ENGINEERING DESIGN CRITERIA

CITY OF HUNTSVILLE, TEXAS

Updated August 2016

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CHAPTER 1.

GENERAL

100.1 Development plans or plats

The developer shall submit a development site plan, fulfilling the application requirements for obtaining a development permit under the City of Huntsville Development Code. The developer shall also provide a copy of any instrument that contains a restriction on the use of, or construction of, the lot, with a copy of any amendment, judgment or other document affecting the use of the property. Whenever the Planning Officer determines that additional information is required to verify correct placement on the property, he may require additional site plan documents to be prepared by a registered design professional including, but not limited to, an architect, engineer or land surveyor.

The site plan shall provide:

(1) the date, scale, north arrow, development district, title, name of owner, and name of person preparing the site plan;

(2) the location and dimensions of boundary lines, easements, and required yards and setbacks of all existing and proposed buildings and land improvements;

(3) the location, height, and intended use of existing and proposed buildings on the site, and the approximate location of proposed buildings and land improvements;

(4) the location of existing and proposed site improvements including parking and loading areas, pedestrian and vehicular access, all utilities, fencing and screening, and lighting;

(5) the center line of existing water courses, drainage features and location and size of existing and proposed streets and alleys, and the 25-year and 100-year floodplain as outlined in Chapter 6;

(6) the number of existing and proposed off-street parking and loading spaces, and a calculation of applicable minimum requirements;

(7) the approximate location and size of proposed signs, if known;

(8) the location and size of the existing and proposed landscaped areas; and

(9) a copy of any instruments which contain a restriction on the use of, or construction of, the lot, with a copy of any amendment, judgment or other document affecting the use of the property.

101. DRAINAGE WORK; EXCAVATION AND RECLAMATION

101.1 Permit required

The developer or owner of property shall obtain a development permit from the City before depositing or removing any material within a watercourse; excavating within a watercourse; constructing, altering, or removing any structure within, upon or across a watercourse; planting or removing any vegetation within a watercourse; or altering any embankment within a watercourse.

101.2 Standards

The developer shall meet all standards relating to construction and drainage contained in Chapters 3 and 6 of this design criteria, and the provisions of the Standard Excavation and Grading Code in obtaining permission to reclaim or improve watercourses.

101.3 Permit procedures for flood hazard zone areas

(1) The developer shall apply to the City Engineer for a development permit on forms furnished by the City Engineer. The form may include, but not be limited to, a site plan showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the developer shall show following information:

   (a) elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;

   (b) elevation in relation to mean sea level to which any nonresidential structure shall be flood proofed;

   (c) a certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of Article 9 COH Development Code;

   (d) description of the extent to which any watercourse or natural drainage will be altered or relocated because of proposed development;

   (e) maintain a record of all such information according to Article 9 COH Development Code.

(2) Approval or denial of a development permit by the City Engineer shall be based on all of the provisions of Article 9 COH Development Code and emphasizing the following relevant factors:

   (a) the danger to life and property due to flooding or erosion damage;

(b) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(c) the danger that materials may be swept onto other lands to the injury of others;

(d) the compatibility of the proposed use with existing and anticipated development;

(e) the safety of access to the property in times of flood for ordinary and emergency vehicles;

(f) the costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;

(g) the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;

(h) the necessity to the facility of a waterfront location, where applicable;

(i) the availability of alternate locations, not subject to flooding or erosion damage, for the proposed use; and

(j) the relationship of the proposed use to the comprehensive plan for that area.

101.4 Permit issuance and fees

The City Engineer may issue a development permit for construction, alteration or removal of public improvements upon approval of the engineered plans and cost estimates for the work and payment of a plan checking and inspection fee according to the duly adopted "Schedule of Fees."

101.5 Construction plans

(1) Utility layout plan

The developer shall submit at least three (3) copies of a plat of the development showing the proposed location of all utilities and their relation to all other utilities as specified in Chapter 3 of this code. The Utility Layout Plan shall bear the signature of approval of the appropriate representative of each utility company proposed to serve the development.

(2) Sanitary sewer and water construction plans

The developer shall submit separate sewer system plans with a plan and profile of proposed sanitary sewers, with grades and pipe sizes indicated and showing locations of manholes, cleanouts, etc., and a separate plan of the proposed water distribution system showing pipe sizes and location of valves, fire hydrants, and fittings, etc., in conformance with the City's criteria. The plans for all water lines shall include profiles. Plans shall show existing public improvements (streets, sewer, water, etc.), public easements and existing and proposed topography. Each plan shall show the seal and signature of the

engineer who prepared the plans. Each sheet shall include north arrow, scale, date, and bench mark description of sea level datum.

(3) Storm drainage construction plans

The developer shall submit separate storm drainage plans showing the information specified below.

(a) A plan and profile of proposed storm sewers or channels, showing hydraulic data, pipe grades and sizes, manholes, inlets, pipe connections, outlet structures, etc., in conformance with the criteria established in Chapter 6 of this code. All plans shall show existing and proposed topography with contour lines at two foot intervals and all existing public improvements (streets, sewer, water, etc.) and public easements. Each plan shall show the seal and signature of the engineer who prepared the plans. Each sheet shall include north arrow, scale, date, and bench mark description to sea level datum.

(b) A general location map of the tract showing the entire watershed (a USGS quadrangle is satisfactory).

(c) Calculations showing the anticipated storm water flow including watershed area, runoff coefficient, time of concentrations, and basis for design of all improvements.

(d) Detailed plans for any bridges, culverts, catch basins, any other drainage structures, or any other improvements proposed.

(4) Street construction plans

The developer shall submit separate street plans with a plan and profile of all proposed streets or roads with centerline and top of curb grades, ditch flowline and tops of ditch grades, and showing existing and proposed surface profiles. Each sheet shall include north arrow, scale, date, and bench mark description to sea level datum. Scales shall be one (1) inch equal forty (40) or fifty (50) feet horizontally and one (1) inch equal four (4), five (5), or ten (10) feet vertically. Each plan shall show all existing and proposed public improvements (drainage, sewer, water, etc.) within the limits of the street construction. The plans shall include typical cross-section of proposed streets showing the width of roadways and type of pavement and location and width of sidewalks. Each plan shall show the seal and signature of the engineer who prepared the plans.

(5) Grading plan

The developer shall submit a plan of the entire tract depicting the final grading contours and elevations, earthwork, quantities (cut and fill), slopes, retaining walls, drainage patterns, finished floor elevations of all existing structures, minimum floor elevations of all future structures and any other information considered necessary by the City at a scale

of l" = 100' minimum. Each plan shall show the seal and signature of the engineer who prepared the plans.

(6) Design summary

The developer shall submit a separate report entitled "Engineering Design Summary" with final plans and specifications for construction of public improvements that summarizes calculations and other engineering information about the major items of design as may be necessary in the City Engineer's review of the plans and specifications to determine whether the facilities proposed for construction are designed according to the intent of the City's design criteria. Calculations shall include drainage facilities, water demand, sewage flows, and any others considered necessary by the City Engineer. The report shall show the seal and signature of the engineer who prepared the design.

(7) Format

(a) The developer shall submit all improvement plans to the Planning Officer on sheets 36 inches by 24 inches with a binding margin of not less than one and one-half (1-1/2) inches on the left side of the sheet and margins not less than one-half (1/2) inch on the three other sides.

(b) Upon approval by the City Engineer of the engineering plans and conditional approval of the final subdivision plat by the Commission, the Planning Officer shall issue the developer a Permit to Construct Public Improvements.

(c) Upon completion of the required public improvements, the developer's engineer shall present to the City Engineer high quality reproducible, drafting film (4 mils thick) of complete "as built" plans for all paving, drainage structure, storm drains, water lines and sewer lines. Within thirty (30) days of the completion, the developer's engineer shall certify that the "as built" plans are true representations of the actual construction.

(d) The City shall not accept ownership or maintenance of any public improvements until the developer submits all final plats and "as built" plans relating to the project to the City Engineer.

See generally Tex.Loc.Gov't Code Ch. 211.

102. OTHER CODES AND STANDARDS AFFECTING DEVELOPMENT IN THE CITY

102.1 Building codes affecting development in the City

Nothing in this Code shall relieve the developer of the additional responsibility of obtaining any other permits required by the City Council in enforcing its rules and regulations. Building Regulations of the Code of Ordinances of the City of Huntsville contains the current building codes adopted by reference and all local amendments.

102.2 Public improvement standards

The developer shall construct all public improvements according to the City of Huntsville developement code and the following manuals and specifications:

(1) CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS City of Huntsville, Texas, 1982;

(2) STANDARD DRAWINGS FOR PUBLIC IMPROVEMENTS City of Huntsville, Texas, 1986

(3) ENGINEERING DESIGN CRITERIA, City of Huntsville, Texas, 2015

CHAPTER 2.

STREET SYSTEM

200.1 Official street map

City Council makes the Official Street Map (Huntsvillegis.com), and any amendments thereto, of the Comprehensive Plan, a part of this Code. The Huntsville GIS Map (Huntsvillegis.com) is the basis for all decisions regarding classification, reservation, or dedication of rights-of-way by this Code.

200.2 Construction and design standards

All roads, sidewalks, parking lots or other required paving shall conform to the construction and design standards of the City.

201. STREET ACCESS

201.1 Direct public access

All public streets shall have direct access to another public street.

201.2 Primary access

A developer shall provide primary access to large subdivisions, commercial tracts and industrial tracts from public streets designed to carry high traffic loads such as arterials and collectors. A developer shall protect residential lots from the adverse effects of through traffic by locating those lots facing local streets.

201.3 Points of access

The developer shall provide a street system within the development with at least one point of access to a public street adjacent to the development; provided, however, that developments containing one hundred and fifty (150) dwelling units or more shall provide at least two points of access to adjacent public streets.

202. INTERSECTION OF PUBLIC STREETS

202.1 General

The developer shall keep the number of intersections to a minimum consistent with traffic needs. The Commission shall minimize the number of streets allowed to converge at a single intersection. A developer shall design intersecting streets so that they intersect at right angles with variations not to exceed 15 degrees. If jogs are necessary, the developer shall connect the streets by means of diagonal curve or line; that is, the street shall curve as it approaches the intersection to cause a nearly right-angle alignment to the greatest extent possible. A developer

shall stagger or offset intersections only if the distance between street center lines is at least two hundred (200) feet.

