Section 8: Airport Hazard Zoning District

8.1. Definitions. The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Airport means the Weslaco Mid Valley Airport.

Airport elevation means the established elevation of the highest point on the useable landing area measured in feet from mean sea level.

Airport hazard means a structure or object of natural growth that obstructs the air space required for the taking off, landing, and flight of aircraft or that interferes with visual, radar, radio, or other systems for tracking, acquiring data relating to, monitoring, or controlling aircraft.

Airport hazard area means any area of land or water upon which an airport hazard might be established if not prevented as provided in this article.

Airport reference point means the point established as the approximate geographic center of the airport landing area and so designated.

Approach surface means a surface longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface and at the same slope as the approach zones height limitation slope set forth in subsection 8.4. In plan, the perimeter of the approach surface coincides with the perimeter of the approach zone.

Approach, transitional, horizontal, and conical zones. These zones are set forth in subsection 8. of this article.

Conical surface means a surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to one for a horizontal distance of 4,000 feet.

Hazard to air navigation means an obstruction determined to have a substantially adverse effect on the safe and efficient utilization of the navigable airspace.

Height. For the purpose of determining the height limits in all zones set forth in this section and shown on the zoning map, the datum shall be mean sea level elevation unless otherwise specified.

Horizontal surface means a horizontal surface 150 feet above the established airport elevation, the perimeter of which in plan coincides with the perimeter of the horizontal zone.

Landing area means the surface area of the airport used for the landing, takeoff or taxiing of aircraft.

Nonconforming use means any preexisting structure, object of natural growth, or use of land which is inconsistent with the provisions of this article or an amendment thereto.

Non-precision 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 non-precision instrument approach procedure has been approved or planned.

Obstruction means any structure, growth, or other object, including a mobile object, which exceeds a limiting height set forth in subsection 8.5.

Overlay zone means the defined areas establishing land use restrictions set forth in subsection 8.6.

Precision instrument runway means a runway having an existing instrument approach procedure utilizing Instrument Landing System (ILS) or Localizer Precision, Vertical (LPV) air navigation facilities with vertical and horizontal guidance for which a straight-in precision instrument approach procedure has been approved or planned.

Primary surface means a surface longitudinally centered on a runway. When the runway has a specially prepared or planned hard surface, the primary surface extends 200 feet beyond each end of that hard surface 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 Regulations 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. The width of the primary surface is 500 feet for the non-precision instrument runway and 1,000 feet for the precision runways having visibility minimums greater than three-fourths statute mile.

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

Runway protection zone (RPZ) means an area off the runway end to enhance the protection of people and property on the ground in a trapezoidal shape established in guidelines published in the Advisory Circular 150/5300-13A by the FAA. Structure means an object, including a mobile object, constructed or installed by man, including, but not limited to, buildings, towers, cranes, smokestacks, earth formations, and overhead transmission lines.

Transitional surfaces means surfaces that extend outward at 90-degree angles to the runway centerline and the runway centerline extended at a slope of seven feet horizontally for each foot vertically from the sides of the primary and approach surfaces to where they intersect the horizontal surface.

Tree means any object of natural growth.

8.2 Purpose. The purpose of this section is provide compatible land use regulations for the airport by establishing development standards that will protect property and occupants of land in the vicinity of the airport from airport hazards and protect the airport from incompatible development. The

regulations and districts herein have been established in accordance with V.T.C.A., Local Government Code chs. 241 (Airport Zoning Act) and 211.

8.3. Compliance. No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this article and any other applicable regulations.

8.4. Zones established. In order to carry out the provisions of this section, there are hereby created and established certain zones which include all of the land lying beneath the approach surfaces, transitional surfaces, horizontal surface and conical surface as they apply to the airport. Such zones for height limitations are shown on Figure 1 and will be reflected on the city's zoning map. The various zones are hereby established and defined as follows:

(a) **Approach zones**. An approach zone is established beneath the approach surface at the end of all existing and proposed runways of the airport for precision and non-precision instrument landings and takeoffs. The limit of approach zones largest overall dimensions is the location at which they intersect with the horizontal surface. These zones have been divided into inner and outer areas in subsections 8.5(a)(1) and (2).

