorized agent as required by the procedures established in 25 TAC 301.101 through 301.109.

f. *On-site Sewage Disposal Near Lakes or Water Storage Reservoirs*. On-site sewerage facilities proposed near lakes or water storage reservoirs shall

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be licensed and installed in strict accordance with requirements established by the TCEQ in their rules 31 TAC Chapter 285.

g. *On-site Wastewater Disposal in Recharge Zones*. On-site sewerage facilities proposed within aquifer recharge zones must be licensed and installed in strict accordance with requirements established by the TCEQ and applicable Texas Department of Health regulations.

h. *Inspections*. The TCEQ, the City of Laredo Health Department, or their authorized agents shall review proposals for on-site sewage disposal systems and make inspections of such systems as necessary to assure that the system is in compliance with Chapter 366 of the Texas Health and Safety Code and rules in 30 TAC Sections 285, and in particular Sections 285.4, 285.5, 285.30 through 285.39. In addition to the unsatisfactory on-site disposal systems listed in 30 TAC Section 285.3 (b), pit privies and portable toilets are prohibited.

i. *Prohibitions*. Pit privies, portable toilets, and on-site sewerage facilities that do not meet the wastewater treatment standards developed by TCEQ and set out in 30 TAC Chapter 285 are prohibited.

f. *Graywater Systems for Reuse of Treated Wastewater*

1. *Organized Sewerage Facilities*. Any proposal for sewage collection, treatment and disposal systems which include graywater reuse shall meet minimum criteria of 30 TAC, Chapter 210 promulgated and administered by the TCEQ.

2. *On-Site Sewerage Facilities*. Any proposal for on-site sewage disposal which includes provisions for graywater use shall meet the minimum criteria of 30 TAC, Chapter 285.

g. *Sludge Disposal*. The disposal of sludge from water treatment and wastewater treatment facilities shall meet the criteria of 30 TAC, Chapter 312, and Chapter 317.

h. *Setbacks*. In areas outside the corporate city limits which lack water lines sized for fire protection, setbacks from private access easements, public or private roads and right-of-ways shall be a minimum of 45 feet from the centerline of such road, street, or easement. Setbacks from adjacent property lines shall be a minimum of 5 feet for site-built housing and 7 feet for any manufactured home or mobile home, and shall not conflict with separation or setback distances required by rules governing public utilities, on-site sewerage facilities, or drinking water supplies.

i. *Number of Dwellings per Lot*. No more than one single family detached dwelling shall be located on an individual lot or tract. A notation of this restriction shall be placed on the face of the approved final plat, in all deeds, and in all contracts for deed for real estate sold within the subdivision. Notice of this restriction must be given by the seller in writing to any purchaser prior to execution of any binding agreement for sale or conveyance of any real estate. Proposals which include multi-family residential shall include adequate, detailed planning materials as

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required for the determination of proper water and wastewater utility type and design.

j. *Connection to Public Wastewater Collection System*. As soon as a public wastewater system is available within 200 feet of the lot or tract, the lot or tract must be connected to the public wastewater collection system. Failure to properly connect to the public system within 30 days of written notice by the City of Laredo shall void any water service agreement, and water service shall be suspended until proper connection to the wastewater collection system is in place.

(5) *Enforcement and Penalties*

a. If it appears that a violation or threat of a violation of Chapter 212, Subchapter B of the Texas Local Government Code or a plan, rule or ordinance adopted under Chapter 212, Subchapter B, or consistent with Subchapter B exists, the City of Laredo is entitled to appropriate injunctive relief against the person who committed, is committing or is threatening to commit the violation.

b. A suit for injunctive relief may be brought in the county in which the defendant resides, the county in which the violation or threat of violation occurs, or any county in which the City of Laredo is wholly or partly located.

c. A person commits an offense if the person violates Chapter 212, Subchapter B or a plan, rule, or ordinance adopted under Chapter 212, Subchapter B or consistent with Subchapter B within the limits of the City of Laredo. An offense under this section is a Class C misdemeanor. Each day the violation continues constitutes a separate offense.

d. *Civil Penalty*. A person who violates any rule adopted under this section pursuant to Section 16.343 of the Texas Water Code is subject to a civil penalty of not less than $50 nor more than $1,000 for each violation and for each day of a conning violation but not in excess of $5,000 per day.

e. *Damages*. The city of Laredo may recover damages in an amount adequate for the City to undertake any construction or other activity to bring about compliance with a requirement established under this section.

f. *Equitable Remedies*. In addition to other remedies, the subdivider may be enjoined for the violation or threatened violation of any requirement of this section by suit for injunction and/or application for temporary injunction, and/or temporary restraining order duly filed by the City Attorney. In addition to enforcement by a political subdivision, the Texas Attorney General may bring suit to enforce a rule adopted under Section 16.350 of the Water Code, to recover the penalty provided by Section 16.352 of the Texas Water Code, to obtain injunctive relief to prevent the violation or continued violation of a political subdivision's rules, or to enforce the rules, recover the criminal penalty, and obtain injunctive relief.

(6) *Conflict of Interest*

a. Any member of the Commission who has a substantial interest in a subdivided tract shall file, before a vote or decision regarding the approval of a plat for the tract, an affidavit stating the nature and extent of the interest and shall abstain

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from further participation in the matter. The affidavit must be filed with the City Secretary of the City of Laredo.

b. For the purposes of this section a person with substantial interest is one who:

1. has an equitable or legal ownership interest in the tract with a fair market value of $2,500 or more;

2. acts as a developer of the tract;

3. owns 10% or more of the voting stock or shares of or owns either 10% or more or $5,000 or more of the fair market value of a business entity that:

a. has an equitable or legal ownership interest in the tract with a fair market value of $2,500 or more; or

b. acts as a developer of the tract; or

4. receives in a calendar year funds from a business entity described by subsection 24.4.7(d)(6)b.3 that exceed ten percent (10%) of the person's gross income for the previous year.

c. A person also is considered to have a substantial interest if he or she is related within the first degree by consanguinity or affinity to another person who, under subsection 24.4.7(d)(6)b, has a substantial interest in the tract.

d. For the purposes of this section, a tract includes the subdivided tract as a whole, not an individual lot.

e. The finding by a court of a violation of this section of these rules does not render voidable an action of the commission unless the measure would not have passed the commission without the vote of the member who violated this section.

f. A violation under this section is a Class A misdemeanor.

(7) *Financial Guarantees for Improvements*. The requirements for posting a financial guarantee to ensure construction for improvements on a subdivision shall be provided as established in Section 24.4.4 of this Article.

(8) *Certification Of Compliance For Utility Connection Application Fee*. The fee for processing an application for Certification of Compliance for Utility Connection shall be fifty dollars ($50.00).

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