202.2 Local to collector/arterial intersections

Local streets intersecting a collector or arterial street shall have a tangent section of centerline at least fifty (50) feet in length measured from the right-of-way line of the higher traffic volume street; however, no such tangent is required if the minor street curve has a centerline radius greater than four hundred (400) feet with the center located in the higher traffic volume street right-of-way line.

202.3 Location of intersections

(1) Arterial streets

The maximum distance between streets (centerline to centerline measurement) intersecting arterial streets shall be 1,800 feet; the minimum distance, 800 feet.

(2) Collector streets

The maximum distance between streets (centerline to centerline measurement) intersecting collector streets shall be 1,800 feet; the minimum distance, 800 feet.

(3) Local streets

The maximum distance between streets (centerline to centerline measurement) intersecting local streets shall be 1,000 feet; the minimum distance, 200 feet.

(4) Off-set streets

Where it is necessary to stagger or offset streets, the streets shall offset at least 200 feet (centerline to centerline measurement).

203. RESERVED

204. HALF-STREETS

A developer shall not create half-streets. A developer shall construct full street improvements for any development.

205. ALLEYS

The developer shall construct private and/or public alleys that meet or exceed street standards contained in Chapter 2.

206. CUL-DE-SAC AND DEAD-END PUBLIC STREETS

206.1 General standards

The developer shall design cul-de-sac streets to prohibit future extensions by arranging lots around the turnaround. The developer shall construct a circular turnaround conforming to City standards for all cul-de-sac and dead-end public streets. The turnaround shall have a pavement radius of forty (40) feet and a right-of-way radius of fifty (50) feet.

The developer shall not design or construct a dead-end street unless it is intended to connect with a future street on adjacent land. The developer shall construct temporary turnarounds within the standard right-of-way at the end of any dead-end street. In a commercial/industrial development, however, the Commission may waive construction of a temporary turnaround if adequate alternatives are available for vehicles to turn around.

206.2 Length

The length of cul-de-sac and dead end streets is the distance from the right-of-way line of the intersecting street along the centerline of the cul-de-sac or dead-end street to the center of the circular turnaround. Expected traffic volume, expressed in vehicle trips per day (VTD) of the street at the time of full development, shall limit the maximum length of cul-de-sac and dead-end streets. The developer shall furnish the City data to justify the length of the proposed street. VTD for residential areas is (15) trips per day per dwelling unit. The maximum length of any cul-de-sac or dead end street shall be:

VTD	Maximum length (in feet)
100 or less	1,000
101 or greater	600

207. GEOMETRIC CRITERIA

The developer shall design public streets according to the minimum geometric criteria established in Table 2-1 and Figures 2-1 through 2-3.

208. STREET STRUCTURAL THICKNESS DESIGN

208.1 Engineered design of street structural section

(1) Except as provided by Section 208.2, the developer shall have an engineer design the street structural sections (structural thickness) according to any one of the following:

(a) American Association of State Highway & Transportation Officials (AASHTO), Flexible-Pavement Design Method;

(b) Asphalt Institute Design Method;

(c) Portland Cement Association, Rigid Pavement Design Method; or

(d) A developer may use any other design methods not specifically mentioned in this Code with prior written approval of the City Engineer

(2) The street structural section design shall be based on the total number and weight (plus configuration) of the axles expected to go over the street section during a design life of twenty years. The concept of "Equivalent Axle Loadings" shall be used to express the total number and mixture of loadings that will occur during the street section's expected life. If a roadway is proposed, it will be designated as an arterial, collector, or local, and the street structural section design shall be based on the loadings shown in Table 2-3: Street Design by Equivalent Axle Loads.

TABLE 2-1

STREET RIGHTS-OF-WAY

STREET CLASSIFICATION	TRAVEL LANES	PARKING LANES	MINIMUM ROW WIDTH (IN FEET)	MINIMUM PAVEMENT WIDTH (IN FEET)*
ARTERIAL				
Standard with Parking, A-1	5	2	120	90
Standard without Parking, A-2	5	0	90	61
COLLECTOR				
Standard, C-1	2	2	70	41
LOCAL				
Local-1	2	1	50	32
Low Volume, L-2 (1)	1	2	50	28
PRIVATE				
Private Streets/Emergency Access Easements	2	0	28'	28'

(1) Low Volume provides access to 20 or less dwelling units (d.u.) or equivalent or short connecting streets.

Back of curb to back of curb or edge to edge.

TABLE 2-2

GEOMETRIC DESIGN CRITERIA FOR PUBLIC STREETS

STANDARD CATEGORY	STREET CLASSIFICATION		
	ARTERIAL	COLLECTOR	LOCAL
MAXIMUM GRADE (IN %)	6[(1)]	8[(1)]	10
MINIMUM GRADE (IN %)	0.5	0.5	0.5
MINIMUM CENTER LINE CURVE RADIUS (IN FEET)	800	500	200
MINIMUM LENGTH OF VERTICAL CURVES (IN FEET)[(2)]	300	100	100
MINIMUM SIGHT DISTANCE (IN FEET)	400	250	250

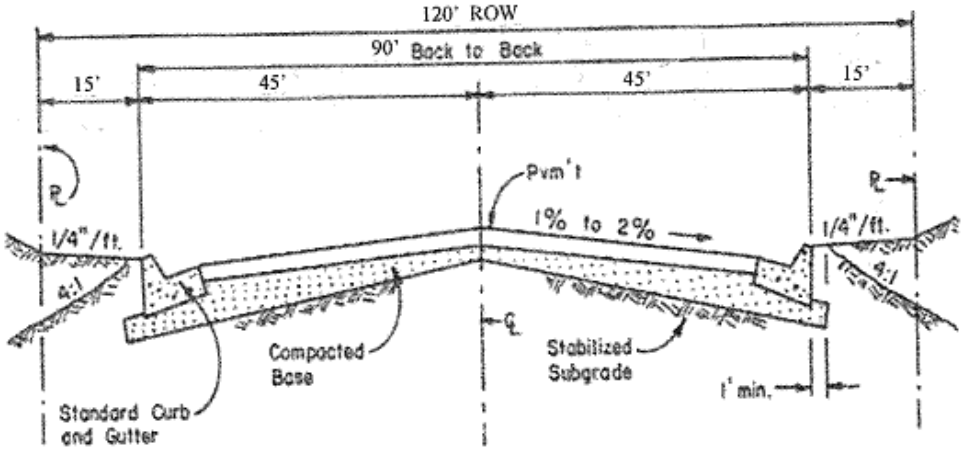
MINIMUM TANGENT LENGTH BETWEEN CURVES (IN FEET)	300	200	100
CURB RETURN RADII (IN FEET)[3]	30	25	20

(1) Where existing topography makes conformance to these grades impractical, consideration may be given to allowing an additional two (2) percent increase in grade for a distance of five hundred (500) feet or less.

(2) Arterial - or fifty (50) times the algebraic difference in grades, whichever is greater.
Collector or local - or twenty (20) times the algebraic difference in grades, whichever is greater.

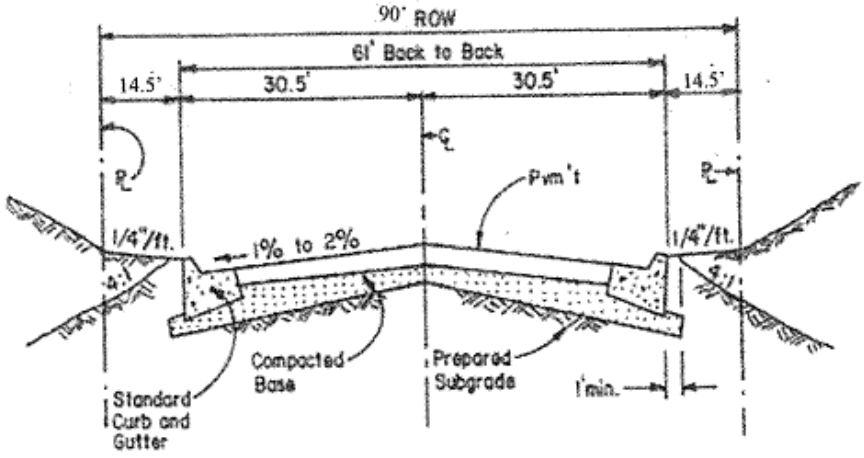
(3) Acute angle intersections shall have twenty-five (25) foot radii.

See Figures 2-1 through 2-3 for additional details.



120 Ft. R.O.W.
Five 13 Ft. Travel Lanes
Two 12 Ft. Parking Lanes

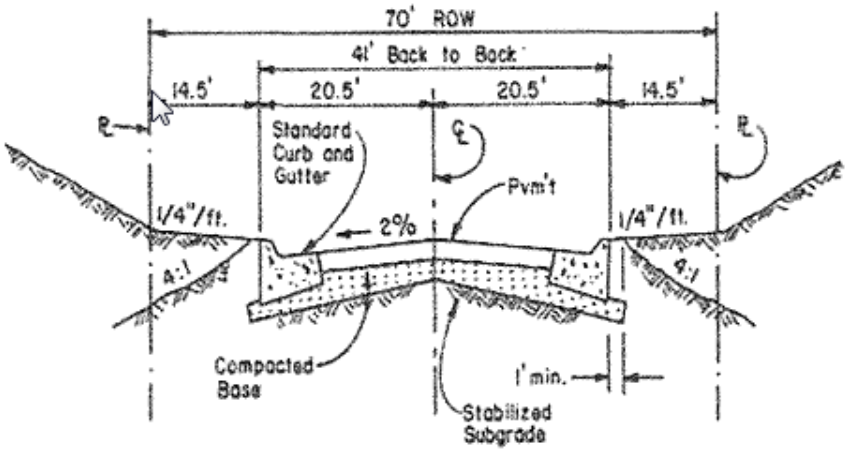
A-1 ARTERIAL STREET (PRIMARY)