(1) **Precision Approach Zone (Runway 14)**: The precision approach zone for precision instrument landings and take-offs is established as the area beneath the precision approach surface, and is horizontally centered on the extended runway centerline. The inner edge of the precision approach zone shall have a width of 1,000 feet at a distance of 200 feet beyond each end of the runways, widening thereafter uniformly to a width of 16,000 feet at a horizontal distance of 50,000 feet beyond the end of the primary surface of each runway. The centerline of the precision approach surface is the continuation of the centerline of the runway.

(2) **Non-precision Approach Zone (Runway 32)**: The inner non-precision approach zone is established as the area beneath the non-precision approach surface, and is horizontally centered on the extended runway centerline. The inner edge of the non-precision approach zone shall have a width of 500 feet at a distance of 200 feet beyond the end of the runways, widening thereafter uniformly to a width of 3,500 feet at a horizontal distance of 10,000 feet beyond the end of the primary surface of each runway. The centerline of the non-precision approach surface is the continuation of the centerline of the runway.

(b) **Transition zones**. Transition zones are hereby established beneath the transitional surface adjacent to each runway and approach surface as indicated on Figure 1. Transitional surfaces, symmetrically located on either side of runways, have variable widths as shown on the zoning map. Transitional surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extends at a slope of seven to one (7:1) from the sides of the primary surface and from the sides of approach surfaces.

(c) **Horizontal zone**. A horizontal zone is established as the area beneath a horizontal surface 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of 10,000 feet radii from the center of each end of the primary surface of Runway(s) 14/32 and connecting the adjacent arcs by lines tangent to those arcs.

(d) **Conical zone**. A conical zone is established as the area beneath the conical surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to one (20:1) for a horizontal distance of 4,000 feet.

(e) **Inner turning zone**. The inner turning zone is an area located on each side of the transitional zone. The inner turning zone reflects the special impacts on areas that lay underneath the varying paths that aircraft take in the pattern on final approach and/or departure. The outer limits of the inner turning zone are defined as beginning at 200 feet from the runway end, and extending outward on each side of the runway at 45 degrees from the runway centerline, for a length determined by the applicable approach zone. The outer limits of each inner turning zone is constructed by a swinging arc, which connects the point determined by the airport's approach zone (as described above), to the 45-degree line extending outward from each runway end.

(f) **Overlay zones**. Overlay zones are hereby established as described below and depicted on Figure 2 to implement land use restrictions as specified in subsection 5.20-8.

(1) **Primary zone**. A primary zone is established on the ground directly beneath and following the boundaries of the primary surface.

(2) **Clear zone**. A clear zone is established on the ground directly beneath and following the boundaries of a runway protection zone.

(i) The RPZ for Runways 14 and 32 have a width of 1,000 feet at a distance of 200 feet beyond the end of each runway, widening thereafter uniformly to a width of 1,750 feet at a horizontal distance of 2,500 feet.

(3) **Approach 1 (A-1) zone**. An A-1 zone is established on the ground directly beneath and following the boundaries of the first third of an inner and outer precision approach zone extending outward from the clear zone.

(4) **Approach 2 (A-2) zone**. An A-2 zone is established on the ground directly beneath and following the boundaries of the middle third of an inner and outer precision approach zone.

(5) **Approach 3 (A-3) zone**. An A-3 zone is established on the ground directly beneath and following the boundaries of the outer third of an inner and outer precision approach zone.

