ARTICLE 3. AIRPORT HAZARD ZONING AND SURROUNDING LAND USE ORDINANCE

Sec. 10.037. Introduction

(a) The City of San Marcos, in accordance with the authority and requirements set forth in the Texas Airport Zoning Act (Texas Local Government Code, §§241.001 et seq.) and V.T.C.A, Local Government Code Chapter 211 (Municipal Zoning Authority) has established these airport zoning regulations to support land use compatibility and airspace protection for the San Marcos Regional Airport and the community.

Sec. 10.038. Short Title

These regulations shall be known and may be cited as the "San Marcos Regional Airport – Airport Hazard Areas and Surrounding Land Use Ordinance."

Sec. 10.039. Definitions

The following words and phrases shall have the meanings ascribed to them in this section:

Airport - The San Marcos Regional Airport located in San Marcos, Texas; including the existing and ultimate development of the facility. The boundaries of which are shown in the Airport Layout Drawing.

Airport Elevation - The established elevation of the highest point on the Runways, either existing or as set forth in the Airport Master Plan, at the Airport measured in feet above mean sea level (MSL).

Airport Hazard – Any Structure, Tree, or use of land which obstructs the airspace required for the flight of aircraft or obstructs or interferes with the control, tracking, and/or data acquisition in the landing, takeoff, or flight at an airport or any installation or facility relating to flight, tracking, and/or data acquisition of the flight craft; is hazardous to, interferes with, or obstructs such landing, takeoff, or flight of aircraft; or is hazardous to or interferes with tracking and/or data acquisition pertaining to flight and flight vehicles. These hazards include, but are not limited to, wildlife attractants, communication/ electrical facilities, and exterior lighting that could be disruptive to aircraft operations.

Airport Layout Drawing – A map identifying the existing and proposed infrastructure at the Airport. A current version of the Airport Layout Drawing is available at the City of San Marcos' Engineering and CIP Department and is available upon request.

Approach Surface - A surface longitudinally centered on the extended Runway centerline, extending outward and upward from the ends of the Primary Surface and at the same slope as the approach zones height limitation slope set forth in Section 4. In plan, the perimeter of the Approach Surface coincides with the perimeter of the approach zone.

Compatible Land Use - Any use of land adjacent to or in the immediate vicinity of the Airport that does not endanger the health, safety, and welfare of the owners, occupants, or users of the land because of levels of noise or vibrations or the risk of personal injury or property damage created by the operations of the Airport, including the taking off or landing of aircraft.

Conical Surface – A surface extending outward and upward from the periphery of the Horizontal Surface at a slope of twenty (20) to one (1) for a horizontal distance of 4,000 feet which in plan coincides with the perimeter of the conical zone.

FAA – The Federal Aviation Administration.

Hazard to Air Navigation – An obstruction or use of land determined to have a substantial adverse effect on the safe and efficient utilization of navigable airspace.

Horizontal Surface – A horizontal plane one-hundred fifty (150) feet above the established Airport Elevation which in plan coincides with the perimeter of the horizontal zone.

Nonprecision Instrument Runway – 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, and for which no precision approach facilities are planned, or indicated on an FAA planning document.

Overlay Zones – The defined areas establishing land use restrictions set forth in Section 3.

Person – An individual, firm, partnership, corporation, company, association, joint stock association, business organization or body politic and includes a trustee, receiver, assignee, administrator, executor, guardian, or other representative.

Precision Instrument Runway – A Runway having an existing or planned instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR).

Primary Surface – 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. The width of the Primary Surface of a Runway will be that width prescribed in 14 CFR Part 77.19 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.

Runway – A defined area on an airport prepared for landing and takeoff of aircraft along its length. Existing and planned Runways are shown in the Airport Master Plan.

Runway Protection Zone (RPZ) – An area at ground level prior to the threshold or beyond the Runway end to enhance the safety and protection of people and property on the ground. The existing and proposed RPZs for all Runways at the San Marcos Regional Airport are identified on the Airport Layout Drawing (ALD).

Structure – An object, including a mobile object, constructed or installed by man including, but not limited to, buildings, towers, cranes, smokestacks, poles, earth formations, overhead power lines, and traverse ways. Traverse ways are considered to be the heights set forth in 14 CFR Part 77.23

TxDOT Aviation – The Texas Department of Transportation – Aviation Division.

Transitional Surfaces – Surfaces extending perpendicular to the Runway centerline and the extended Runway centerline outward from the edges of the Primary Surface and the Approach Surfaces at a slope of seven (7) feet horizontally for each one (1) foot vertically to where they intersect the Horizontal Surface. Transitional Surfaces for those portions of the precision approach surface which extend through and beyond the limits of the Conical Surface extend at a slope of seven (7) feet horizontally for each one (1) foot vertically for a distance of five-thousand (5,000) feet measured horizontally from either edge of the Approach Surface and perpendicular to the extended Runway centerline.