Ninety Foot R.O.W.
Five 12 Ft. Travel Lanes

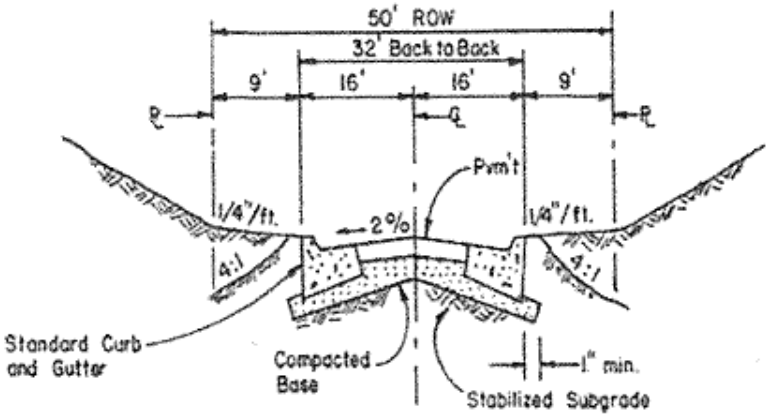
A-2 ARTERIAL STREET (SECONDARY)

Huntsville Design Criteria	**ARTERIAL STREET**	Scale: NONE
Revisions	**(PRIMARY AND SECONDARY)**	**FIGURE 2-1**



Seventy Foot R.O.W.
Two 12 Ft. Travel Lanes (with provision for future turning lane if one parking lane is deleted)
Two 8 Ft. Parking Lanes

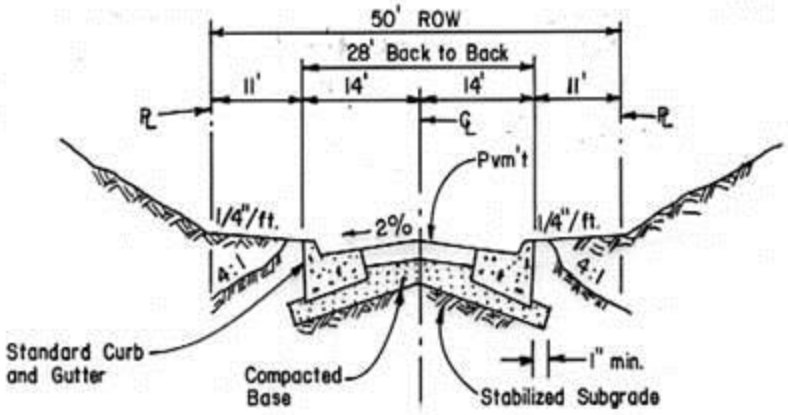
C-1 COLLECTOR STREET



Fifty Foot R.O.W.
Two 12 Ft. Travel Lanes
One 7 Ft. Parking Lane

L-1 LOCAL STREET

Huntsville Design Criteria	**COLLECTOR STREET LOCAL STREET**	Scale: NONE
Revisions		**FIGURE 2-2**



L-2 LOCAL LOW VOLUME STREET

Fifty Foot R.O.W.
Two 12 Ft. Travel Lanes

Huntsville Design Criteria	**L-2 LOCAL LOW VOLUME STREET**	Scale: NONE
Revisions		**FIGURE 2-3**

TABLE 2-3

STREET DESIGN BY EQUIVALENT AXLE LOADS

(20 YEAR DESIGN LIFE)

STREET CLASSIFICATION	DESCRIPTION	AXLE LOADS EQUIVALENT TO 18,000 LBS
A-1	Arterial (Primary)	5,000,000
A-2	Arterial (Secondary)	5,000,000
C-1	Collector	5,000,000
L-1	Local	400,000
L-2	Local (Low volume)	9,000

208.2 Standard structural section design for paved local streets

Instead of a designed street structural section, the developer may design and construct local street pavement sections (see also Section 208.1 and 208.3) as follows:

(1) 2" hot mix asphaltic concrete (H.M.A.C.), 6" flexible base, 6" stabilized subgrade;

(2) 6" H.M.A.C., 6" stabilized subgrade, where necessary; (see Section 208.3);

(3) 6" reinforced Portland Cement concrete (with 2" sand cushion allowed), 6" stabilized subgrade, where necessary (see Section 208.3).

208.3 Soils testing and subgrade stabilization

(1) The developer shall submit to the City Engineer a soils test report for each 1,000 square yards of paved surface proposed or for each type of soil encountered in the subgrade.

(2) The developer shall submit to the City Engineer the following data as part of the soils test report:

(a) soil classification;

(b) optimum moisture/density (Modified Proctor, ASTM D 1557);

(c) Atterberg Liquid Limits and Plasticity Index (P.I.);

(d) stabilization requirements for subgrade soil (% lime for clay or % cement for sandy soils), if an engineer designs the street structural section;

(e) a certified testing laboratory shall perform all tests;

(3) The developer shall stabilize all subgrade soils with a P.I. of fifteen (15) or more:

(a) if the standard structural section design for paved local streets is used, five (5%) percent lime by weight may be used, otherwise,

(b) the developer shall have a certified testing laboratory conduct lime (or other approved material) series test to find the percent of stabilizing agent necessary to lower the P.I. below fifteen (15).

(4) A developer may use native soils with a P.I. of less than fifteen (15) as subgrade material if they can meet this Code's compaction requirements (see Section 208.4(1). The developer may add a stabilizing agent (lime, cement, etc.) as recommended by soils analysis to low P.I. soils to aid in compaction.

(5) Subgrade soils evaluation shall generally apply to the top six (6) inches of soil measured down from the proposed subgrade surface.

208.4 Other basic criteria

(1) The developer shall compact all subgrade and individual layers of base and paving materials to 95% relative density, Modified Proctor Test (ASTM-D1557).

(2) The total design thickness of the street structural section shall be rounded up to the nearest whole inch.

(3) The total thickness of an asphaltic concrete pavement may be divided into different grades of material. Unless otherwise approved by the City Engineer, Type "D" Hot Mix Asphaltic Concrete (H.M.A.C.) defined by Item 340 Texas Department of Transportation Standard Specifications, shall be used for a surface course.

(4) The developer shall lay asphaltic concrete pavement in lifts of no more than three nor less than one and one-half inches each, unless otherwise approved by the City Engineer.

(5) The developer shall completely clear and grub the area within the street right-of-way before construction of any street improvements.

(6) The design requirements set forth in this section are minimum design standards. The City Engineer may require additional precautions or treatments consistent with sound engineering practice to provide for conditions not specifically covered herein.

(7) Any other design methods not specifically mentioned in this code may be used with prior approval of the City Engineer.

208.5 Exceptions

The provisions of this section shall not apply to reserve areas of twenty-five (25) acres or less of subdivisions previously platted and filed with the Walker County Clerk; provided, however, that a developer shall build any streets when developing the area designated by the reserve to same standards as the other streets in the subdivision.

209. STREET LIGHTING STANDARDS

209.1 Introduction

Street lighting improves the urban environment by increasing comfort, convenience and safety of travel at night. Drivers see more distinctly and locate with greater certainty all significant details of the surroundings. At the same time, added illumination assists the nighttime pedestrian and serves as a deterrent to crime.

209.2 Responsibility

The Community Development Division of the Public Works Department is authorized to determine the necessity for placing street lights and the appropriate location for individual luminaries according to the criteria established by code. Requests for installation of street lighting in areas developed prior to adoption of this Code may be made by individual citizens on forms provided by the Community Development Division.

209.3 Location criteria

(1) Local and collector streets

A developer shall place street lights at all street intersections on local and collector streets, at the end of cul-de-sacs or dead-end streets, and at all significant changes in direction of the roadway. Community Development Division personnel shall exercise best judgment to specify lighting at all significant changes in grade or bearing of roadway and as required to provide for light spacing of approximately 500 feet.

(2) Arterial streets

A developer shall install street lights along arterial streets at approximately 300 feet intervals. On boulevard streets, the developer shall place lights on both sides of the street or in the esplanade with lights extended on arms over each roadway.

(3) State and Federal highways

For those highways for which there is a formal maintenance agreement between City Council and other government agencies, the developer shall place lighting in accordance with agreement between the governments.

209.4 Design criteria

(1) Local and collector streets

As a minimum, a developer shall install street lighting on wooden poles at a height of no less than 25 feet. Mounting arms shall be oriented to overhang the pavement and shall be no less than 12 feet long. Luminaries shall be (preferably) 100-watt high pressure sodium or (alternatively) 175-watt mercury vapor. See Table 2-4.

If the electrical system for the development is underground, the electrical service to the street lights shall also be underground. If the electrical system for the development is overhead wires with power poles located along the rear lot lines, the electrical service to the street lights shall be underground. If the power poles are located adjacent to the street, the electrical service to the street lights may be overhead and the street light mast arms may be mounted on the power poles provided that the required lighting intensity is maintained. The developer shall submit a street lighting plan including specific mounting height, type of luminaire, arm length, etc., and shall be subject to approval of the City Engineer during the final plat preparation phase. Location, type and other pertinent data shall be shown on the public improvement plans and specifications submitted by the developer with the final plat. See Table 2-4.

(2) Arterial streets

Specifications for lighting on arterial streets shall be the same as for local and collector streets except that minimum mounting height shall be increased to 30 feet and mounting arm length shall be increased to 15 feet.

(3) State and Federal highways

Street lights along state and federal highways for which there is a maintenance agreement between the city and other governmental entities shall be installed in accordance with the agreement or, if lighting specifications are not a part of the agreement, specifications shall be determined by the governmental agency and the City Engineer.

209.5 Engineered plans and approvals

The developer shall show street light locations and intensities on the Utility Layout Master Plan for approval by the City and the applicable electrical utility service. The City will accept street lighting installations upon receipt of a written recommendation by the applicable electrical utility service.

209.6 Construction

Street lighting shall be installed only by the electrical utility company franchised to serve the area of the City of Huntsville in which the light is placed, or by a contractor approved by the utility company and the City Engineer.

209.7 Ownership and maintenance

All street lighting installed according to this policy shall be and shall remain property of the electric utility franchised to serve that area of the City of Huntsville and shall be serviced by the utility company.

TABLE 2-4

STREET LIGHTING INTENSITY

Street Classification	Lighting Intensity in foot candles (fc)
Arterial	2.0
Collector	1.2
Local	1.2
Local Low Volume	1.2

CHAPTER 3.

PUBLIC EASEMENT

301. UTILITY EASEMENTS

301.1 Easement criteria

If this Code or other law requires an easement, the developer shall provide easements as follows:

(1) If a utility easement is adjacent to a public street, the developer shall provide utility easements at least ten (10) feet in width along both sides of the street.