(6) **Transition zone**. A transition zone is established on the ground symmetrically located on either side of the primary, clear, A-1, and A-2 zones described above, has a variable width as shown on the zoning map. The width of the transition zone is determined in the same manner as transitional surfaces, extends outward and upward at right angles to the centerline of the primary, clear, A-1 and A-1 zones extended at a slope of seven to one (7:1) from the sides of the primary, clear, A-1, and A-2 zones to where they intersect with the horizontal surface.

8.5. Height limitations. Except as otherwise provided in this article, no structure shall be erected, altered, or maintained, and no tree shall be allowed to grow, in any zone created by this article to a height in excess of the applicable height limit established in this section for such zone. Such applicable height limitations are hereby established for each of the zones in question. An area located in more than one of the following zones is considered to be only in the zone with the more restrictive height limitation:

(a) **Approach zones**. Horizontal distance beginning at the end of and at the elevation of the primary surface and sloping upward from the end of the primary surface.

(1) **Inner Precision Approach Zone (Runway 14)**: It is horizontally centered on the extended runway centerline, extending 50 feet outward for each one foot upward (50:1) from the end of the primary surface and for a distance of 10,000 feet.

(2) **Outer Precision Approach Zone (Runway 14)**: It is horizontally centered on the extended runway centerline, extending 40 feet outward for each one foot upward (40:1) from the end of the inner precision approach zone (10,000 feet) to a distance 50,000 feet beyond the end of the primary surface of each runway.

(3) **Non-precision Approach Zone (Runway 32)**: It is horizontally centered on the extended runway centerline, extending 34 feet outward for each one foot upward (34:1) from the end of the primary surface and for a distance of 10,000 feet.

(b) **Transition zones**. Slope seven feet outward for each foot upward beginning at the sides of and at the same elevation as the primary surface and the approach surface, and extending to a height of 150 feet above the airport elevation, which is 69.9 feet above mean sea level, adjacent the primary surface or for 5,000 feet adjacent an approach surface.

(c) **Horizontal zone**. Established at 150 feet above the airport elevation, or a height of 801 feet above mean sea level.

(d) **Conical zone**. Slopes 20 feet outward for each foot upward beginning at the periphery of the horizontal zone and at 150 feet above the airport elevation and extending to a height of 350 feet above the airport elevation.

(e) **Inner turning zone**. Based on the most demanding approach published for each runway end, the following height controls are established:

(1) **Precision approach**. The 50:1 slope for a precision approach places the outer limit of the inner turning zone at 5,000 feet from a point 200 feet from the runway end, along the runway centerline.

(2) **Non-precision approach**. The 34:1 slope for a non-precision approach places the outer limit of the inner turning zone at 3,400 feet from a point 200 feet from the runway end, along the runway centerline.

8.6. Interference prohibited. Notwithstanding any other provisions of this article, no use may be made of land or water within any zone established by this article in such a manner as to create electrical interference with navigational signals or radio communications between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and others, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, taking off, or maneuvering of aircraft intending to use the airport.

8.7. Nonconforming uses.

(a) **Regulations are not retroactive**. The regulations prescribed by this article shall not be construed to require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations as of the effective date of this article, or to otherwise interfere with the continuance of any nonconforming use. Nothing contained in this article shall require any change in the construction, alteration, or intended use of any structure, the construction or alteration of which was begun prior to the passing of the ordinance from which this section derives and which is diligently prosecuted.

(b) **Marking and lighting**. Notwithstanding the preceding provisions of this section, the owner of any nonconforming structure or tree is hereby required to give permission for the installation, operation, and maintenance of markers and lights that are deemed necessary by the city manager to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport hazards. Such markers and lights shall be installed, operated, and maintained at the expense of the city.

8.8. Land use restrictions: Conforming and nonconforming land uses by overlay zone.

(a) The following table specifies uses allowed (conforming land use) and those that are not allowed (non-conforming land use) unless they were established prior to the effective date of this section. The overlay zones depicted in Figure 2 are in addition to the underlying zoning standards when located within the city limits. The following restrictions do not eliminate an allowable use or reduce the allowable residential density as specified in the zoning district, approved permit or development agreement on the affected property at the passing of the ordinance.