(2) If a utility easement is not next to a public street, the developer shall provide an easement at least twenty (20) feet wide for utility construction, service and maintenance. The Commission may require greater width dimensions along or across lots if engineering design or special conditions make it necessary.

(3) Figures 3-1, 3-2 and 3-3 illustrate the proper placement, arrangement and depth of utilities within easements. With permission of the City and the applicable public utility, locations of a utility line may vary from these standards.

301.2 Utility easement restrictions

The developer shall place the following statement of restrictions on the plat whenever easements are dedicated for public use:

PUBLIC EASEMENTS

> All public easements denoted on this plat are dedicated to the use of the public forever. Any public utility, including the City of Huntsville, shall have the right always of ingress and egress to and from and upon these easements for construction, reconstruction, inspection, patrolling, maintaining and adding to or removing all or parts of its respective systems without the necessity at any time of getting the permission of the property owner. Any public utility including the City of Huntsville shall have the right to move and keep moved all or part of any building, fences, trees, shrubs, other growths or improvements that in any way endanger or interfere with the construction, maintenance, or efficiency of its respective systems on any of the easements shown on this plat. Neither the City of Huntsville nor any public utility shall be responsible for replacing or reimbursing the property owner due to removal or relocation of any obstructions in the public easements.

301.3 Utilities

The developer shall place or construct all new utilities within designated easements or street rights-of-way as shown in Figures 3-1 to 3-3.

301.4 Requirements

The developer shall not place any structure, foundation, slab or other permanent improvement within any dedicated public easement without written permission from the City.

302. DRAINAGE/FLOODWAY EASEMENTS

If these criteria or other law requires a drainage easement, the developer shall provide a public or private drainage easements along all natural and manmade drainage channels and floodways that drain two or more lots or tracts of land according to the following criteria:

(1) Natural drainage channels

The developer shall provide public or private storm drainage easements along existing or proposed open drainage channels with sufficient width for the water course to handle the flow from the frequency storm required by Section 602.3 plus a minimum of twenty (20) feet on each side, for ingress and egress of maintenance equipment, for clearance from fences, for maintenance of the channel bank, and for adequate slopes along the bank.

(2) Enclosed drainage systems

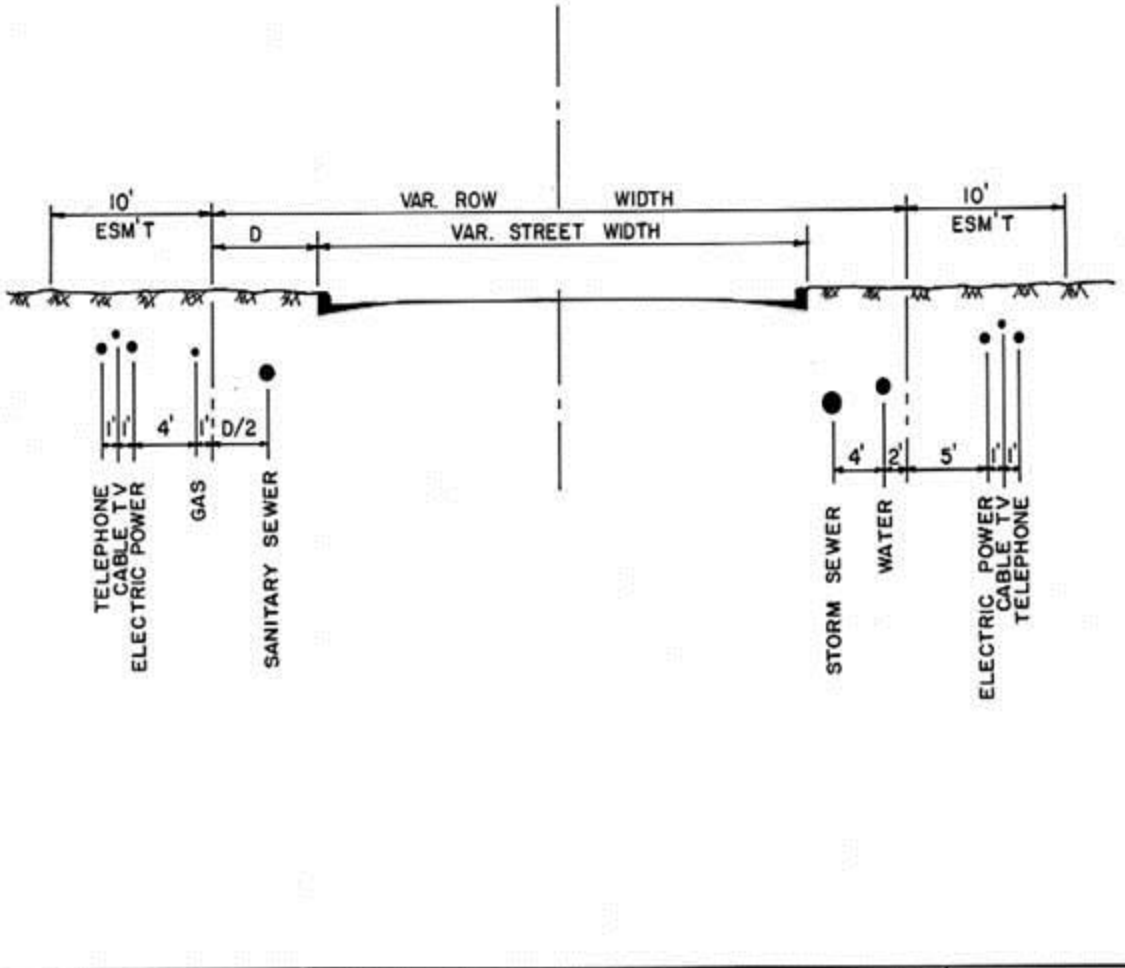
Where a developer provides an enclosed drainage system that is not within or next to a public street, the developer shall provide public or private storm drainage easements of twenty (20) foot or wider and centered on the system. The developer shall provide easements wide enough to encompass the system and provide ingress and egress for future maintenance operations.

See also Chapter 6, Storm Drainage Facilities.

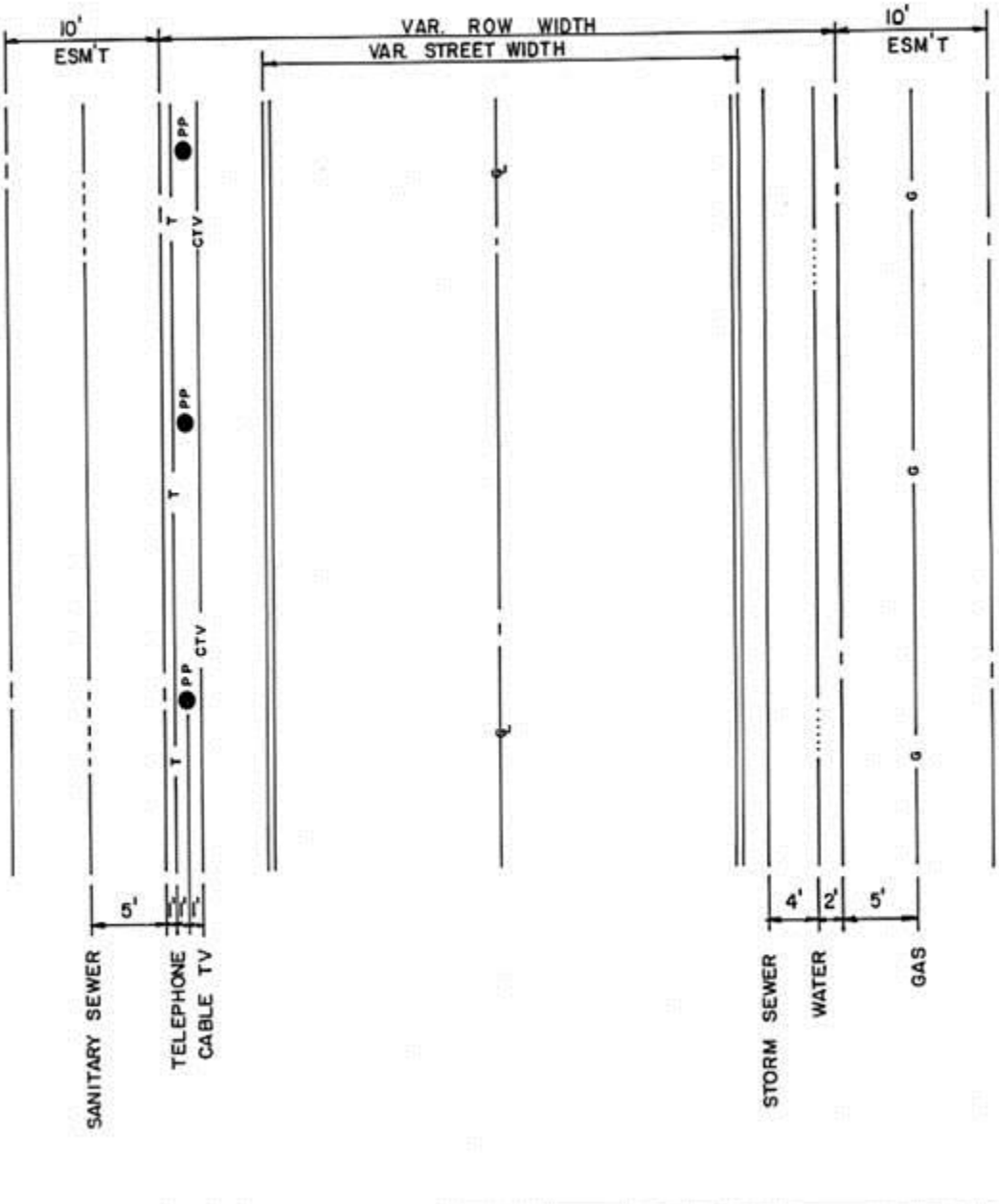
303. EMERGENCY ACCESS EASEMENTS

If these criteria or other law requires an emergency access easement, then the developer shall provide emergency access (fire lane) easements with a minimum width of twenty-eight (28) feet and a minimum height clearance of fourteen (14) feet, and connections at each end to a dedicated public street or a turnaround with a minimum diameter of eighty (80) feet and an additional distance of ten (10) feet on all sides clear of permanent structures. The developer shall design and construct the driving surface within emergency access easements according to standards established for local public streets.

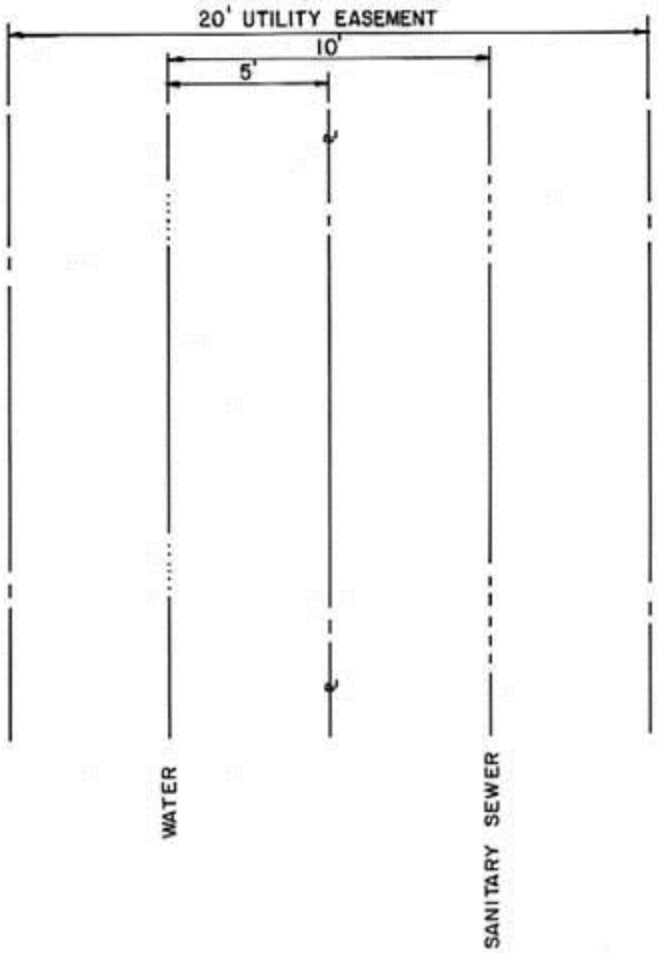
A developer shall construct, erect, or locate any structure within one hundred fifty (150) feet of either a dedicated and improved emergency access easement or a public street. (see also Development Code, Building Code and Fire Code).



Huntsville Design Criteria	**UTILITY PLACEMENT IN R.O.W. with ADJACENT EASEMENT TYPICAL SECTION**	Scale: NONE
Revisions		**FIGURE 3-1**



Huntsville Design Criteria	**UTILITY PLACEMENT IN R.O.W. with ADJACENT EASEMENT PLAN VIEW**	Scale: NONE
Revisions		**FIGURE 3-2**



Huntsville Design Criteria	UTILITY PLACEMENT IN BACKLOT EASEMENT	Scale: 1" = 5'
Revisions		FIGURE 3-3

CHAPTER 4.

WATER FACILITIES

401. GENERAL PROVISIONS

(1) The developer shall provide public water access to every lot the developer creates.

(2) The developer shall design and construct all water supply, distribution, pumping, and storage improvements according to this chapter, the City's "Construction Specifications for Public Improvements," and the Texas Commission on Environmental Quality (TCEQ) regulations.

See generally 30 Texas Administrative Code chapter 290.

402. DESIGN CRITERIA

402.1 Minimum size; looped.

All water mains shall be a minimum of six inches (6") in size. Upon approval of the City Engineer, two (2") inch water mains may be used in residential developments if extended off six inches (6") or greater mains and intended to service the equivalent of ten (10) single family homes or less. All water mains shall be looped where practical.

30 TAC § 290.44 (c).

402.2 Provision for future extensions

The developer shall extend water lines, where necessary, to the borders of the development for future extensions of the distribution system. With City Council approval, the City may participate in the cost of oversizing lines required to serve land areas or improvements beyond the development COH Development Code.

402.3 Fire hydrants

The developer shall install fire hydrants as part of the water distribution system. The developer shall locate a fire hydrant within five hundred (500) feet of all portions of building sites, based upon a clear path of travel. Fire hydrants shall be served by supply lines of at least six inches (6") in size.

30 TAC § 290.44(d).

402.4 Valves

The developer shall install valves at the intersections of all water mains. The developer shall install inline valves at about one thousand (1,000) foot intervals.

30 TAC § 290.44(d)(5).

402.5 Depth of cover

The depth of cover of water mains shall be thirty (36) inches below finished grade, except that the depth of cover shall be at least forty-eight (48) inches in roadways.

402.6 Air relief valves

The developer shall install air release valves and/or air and air vacuum relief valves at critical water line profile summits. Sizing shall be according to City standards.

30 TAC § 290.44(d)(1).

402.7 Flush valves

The developer shall install blow-offs or flushing valves at water line profile low points so that the water discharged by draining the line can be readily disposed of if required for repairs or flushing.

30 TAC § 209.44(d)(6).

402.8 Public easements required

All public water facilities shall be placed in public easements as described in Chapter 3: Easement Standards.

403. INDIVIDUAL WATER SERVICE CONNECTIONS

The developer shall install service connections (water "taps") for each unit (dwelling or commercial/industrial) in the development intended for individual ownership at the time of construction of new water improvements. If individual utility connections for apartments are desired, the developer shall install service connections for each apartment at the time of construction of new water improvements. Such service connections shall be the appropriate size to serve the intended use of the property, as approved by the City Engineer, and shall extend from the public water main to the lot property line or utility easement line, as the case may be. All corporation stops, service piping, curb stops, meter boxes and vaults and any other material required for the connection shall be included in the service connection installation.

30 TAC § 290.44(d)(4).

CHAPTER 5.

SANITARY SEWERAGE FACILITIES

501. GENERAL PROVISIONS

(1) The developer shall provide public sewer access to every lot the developer creates.

(2) The developer shall design and construct sanitary sewer improvements according to this chapter, the City's Construction Specifications for Public Improvements and Texas Commission on Environmental Quality regulations.

See generally Texas Administrative Codes, 30 TAC Part I.

502. DESIGN CRITERIA

502.1 Minimum size

No public sewer line shall be less than six (6) inches to the inside diameter.

30 TAC § 217.53(j)(4).

502.2 Future extensions

The developer shall design all sewers to serve both the subject property and the full drainage area tributary to the sewer system. A developer shall extend sewer lines to the borders of the development to allow for future extensions of the collection system. With City Council approval, the City may participate in the cost of any oversizing of lines required to serve land areas or improvements beyond the development COH Development Code.

502.3 Manholes

The developer shall install manholes at all intersections of other sewers six (6) inches in diameter or larger and at intermediate spacing along the line. The maximum spacing shall be according to Texas Commission on Environmental Quality "Design Criteria for Domestic Wastewater Systems". The developer shall install manholes at all changes in grade and at the ends of all extendable sewers.

30 TAC § 217.55.

502.4 Alignment

The developer shall design sewers with straight alignment. If horizontal curvatures must be used, the smallest radius shall not exceed that recommended by the pipe manufacturer; provided, however, that any radius shall not be less than one hundred (100) feet.

30 TAC § 217.53(m).

502.5 Hydraulic slopes

The developer shall design all sewers with hydraulic slopes sufficient to give mean velocities, when flowing full, of not less than two (2') feet per second on Manning's formulas using a minimum "n" value of 0.013.

30 TAC § 217.53(l).

502.6 Surface water and non-domestic waste prohibited

The developer shall not connect any sanitary sewerage system within the City that allows the entrance of surface water or waste of other than domestic sewage characteristics without the specific authorization by the City (see also Chapter 46, Huntsville Code of Ordinances).

30 TAC § 217.53

502.7 Backfill

The developer shall install and backfill all lines, including all service laterals, below proposed paved areas to the City specifications before compaction of subgrade and placement of the paving.

30 TAC § 217.54.

502.8 Lift stations

The developer shall not design or construct lift stations or separate treatment facilities unless such lift stations or separate facilities are more beneficial to the City than constructing an adequate outfall or approach sewer from the existing system. In deciding benefit, the Commission shall consider power cost for operation, land costs and all other costs of lift stations based on a ten-year life.

30 TAC § 217.59.

502.9 Public easements

All public sanitary sewer facilities shall be placed in public easements as described in Section 3: Easement Standards.

503. INDIVIDUAL SEWER SERVICE CONNECTIONS

The developer shall install service connections (sewer "taps") for each building in a development at the time of construction of sewer improvements.

503.1 Duplex and multi-family dwelling units

The developer shall install individual sanitary sewer service connections for each dwelling unit in duplex or two-family buildings. Buildings containing more than two (2) dwelling units may provide a common sewerage collection system from the building.

503.2 Standards

Each service connection shall serve only one (1) building (no "sharing" of service connections). The individual service connections shall be a minimum of four (4) inches inside diameter and may extend to a common building sewer system or individually to the public sewer. A manhole connection to the public sewer is required for all service connections greater than four (4) inches inside diameter.

503.3 Variance required

The Planning Commission may grant a variance from the requirement to provide a public sewage system at the time of preliminary plat approval if it decides that the developer cannot feasibly extend the public sewage system to the area of development. The developer shall provide the Commission with sufficient technical data (topography, soils, existing sewer system and construction costs) to show the proposed development's need for an alternative to the public sanitary sewage treatment facilities. The developer shall not design or construct such alternative sewage treatment systems unless such facilities are more beneficial to the City than constructing an adequate system extended from and connected to the existing public system.

503.4 Approval by Texas Commission on Environmental Quality

The City Engineer shall not approve a final plat until the developer submits an engineered sewage disposal plan approved by the Texas Commission on Environmental Quality.

503.5 Dedication of utility easements

If the Commission approves on-site sewage treatment installations, the developer shall dedicate utility easements for the future installation of a public sewage system. Such easements shall comply with criteria of Chapter 3 of this Code.

CHAPTER 6.

STORM DRAINAGE FACILITIES

601. GENERAL PROVISIONS

(1) A developer shall provide private or public storm drainage easements along existing or proposed open drainage channels that encompass the water course and sufficient adjacent area to handle the flow of design storm described in Section 602.3.

(2) The developer shall design and construct drainage facilities according to this chapter and the City's Construction Specifications for Public Improvements. The following design criteria are the City's minimum methods and standards. A developer may use other hydrologic and hydraulic design methods to satisfy drainage requirements with prior approval of the City Engineer.