Overlay Zone	Non-Conforming Land Use	Conforming Land Use
		Allowed use or density as of the date of the passing of the ordinance
Primary Zone	Any use not included in the Airport Layout Plan	Any use not included in the Airport Layout Plan
Clear Zone	Residential	Undeveloped
	Commercial/Retail	Rural/Agriculture
	Industrial	Surface parking (lighting in compliance in this section)
Approach 1 Zone (A-1)	Residential	Undeveloped
		Rural/Agriculture
		Commercial/Retail
		Industrial
Approach 2 Zone (A-2)	Residential - density above 3 dwelling units per acre	Undeveloped
		Rural/Agriculture
		Residential - density not to exceed 3 dwelling units per acre
		Commercial/Retail
		Industrial
Approach 3 Zone (A-3)	Residential - density above 6 dwelling units per acre	Undeveloped
		Rural/Agriculture
		Commercial/Retail
		Industrial
		Residential - same density as adjacent Zone

(b) **Plat note**. A plat note shall be added to all subdivision plats located within the overlay zones indicating that the subdivision is subject to the airport hazard zoning district standards and regulations.

8.9. Construction methods and materials. The type of all newly constructed occupied structures within the overlay zones constructed after the effective date of the ordinance from which this section derives are to be constructed to achieve a minimum 25 decibel sound level reduction from the exterior to the interior of the structure. Compliance with the following construction standards are intended to achieve that result. Structures excluded from these standards include hangars, warehouses, barns and other similar structures and additions to existing occupied structures.

(a) **General**.

(1) Brick veneer, masonry blocks, or stucco exterior walls shall be grouted or caulked airtight.

(2) At the penetration of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts or conduits shall be caulked or filled with mortar.

(3) Window and/or through-the-wall ventilation units shall not be used.

(b) **Exterior walls**.

(1) Exterior walls other than as described in this section shall have a laboratory sound transmission class rating of at least STC-39.

(2) Masonry walls having a surface weight of at least 25 pounds per square foot do not require a furred (stud) interior wall. At least one surface of concrete block walls shall be plastered or painted with heavy "bridging" paint.

(3) Stud walls shall be at least four inches in nominal depth and shall be finished on the outside with siding-on-sheathing, stucco, or brick veneer.

(i) Interior surface of the exterior walls shall be gypsum board or plaster at least one-half-inch thick, installed on the studs.

(ii) Continuous composition board, plywood or gypsum board sheathing at least one-half-inch thick shall cover the exterior side of the wall studs behind wood or metal siding. Asphalt or wood shake shingles are acceptable in lieu of siding; however, multi-family and non-residential structures located within the city limits must also comply with non-residential and multi-family design standards.

(iii) Sheathing panels shall be butted tightly and covered on the exterior with overlapping building paper. The top and bottom edges of the sheathing shall be sealed.

(c) **Windows**.

(1) Windows other than as described in this section shall have a laboratory sound transmission class rating of at least STC-28.

(2) Glass shall be at least three-sixteenths-inch thick.

(3) All operable windows shall be weather stripped and airtight when closed so as to conform to an air infiltration test not to exceed one-half cubic foot per minute per foot of crack length in accordance with ASTM E-283-65-T.

(4) Glass of fixed-sash windows shall be sealed in an airtight manner with a non-hardening sealant, or a soft elastomer gasket or glazing tape.

(5) The perimeter of window frames shall be sealed airtight to the exterior wall construction with a sealant conforming to one of the following Federal Specifications: TT-S-00227.

(6) The total area of glass in both windows and doors in sleeping spaces shall not exceed 20 percent of the floor area.

(d) **Doors**.

(1) Doors, other than as described in this section shall have a laboratory sound transmission class rating of at least STC-28.

(2) All exterior side-hinged doors shall be solid-core wood or insulated hollow metal at least one and three-fourths-inch thick and shall be fully weather stripped.