See also Chapter 3 of these Criteria.

(3) Except as provided below, the developer shall provide public easements for

(a) facilities that are constructed or used to control storm water flow from several developed properties, or

(b) facilities that a developer desires the city to own or maintain.

(4) The City does not require a developer to provide public easements for storm water drainage if

(a) the facilities that are constructed serve a single property or an association of property owners and

(b) the developer places and records private easements or restrictions on the properties and their uses to privately maintain the drainage facilities. Maintenance of private drainage systems shall be the responsibility of property owners within the development. The property owners shall be legally bound together by deed restrictions, property owners' association, corporation or other organizations that has as one of its purposes the continued care and maintenance of all commonly owned property within the development, including private drainage.

See Chapter 3 of these Criteria.

601.1 Upstream conditions

The developer shall design all drainage facilities based on potential and fully developed upstream conditions. A developer shall use a minimum runoff coefficient of 0.75 for all undeveloped upstream property.

601.2 Downstream conditions

The developer shall determine downstream water surface elevations for a 100-year design frequency storm to define the downstream flood hazards created by the proposed development.

601.3 Protection of downstream properties

The developer shall design and construct downstream drainage improvements or a detention / retention system to protect downstream properties from any change in storm water runoff.

601.4 Discharge points

The developer shall end all drainage improvements at a discharge point approved by the City Engineer. The developer shall design and construct such discharge points, or outlets, to prevent damage to or overflowing into adjacent property. The City Engineer may require creek improvement, channel lining, energy dissipaters or other improvements for such outlets to prevent erosion or increase the flow capacity.

601.5 Public streets as drainage facilities

(1) Maximum depth of water to be allowed in local streets at five (5) year design flow shall be at the top of crown, or top of curb, whichever is least.

(2) Maximum spread of water in collector streets at ten (10) year design flow shall allow for one (1) clear lane of traffic (twelve (12) feet wide).

(3) Maximum spread of water in arterial streets at ten (10) year design flow shall allow for two clear lanes of traffic (twenty-four (24) feet wide).

601.6 Drainage channels and structures

(1) The developer shall install an underground storm drain on curb and gutter streets beginning at the point where the calculated storm water runoff is of such a quantity that it exceeds the height specified above (see also Table 6-2). The developer shall construct the storm drain system from this point to an approved outlet.

(2) For non-curb and gutter streets, the developer may use open channel (channel or ditch) methods to dispose of storm water runoff of such a quantity that it exceeds the height specified above. Such channels may be in dedicated drainage easements outside the standard street right-of-way upon Planning Commission approval of the location and alignment of such easements. Alternatively, the developer may widen the street right-of-way to hold an open channel of greater capacity than the standard street/ditch section (refer to Figures 2-1 to 2-3).

(3) If the developer locates the channel in a widened street right-of-way, the City Engineer shall approve the right-of-way width and channel configuration.

(4) The developer shall design and construct all channels to end at approved outlets.

601.7 Habitable structures

The developer shall provide adequate means for storm water runoff more than the streets' "design storm" capacity (i.e., 5, 10-year storms) to flow around habitable structures.

(1) If adjacent topography rises away from the street, the developer shall provide a grading/drainage plan that shows that all building sites can provide a finished floor elevation:

(a) at least one foot (l') above the top of the curb using the highest point along the portion of the curb fronting the building site, or

(b) at least one foot (1') above the top of ditch elevation, using the highest point along the portion of the ditch fronting the building site.

(2) If adjacent topography falls away from the street, the developer shall provide a grading/drainage plan that shows that all building sites can provide a finished floor elevation at least one foot above the ground elevation along all sides of the building site.

(3) The developer shall design and construct all streets to minimize any fill required to bring building pads into compliance with this Code.

(4) Alternate methods of building protection of those above may be accepted by the City Engineer upon submittal of detailed, engineered plans.

601.8 Drainage system criteria

If an underground drainage system is required, and a sixty (60") inch or smaller pipe will handle the design flow, pipe shall be used. If a sixty (60") inch pipe is not adequate, the developer has the option to use concrete pipe or natural and/or a lined open drainage channel. If pipe is selected, the maximum allowable velocity shall be 8 feet per second (fps) in the pipe. The City Engineer shall approve any lining materials used.

601.9 Line of flow

The developer shall allow water courses to follow their natural lines of flow; provided, however, a developer may rechannel or reroute water courses where approved by the City Engineer and where the developer does not change the points at which the water course enters the property and the points at which it leaves the property.

601.10 Bridges and box culverts

The developer shall design and construct bridges or box culverts at all street crossings over all drainageways and floodways according to Table 6-3.

601.11 Valley gutters

The developer shall provide concrete valley gutters if the gutter flow is carried across intersections of curbed streets.

601.12 Public easements required

All public drainage facilities shall be placed in public easements as described in Chapter 3: Easement Standards.

602. DESIGN CRITERIA

602.1 Basis for discharge

The developer shall design drainage improvements for watersheds less than 1,000 acres based on flood discharges determined from the Rational Formula. See Table 6-2.

602.2 Determination of time of concentration

Calculate the time of concentration based on the average runoff velocities shown in Table 6-1.

Description of Water Course	Velocity of Run-off in F.P.S. for Slope in Percent			
	0% to 3%	4% to 7%	8% to 11	over12%
Overland Surface Drainage	5	10	15	18
Channels	Determine V by Manning's Formula			
Storm Sewers	Determine V by Manning's Formula			

For street or gutter flow, the velocity shall be based on the grade of the street. Without detailed calculation by Manning's Formula for the specific street section, the average velocities shown in Table 6-1 may be used.

TABLE 6-1

AVERAGE VELOCITIES OF RUNOFF

% Slope of Gutter	Assumed Velocity (Ft./Sec.)
0.5%	1.5
1.0%	2.2
2.0%	3.1
3.0%	3.8
4.0%	4.3
5.0%	4.9
6.0%	5.3
8.0%	6.1
10.0%	6.9

TABLE 6-2

THE RATIONAL FORMULA

Q = CIA, where:

Q = the maximum storm flow rate at a given point (in cubic feet per second);

C = a runoff coefficient that varies with the topography, land use and moisture content of the soil at the time. The runoff coefficient shall be based on the ultimate use of the land. The runoff coefficient can be selected from the major use classification shown below.

Shopping Centers	0.95
Business Areas	0.80
Industrial Areas	0.70
Residential Areas	
(1) less than 2 lots/acre	0.40
(2) greater than 2 lots/acre, but less than 4 lots/acre	0.50
(3) greater than 4 lots/acre, but less than 8 lots/acre	0.60
(4) greater than 8 lots/acre	0.75
Apartments	0.75

Park and Open Space 0.30

I = the average intensity of rainfall in inches per hour for a period equal to the time of concentration of flow from the farthest point of the drainage area to the point under consideration.

$$I = \frac{b}{(t+d)^e}$$

where d = 8.0 and

	5 year	10 year	25 year	50 year	100 year
b =	73	80	84	94	93
e =	.778	.759	.739	.740	.720

t = time of concentration in minutes

A = the drainage area, in acres, tributary to the point under design calculated from the drainage map of the area. This drainage map shall be submitted with any drainage plans submitted for consideration by the City Engineer.

Using the average velocities in Table 6-1, the developer shall calculate the time of concentration by the formula shown in Table 6-4 or by other recognized formulas such as the Texas State Department of Highways and Public Transportation formulas unless more data is shown on the plans for calculating time of concentration.

602.3 Storm frequency

Design storm frequencies for storm drainage improvements are shown in Table 6-3.

TABLE 6-3

DESIGN STORM FREQUENCY

Type of Facility	Minimum Design Description of Area to be Drained	Frequency (Years)	
Streets and Storm Sewers or Side Ditches, Combined*	Residential, Commercial and Industrial	Local -	5
		Collector -	10
		Arterial -	10
Culverts, Bridges, Channels and Creeks	Any type of area less than 1,000 acres		25
Culverts,	Any type of area		100

Bridges, Channels and Creeks	greater than 1,000 acres

* If in a storm drain system, an inlet is at a low point so that flow in excess of the storm drain capacity would be directed onto private property, and such overflows could cause damage or serious inconvenience in the opinion of the City Engineer, the design frequency shall be twenty-five (25) years.

602.4 Underground drainage facility design

The developer shall calculate underground drainage facility (storm drain) capacity by Manning's Formula as follows:

$$Q = \frac{1.486}{n} AR^{2/3} S^{1/2}, \text{ where:}$$

Q = the discharge in cubic feet per second;

A = the cross-sectional area of flow in square feet;

R = the hydraulic radius in feet = area/wetted perimeter;

S = the slope of the hydraulic gradient in feet per foot;

n = the coefficient of roughness.

The elevation of the hydraulic gradient of the storm sewer shall be a minimum of 1.5 feet below the elevation of the adjacent street gutter. The developer shall use storm water pipe sized so that the average velocity in the pipe will not exceed eight (8) feet per second.

TABLE 6-4

TIME OF CONCENTRATION

$$T = \frac{D}{Vx60}, \text{ where:}$$

T = Time of concentration in minutes for use in Table 6-4. The minimum time of concentration shall be ten (10) minutes.

D = Distance in feet from point of concentration to the hydraulically most distant part of the drainage basin under construction.

V = Velocity in feet per second from Section 602.2, or velocity calculated by an engineer for streets and/or storm sewers.

TABLE 6-5

COEFFICIENT OF ROUGHNESS

Open Channels		Maximum Permissible Velocity in Feet/Second	Coefficient "n"
Paved			
	Concrete	8	0.011 to 0.020
	Asphalt	8	0.013 to 0.017
	Rubble or Riprap	8	0.017 to 0.030
Earth			
	Bare, sandy silt, weathered	2.0	0.020
	Silt clay or soft shale	3.5	0.020
	Clay	6.0	0.020
	Soft sandstone	8.0	0.020
	Clean gravelly soil	6.0	0.030 to 0.150[1]
Turf			
	Shallow Flow	6.0	0.06 to 0.08
	Depth of flow over 1 foot	6.0	0.04 to 0.06

From: "Town Branch Drainage Study - Huntsville, Texas"
Dec. 1975 by O'Malley and Clay, Inc.

[1] Will vary with straightness of alignment, smoothness of bed and side slopes, and whether channel has light vegetation or is choked with weeds and brush.

602.5 Open channel design

The developer shall design and construct open channel facilities based on frequencies shown in Table 6-3 and calculated by Manning's Formula with roughness coefficients and velocities as shown in Table 6-5. Side slopes of channels shall be no steeper than 3:1 in earth and 1:1 when lined with concrete.

602.6 Culvert design

A developer shall install enclosed culverts if a creek or ditch crosses proposed roadway improvements. The developer shall determine the quantity of flow to be carried by the culvert by the Rational Formula. The size of the culvert required shall be the larger size indicated by the inlet and outlet flow control.

Design of culverts shall include the determination of upstream backwater conditions, downstream velocities and flooding conditions. The developer shall not design or install culverts with discharge velocities that exceed those provided in Table 6-6.

603. MINIMUM DESIGN STANDARDS

The design requirements set forth in this chapter are minimum design standards. The City Engineer may require additional precautions or treatments consistent with sound engineering practice to provide for conditions not specifically covered in this chapter.

TABLE 6-6

CULVERT DISCHARGE –VELOCITY LIMITATIONS

Culvert Discharging On To	Maximum Allowable Velocity (f.p.s.)
Earth	6
Sod Earth	8
Paved or riprap apron	8
Shale	8
Rock	8

604. INDIVIDUAL LOT GRADING AND DRAINAGE PLAN

When a new building is constructed, an addition proposed, or a lot or tract of land is excavated, it is essential that grading be handled properly to ensure that surface drainage is directed away from the building and that it does not alter drainage patterns or damage adjacent properties.

604.1 Drainage Plan Required

Approval of a Development Permit as required elsewhere in these criteria will require the submittal of a Drainage Plan for the lot or lots being permitted.

(1) Non-residential or Multi-family Lot Grading and Drainage Plan Contents

(a) Address and legal description of the lot or tract, and adjacent property

(b) Boundary of the lot or tract, and adjacent property

(c) Grading Plan as defined in Chapter 1.

(d) Drainage Improvements Plan as defined in Chapter 1.

(2) Single-family or Two-family Lot Grading and Drainage Plan Contents

Plan contents shall conform to the drainage requirements outlined in the *2000 International Residential Building Code*, or the most currently adopted revision.

CHAPTER 7.

DEFINITIONS

Accessory Building - a building or structure customarily incidental and subordinate to the principal structure and located on the same lot as the principal building.

Agriculture - any land or building used for pasturage, floriculture, dairying, horticulture, forestry, and livestock or poultry husbandry.

Airport - means the Huntsville Municipal Airport.

Airport Elevation - the highest point of an airport's usable landing area measured in feet from mean sea level.

Airport Hazard - any structure or object of natural growth located on or in the vicinity of a public airport, or any use of land near such airport, which obstructs the airspace required for the flight of aircraft in landing or takeoff at such airport or is otherwise hazardous to such landing or takeoff of aircraft.

Alley - a legally established private access easement affording a secondary means of vehicular access to abutting property and not intended for general traffic circulation.

Alluvial Fan Flooding - means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and unpredictable flow paths.

Alterations - any change, addition or modification in construction or type of occupancy; any change in the structural members of a building, such as walls or partitions, columns, beams or girders; or any change which may be referred to herein as "altered" or "reconstructed".

Apartment - a dwelling unit in a "multiple family dwelling" as defined herein.

Apex - means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

Appeal - means, for the purpose of flood hazard regulation, a request for a review of the Floodplain Administrator's interpretation of any provision of this code or a request for a variance.

Approach - transitional, horizontal and conical zones. These zones apply to the area under the approach, transitional, horizontal, and conical surfaces defined in FAR Part 77.

Area of Shallow Flooding - means a designated AO, AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the

path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of Special Flood Hazard - is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed rate making has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AE, AH, AO, A1-99, VO, V1-30, VE or V.

As Built Drawings - plans prepared by a registered professional engineer and certifying that the public improvements are constructed as shown.

Base Flood - the flood having a one percent chance of being equaled or exceeded in any given year.

Basement - means any area of the building having its floor sub-grade (below ground level) on all sides.

Berm - a man-made, formed, earth mound of definite height and width used for obscuring purposes; the intent of which is to provide a transition between uses of differing intensity.

Block - a tract or parcel of land designated as such on a subdivision plat surrounded by streets or other physical obstructions.

Boundary Sewer Line - a sewer line installed in a street bounding a development or faced on only one side by a development, which can also serve property not included in the development on the opposite side of the street.

Boundary Water Line - a water line, installed in a street bounding a development or faced on only one side by a development, which can also serve property not included in the development on the opposite side of the street.

Buffer Yard - a strip of land, including any specified type and amount of planting or structures which may be required to protect one type of land use from another, or minimize or eliminate conflicts between them.

Building - see definition in Building Code.

Building Height - the vertical distance measured from the established grade to the highest point of the roof surface for flat roofs; to the deck line of mansard roofs; and to the average height between eaves and ridge for gable, hip, and gambrel roofs. Where a building is located on a sloping terrain, the height may be measured from the average ground level of the grade at the building wall.

Building Line - a line parallel to the front lot line. A minimum building line is the same as the minimum required front setback line.

Building, Principal - a building in which is conducted the main or principal use of the lot on which said building is located.

Certificate of Compliance - a certificate issued by the City to a party or parties intending to initiate any work or change any use of property in the City.

Church - a building wherein persons regularly assemble for religious worship and which is maintained and controlled by a religious body organized to sustain public worship, together with all accessory buildings and uses customarily associated with such primary purpose.

City - the City of Huntsville, Texas.

Club - an organization of persons for special purposes or for the promulgation of sports, arts, science, literature, politics or similar activities, but not operated for profit and open only to members and not the general public.

Commercial Building - any building other than a single family residence.

Condominium - see unified development.

Critical Feature - means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

Development - means, for the purpose of flood hazard regulation, any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations or storage of equipment or materials.

Developer - any person who improves or subdivides a tract of land or improves or takes any action preparatory to the erection, improvement or movement of any building or structure on a tract of land.

Density - the average number of dwelling units per acre for the entire development, including streets.

District - an area of land for which there are uniform regulations governing the use of buildings and premises, density of development, yard requirements and height regulations.

Dwelling, Multiple Family - a building used or designed as a residence for three or more families living together independently of each other.

Dwelling, Single Family-Attached - A dwelling which is joined to another dwelling at one or more sides by a party wall or abutting separate wall, and which is designed for or occupied exclusively by one family.

Dwelling, Single Family-Detached – A dwelling designed for or occupied exclusively by one family and having no physical connection to another building located on the same lot or tract or any other lot or tract.

Dwelling, Two Family - a detached building, designed for or occupied by two families living independently of each other.

Dwelling Unit - one or more rooms with bathroom and principal kitchen facilities designed as a self contained unit for occupancy by one family for living, cooking and sleeping purposes.

Erected - the word "erected" includes built, constructed, reconstructed, moved upon, or any physical operations on the premises required for the building. Excavations, fill, drainage, and the like, shall be considered a part of erection.

Elevated Building - means a non-basement building (i) built, in the case of a building in Zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, to have the top of the elevated floor, or in the case of a building in Zones V1-30, VE, or V, to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the floor of the water and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A1-30, AE, A, A99, AO, AH, B, C, X, D, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters. In the case of Zones V1-30, VE, or V, "elevated building" also includes a building otherwise meeting the definition of "elevated building", even though the lower area is enclosed by means of breakaway walls if the breakaway walls met the standards of Section 60.3(e)(5) of the National Flood Insurance Program regulations.

Excavation - any breaking of ground, except common household gardening, general farming and ground care.

Existing Construction - means, for the purpose of flood hazard regulation and for the purposes of determining flood insurance rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures."

Existing Manufactured Home Park or Subdivision - means, for the purpose of flood hazard regulation, a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing Manufactured Home Park or Subdivision - means, for the purpose of flood hazard regulation, the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Family - an individual, or two or more persons related by blood, marriage, or adoption, or parents along with their direct lineal descendants, and adopted or foster children (including domestic employees) or a group not to exceed two persons not related by blood or marriage,

occupying a premises and living as a single housekeeping unit with single cooking facilities. Every additional group of two or less persons living in such housekeeping unit shall be considered a separate family. Said definition shall not apply in instances of group care centers, or licensed residential facilities.

FEMA - Federal Emergency Management Agency

FHBM - Flood Hazard Boundary Map

Filling - the depositing or dumping of any matter into or onto the ground except common household gardening and general maintenance.

FIRM - See Flood Insurance Rate Map

Flag Lot - a lot which has minimum frontage on a public street, which is reached via a private drive or lane whose width some distance back from the street right-of-way, meets all ordinance requirements.

Flood or Flooding - means a general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) the overflow of inland or tidal waters.

(2) the unusual and rapid accumulation or run-off of surface waters from any source.

Flood Insurance Rate Map (FIRM) - means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood Insurance Study - is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, water surface elevation of the base flood, as well as the Flood Boundary-Floodway Map.

Flood Protection System - means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Floodplain Management - means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain Management Regulations - means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodplain or Flood-Prone Area - means any land area susceptible to being inundated by water from any source (see definition of flooding).

Floodproofing - means any combination of structural and nonstructural additions, changes or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Flood Protection System - means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such as system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Floodway (Regulatory Floodway) - means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Functionally Dependent Use - means for the purpose of flood hazard regulation, a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Grade - a ground elevation established for the purpose of controlling the number of stories and the height of any structure. The building grade shall be determined by the level of the ground adjacent to the walls of any structure if the finished grade is level. If the ground is not level, the grade shall be determined by averaging the elevation of the ground for each face of the structure.

Habitable Floor - means for the purpose of food hazard regulation, any floor usable for the following purposes; which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used for storage purposes only is not a "habitable floor."

Half-Street - a vehicular access-way created if only a portion of the required right-of-way width or pavement width is dedicated and/or constructed.

Highest Adjacent Grade - means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic Structure - means, for the purpose of flood hazard regulation, any structure that is:

(1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

(4) Individually listed on a local inventory or historic places in communities with historic preservation programs that have been certified either:

i. by an approved state program as determined by the Secretary of the Interior or;

ii. directly by the Secretary of the Interior in states without approved programs.