(3) Exterior sliding doors shall be weather stripped with an efficient airtight gasket system with performance as specified in Section 1-4C. The glass in the sliding doors shall be at least three-sixteenths-inch thick.

(4) Glass in doors shall be sealed in airtight non-hardening sealant or in soft elastomer gasket or glazing tape.

(5) The perimeter of door frames shall be sealed airtight to the exterior wall construction as described in paragraph (e5) [(d)(3)] above.

(e) **Roofs**.

(1) Combined roof and ceiling construction other than described in this section and subsection (f) shall have a laboratory sound transmission class rating of at least STC-39.

(2) With an attic or rafter space at least six inches deep, and with a ceiling below, the roof shall consist of closely butted one-half inch composition board, plywood or gypsum board sheathing topped by roofing as required.

(3) If the underside of the roof is exposed, or if the attic or rafter spacing is less than six inches, the roof construction shall have a surface weight of at least 25 pounds per square foot. Rafters, joists or other framing may not be included in the surface weight calculation.

(4) Windows or dome skylights shall have laboratory sound transmission class rating of at least STC-28.

(f) **Ceilings**.

(1) Gypsum board or plaster ceilings at least one-half-inch thick shall be provided where required by paragraph (e)(2) above. Ceilings shall be substantially airtight, with a minimum number of penetrations.

(2) Glass fiber or mineral wool insulation at least two inches thick shall be provided above the ceiling between joists.

(g) **Ventilations**.

(1) A mechanical ventilation system shall be installed that will provide the minimum air circulation and fresh air supply requirements for various uses in occupied rooms without the need to open any windows, doors, or other openings to the exterior.

(2) Gravity vent openings in attic shall not exceed code minimum in number and size.

(3) If a fan is used for forced ventilation, the attic inlet and discharge openings shall be fitted with sheet metal transfer ducts of at least 20 gauge steel, which shall be lined with one-inch thick coated glass fiber, and shall be at least five feet long with one 90- degree bend.

(4) All vent ducts connecting the interior space to the outdoors, excepting domestic range exhaust ducts, shall contain at least a five-foot length of internal sound absorbing duct lining. Each duct shall be provided with a bend in the duct such that there is no direct line of sight through the duct from the venting cross section to the room-opening cross section.

(5) Duct lining shall be coated glass fiber duct liner at least one inch thick.

(6) Domestic range exhaust ducts connecting the interior space to the outdoors shall contain a baffle plate across the exterior termination which allows proper ventilation. The dimensions of the baffle plat should extend at least one diameter beyond the line of sight into the vent duct. The baffle plate shall be of the same material and thickness as the bent duct material.

8.10. Permits and variances.

(a) **Establishment of development permit**. An airport hazard zoning district development permit (AHZD development permit) shall be required to ensure conformance with the provisions of this section.

(b) **Abrogation and greater restrictions**. This section is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(c) **Future uses**. Except as specifically provided in the Zoning Ordinance, no material change shall be made in the use of land, no structure shall be erected or otherwise established, and no tree shall be planted in any zone created by this article unless a permit therefore shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient details to determine whether the resulting use, structure, or tree would conform to the regulations prescribed in this section. If such determination is in the affirmative, the permit shall be granted. No permit for a use inconsistent with the provisions of this article shall be granted unless a variance has been approved in accordance with this chapter.

(1) In the area lying within the limits of the horizontal zone and conical zone, no permit shall be required for any tree or structure less than 75 feet of vertical height above the ground, except when, because of terrain, land contour, or topographic features, such tree or structure would extend above the height limits prescribed for such zones.

(2) In areas lying within the limits of the approach zones, but at a horizontal distance of not less than 4,200 feet from each end of the runway, no permit shall be required for any tree or structure less than 75 feet of vertical height above the ground, except when such tree or structure would extend above the height limit prescribed for such approach zones.

Nothing contained in any of the foregoing exceptions shall be construed as permitting or intending to permit any construction or alteration of any structure, or growth of any tree, in excess of any height limits established by this article.

8.11 Permit procedures.

(1) Application for a AHZD development permit shall be presented to the building division on forms furnished by him/her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and maximum elevation of proposed landscape alterations all existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of AHZD. Additional information to assist in determining compliance with this section may be required.
(2) The applicant should understand that an AHZD development permit is only a permit to complete the proposed development. It is not a permit to, for example, build a house, construct a baseball field, install a drainage ditch or septic system or grade a parcel of land; a building permit must be obtained for the actual construction for those properties located within the city limits.
(3) When filed separately prior to application for building permit. Three complete sets of plans, sealed by a Texas registered engineer, architect or land surveyor are required.

(4) Applicants applying for an AHZD development permit in the ETJ shall submit to the city a letter of construction compliance for subsection 8.9, Construction methods and materials from a qualified engineer, architect or new construction inspection firm licensed and insured in the state of Texas prior occupancy.

(5) The AHZD development permit application shall include the following information:

(i) Completed AHZD development permit application form.

(ii) Applicable permit fees in city limits:

1. One- and two-family dwelling AHZD permit ($0.05/sf for residential) + $100.00.
2. Other than one- and two-family dwelling AHZD permit ($0.10/sf for commercial) + $250.00.

When applicable, the AHZD development permit application may be filed with the application for building permit or separately prior to application for building permit.

(iii) Applicable permit fees in the ETJ:

1. One- and two-family dwelling AHZD permit: $50.00.
2. Other than one- and two-family dwelling AHZD permit: $75.00.

(6) Where there is conflict between the code adopted in this section and any city, state, or federal law, the more restrictive requirements shall govern unless the less restrictive requirements are preemptive under state or federal law.

(7) The AHZD development permit shall include a checklist of other possible state or federal agency approvals needed in addition to the city.

(e) **Existing uses**. No permit shall be granted that would allow the establishment or creation of any airport hazard or permit a nonconforming use, structure, or tree to be made or become higher, or become a greater hazard to air navigation, than it was on the date of the ordinance adoption, or any amendments to this article or than it is when the application for a permit is made. Except as indicated, all applications for such a permit shall be granted.

(f) **Variance**. Any person desiring to erect or increase the height of any structure, or permit the growth of any tree, or use his property, in violation of the regulations prescribed in this section may apply to the zoning board of adjustment for a variance from such regulations in question. The application for variance shall be accompanied by a determination from the Federal Aviation Administration as to the effect of the proposal on the operation of air navigation facilities and the safe, efficient use of navigable airspace. Such variance shall be allowed where it is duly found that a literal application or enforcement of such regulations will result in unnecessary hardship and the relief granted would not be contrary to the public interest, but would do substantial justice and be in accordance with the spirit of this article. Additionally, no application for variance to the requirements of this article may be considered by the zoning board of adjustment unless a copy of the application has been furnished to the airport advisory board of the city for advice as to the aeronautical effects of the variance. If the

airport advisory board does not respond to the application within 45 days after receipt, the zoning board of adjustment may act on its own to grant or deny such application.

(g) **Obstruction marking and lighting**. Any permit or variance granted may, if such action is deemed advisable by the city manager or the zoning board of adjustment to effectuate the purpose of this article and be reasonable in the circumstances, be so conditioned as to require the owner of the structure or tree in question to allow the city manager to install, operate, and maintain, at the expense of the city, such markings and lights as may be necessary.

8.12. Abatement of violations. The city council may institute in any court of competent jurisdiction an action to prevent, restrain, correct, or abate any violation of this article or of any order or ruling made in connection with the administration or enforcement of this article, including, but not limited to, an action for injunctive relief as provided by the Airport Zoning Act, as amended, V.T.C.A., Local Government Code § 241.044.