Improvement - Any physical structure or system, including building, drainage work, water system, sewer system, sidewalks, streets, or utility system.

Industrial - a business, plant or enterprise for production of goods, merchandise, or machines.

Lease - a contract by which one owning such property grants to another the right to possess, use and enjoy it for a specified period of time in exchange for the periodic payment of a stipulated price.

Levee - means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

Levee System - means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lot - an undivided tract or parcel of land having frontage on a public street and which is, or in the future may be offered for sale, conveyance, transfer or improvement.

Lot Depth - the distance on a horizontal plane between the midpoint of the front lot line and the midpoint of the rear lot line.

Lot Lines - the lines bounding a lot as defined herein:

(1) **Lot Line, Front**: In the case of an interior lot, a line separating the lot from the street; as in the case of a corner lot, a line separating the narrowest street frontage of the lot from the street, except in those cases where the deed restrictions specifies another line as the front lot line; provided, however, that the front lot line of a non-residential lot shall be that side adjacent to the highest volume street.

(2) **Lot Line, Rear**: a lot line opposite and most distant from the front lot line.

(3) **Lot Line, Side**: any lot line not a front line or rear lot line.

Lot of Record - a lot which is, (1) part of a platted subdivision, the plat of which is recorded in the office of the County Clerk, or (2) a parcel or lot described by metes and bounds, the deed of

which has been recorded in the office of the County Clerk prior to March 1, 1982; or (3) a lot which is part of an approved Boundary Line Adjustment, the plat of which is filed with the City.

Lot Width - the distance on a horizontal plane between the midpoint of the side lot lines.

Lowest Floor - means for the purpose of flood hazard regulation, the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

HUD-code Manufactured Home - a structure constructed on or after June 15, 1976, according to the rules of the United States Department of Housing and Urban Development, transportable in one or move sections, which, in the traveling mode, is eight (8) body feet or more in width or 40 body feet or more in length, or, when erected on site is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning, and electrical systems. The term does not include a recreational vehicle as that term is defined by 24 Code of Federal Regulations, Section 3282.8(g).

Manufactured Home Park or Subdivision - means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Marquee - a roof-like structure of a permanent nature projecting from the wall of a building.

Mean Sea Level - means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

Mobile Home - a structure that was constructed before June 15, 1976, transportable in one or move sections, which, in the traveling mode, is eight (8) body feet or more in width or 40 body feet or more in length, or, when erected on-site is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning, and electrical systems.

Mobile Home Park - a mobile home park is a parcel of land under single ownership on which two (2) or more mobile homes are occupied as residences. Any mobile home facility where two or more units are intended for long-term residential use (beyond ninety (90) days) is considered a mobile home park for purposes of applying development standards.

New Construction - means, for the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management

regulation adopted by a community and includes any subsequent improvements to such structures.

New Manufactured Home Park or Subdivision - means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

Nonconforming Building (Nonconforming Structure) - a building or structure (or portion thereof) lawfully existing at the time of adoption of this Code or subsequent amendment thereto, that does not conform to the provisions of this Code relative to height, bulk, area, placement or yards for the district in which it is located.

Nonconforming Use - the use of a building or structure or of a parcel *of* tract or land, lawfully existing at the time of adoption of this Code or subsequent amendment thereto, that does not conform to the regulations of the district in which it is situated.

Nonprecision Instrument Runway - means a runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in nonprecision instrument approach procedure has been approved or planned, and for which no precision approach facilities are planned or indicated on an FAA planning document or military service's military airport planning document.

Owner - any owner, authorized agent or contractor who constructs, enlarges, alters, repairs, moves or changes the occupancy of a building or structure.

Owner's Front Footage - the pro rata amount of the cost of a water or sewer line extension that is not reimbursable to the person requesting the extension.

Pavement Width - the portion of the surface of the street available for vehicular traffic; if curbed, it is that portion of street between back of curb and back of curb.

Planned Unit Development (PUD) - see unified development.

Person - an individual, firm, partnership, corporation, company, association, joint stock association or governmental entity. It includes a trustee, receiver, assignee or similar representative of any of them.

Primary Surface - means a surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends two hundred (200) feet beyond each end of that runway; but when the runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The width of the primary surface of a runway will be that width prescribed in Part 77 of the Federal Aviation Regulation (FAR) for the most precise approach existing or planned for either end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.

Principal Use - the main use to which the premises are devoted and the principal use for which the premises exist.

Private Street - a vehicular access way under private ownership and maintenance providing access to building units in the interior of a lot.

Pro Rata - is the charge per front foot of abutting land to be paid by the lot owner or owner of a development to aid in defraying the cost of supplying sewer service or water service to his lot or site.

(a) **Single pro rata** - the charge based on the front footage of abutting land on only one side of the street or easement.

(b) **Double pro rata** - the charge based on the front footage of abutting land on both sides of the street or easement.

Public Street - a public right-of-way, however designated, dedicated or acquired, that provides vehicular access to adjacent private or public properties.

Public Utility - any person, firm or corporation, municipal department, board or commission duly authorized to furnish and furnishing under federal, state or municipal regulations to the public; gas, steam, electricity, sewage disposal, communication, telephone, telegraph, transportation or water.

Recreational Vehicle (RV) - means a vehicle which is:

(1) built on a single chassis;

(2) 400 square feet or less when measured at the largest horizontal projections;

(3) designed to be self-propelled or permanently towable by a light duty truck; and

(4) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use

Recreational Vehicle (RV) Park - an area set aside and offered by any person for the parking and accommodation of two (2) or more recreational vehicles.

Reserve - a tract of land created within a subdivision plat that is not divided into lots or proposed for development at the time of platting.

Residential - a tract of land designed for or used exclusively to contain a dwelling unit or units. A "primary residential area" shall mean a street or streets in which a majority of the total front footage is used for residential purposes.

Right-of-way - a street, alley, or other thoroughfare or easement permanently established for passage of persons, vehicles, or the location of utilities. The right-of-way is delineated by legally established lines or boundaries.

Runway - a defined area on an airport prepared for landing and takeoff of aircraft along its length.

Setback - the minimum unoccupied distance between the lot line and the principal and accessory buildings, as required herein.

Setback, Front - the minimum unoccupied distance, extending the full lot width, between the principal and accessory buildings and the front lot line.

Setback, Rear - the minimum required unoccupied distance, extending the full lot width, between the principal and accessory buildings and the lot line opposite the front lot line.

Setback, Side - the minimum required unoccupied distance, extending from the front setback to the rear setback, between the principal and accessory buildings and the side lot line.

Sign - any device including words, numerals, figures, designs, pictures or trademarks painted upon or otherwise affixed to a building, wall, board, or any structure, so as to inform or attract attention.

Site Plan - a plan showing all salient features of a proposed development, so that it may be evaluated in order to determine whether it meets the provisions of this Code.

Start of Construction - for floodplain management purposes (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Street: Expressways - roads intended to serve interstate or high speed, high volume urban traffic. Access to expressways is limited to other expressways and major streets.

Street: Arterial - roads of regional importance or the main roads of a community. Direct access is primarily limited to significant land uses.

Street: Collector - provides access to nonresidential land uses and connects residential streets to the system's arterial streets.

Street: Local - provides access to adjacent land. Characterized by a small service and low speeds.

Structure - see Building Code.

Structure - for floodplain management purposes, means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

Subdivision Plat - a map or drawing of a proposed subdivision prepared in a manner suitable for recording in the County records and containing accurate and detailed engineering and survey data, dimensions, dedicatory statements and certificates.

(1) Preliminary Plat - see Section 203.1

(2) Final Plat - see Section 203.4

Substantial Damage - for floodplain management purposes, means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement - means, for floodplain management purposes any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before "start of construction" of the improvement. This includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

(1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary conditions or

(2) Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure."

Unified Development - the separate ownership of single units or apartments in a multiple unit structure or structures with common elements. (See Tex. Rev. Civ. Stat. art. 1301a)

Utility Runway - a runway that is constructed for and intended to be used by propeller driven aircraft of twelve thousand five hundred (12,500) pounds maximum gross weight and less.

Variance - is a grant of relief to a person from the requirements of this code when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development is a manner otherwise prohibited by this code. (For floodplain management purposes, see Section 60.6 of the National Flood Insurance Program regulations for full requirements.

Violation - means, for floodplain management purposes, the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other

evidence of compliance required in Sections 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Watercourse - a definite channel of a stream in which water flows within a defined bed and banks, originating from a definite source or sources. (The water may flow continuously or intermittently, and if the latter, with some degree of regularity, depending on the characteristics of the sources.)

Water Surface Elevation - means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

CHAPTER 8.

MISCELLANEOUS PROVISIONS

800. PRESERVING RIGHTS IN PENDING LITIGATION AND VIOLATIONS UNDER OTHER EXISTING ORDINANCES

These criteria shall not be construed or held to repeal a former ordinance, whether such former ordinance is expressly repealed or not, as to any offense committed against such former ordinance or as to any act done, any penalty, forfeiture, or punishment so incurred or any right accrued or claim arising before this act takes effect, save only that the proceedings thereafter shall conform to the code in force at the time of the proceedings, so far as practicable. This section extends to all repeals, either by express words or implication. Nothing in this section, or any section of these criteria, shall be construed as abating any action now pending under or by virtue of any ordinance of the City herein repealed; or as discontinuing, abating, modifying, or altering any penalty accrued or to accrue, or as affecting the liability of any person, firm or corporation, or as waiving any right of the City under any code in force at the time of passage of these criteria.

801. PENALTY FOR VIOLATIONS

Any person or corporation violating any of the provisions of these criteria shall, upon conviction, be fined any sum not exceeding one thousand dollars ($1,000.00) for each and every day that the provisions of the Code are violated and each violation shall constitute a separate and distinct offense. In addition to the said penalty provided for, the right is hereby conferred and extended upon any property owner owning property in any district, where such property owner may be affected or invaded, by a violation of the terms of the Criteria, to bring suit in such court or courts having jurisdiction thereof and obtain such remedies as may be available by law and equity in the protection of the rights of such property owners.

802. VALIDITY OR SAVINGS CLAUSE

Each section and each provision or requirement of any section of shall be considered separable, and invalidity of any portion of this code shall not affect the validity or the enforceability of any other portion.