Tree - Any living, self-supporting woody plant species which normally grows to an overall minimum height of 15 feet.

Sec. 10.040. General

(a) *Height Measurement* - For the purpose of determining the height limits in all zones set forth in this ordinance and as shown on the zoning map, the datum shall be height above mean sea level (MSL) elevation as measured in feet.

(b) *Existing Nonconforming Uses* – The regulations prescribed herein shall not be construed as to require changes in the use of any land or other change or alteration of any Structure or Tree not conforming to these regulations as of the effective date of these regulations or otherwise interfere with the continuance of any nonconforming use. Nothing contained herein shall be construed as to require any change in the construction, alteration, or intended use of any nonconforming Structure, the construction of which was begun prior to the effective date of these regulations and is diligently prosecuted.

Any Person who desires to replace, rebuild, substantially change, or repair an Airport Hazard that is an existing nonconforming use shall be allowed to do so as long as the modification does not increase the height or makes it a greater Hazard to Air Navigation.

(c) *Communications Facilities and Electrical Interference* – No proposed land-use or development shall cause electrical interference with navigational signals or radio communications at the Airport or with radio or electronic communications between the Airport, air traffic control, and an aircraft. Proposals for the location of new or expanded radio, radio-telephone, television transmission facilities, electrical transmission lines, or other transmission lines or facilities shall be coordinated with the FAA and TxDOT – Aviation prior to approval.

(d) *Emissions* – No proposed land-use or development shall, as part of its regular operation, cause emissions of smoke, ash, vapor, gas, dust, steam or other emissions that obscure visibility of pilots or conflict with airport operations as described in the Federal Aviation Administration's (FAA) Aeronautical Information Manual (AIM). Any proposed land-use or developments within any of the proposed height hazard zones identified in Section 4 of this ordinance that are expected to create said emissions should be studied in accordance with current FAA guidance materials and formally reviewed by the FAA through the submission of an FAA Form 7460-1. A "no hazard" determination must be obtained from the FAA to permit the proposed land-use or development.

(e) *Visual Impairment* – No proposed land-use or development shall have exterior lighting or generate a glare/glint that could create a visual impairment or distraction to pilots or the Air Traffic Control Tower (ATCT) personnel at the Airport. Any proposed land-use or developments that are expected to potentially create a visual impairment must be reviewed in compliance with applicable FAA policies.

(f) *Wildlife Attractants* – No proposed use or development within the buffer zone described in Section 4 of this ordinance shall be designed or constructed in a manner to attract birds or other wildlife near the airport. No proposed wastewater treatment facilities, wetlands mitigation, dredged spoil containment areas, or solid waste landfills shall be located within 10,000 ft of the end of a runway unless the development has been reviewed by a qualified wildlife biologist and proper wildlife mitigations have been established.

(g) *Variances* – Any Person who desires to use their property in violation of any of these regulations contained herein must apply to the City of San Marcos Zoning Board of Adjustments (ZBOA) for a variance in accordance with Chapter 2, of the San Marcos Development Code.

(h) *Adherence with State Laws* – Any actions brought forth by any Person or taxpayer as a result of the administration, enforcement, or the contesting of these regulations will be in accordance with the provisions of the Texas Local Government Code, §§241.001 and other applicable State laws.

Sec. 10.041. Land–Use Compatibility

The purpose of this section is to 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 impacts and protect the Airport from incompatible development.

(a) *Overlay Zones* – Overlay zones are hereby established as described below to implement land use restrictions. A map of the Overlay Zones is on file with the City of San Marcos' Engineering and CIP Department and is available upon request.

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

(2) *Runway Protection Zone* – – A runway protection zone is established on the ground directly beneath and following the boundaries of a Runway Protection Zone (RPZ) shown on the Airport Layout Drawing.

(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 the Approach Surface, within the limits of the Horizontal Surface, for each Runway extending outward from the Runway Protection 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 the Approach Surface, within the limits of the Horizontal Surface, for each Runway extending outward from the A-1 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 the Approach Surface, within the limits of the Horizontal Surface, for each Runway extending outward from the A-2 zone.

(6) *Transition Zone* – A transition zone is established on the ground symmetrically located on either side of the primary zone, Runway Protection Zone, A-1 zone, and A-2 zone described above, and has a variable width as shown on the Overlay Map on file with the City's Engineering and CIP Department which is available upon request. The width of the transition zone is determined in the same manner as transitional surfaces, extending outward and upward at right angles to the centerline of the primary zone, Runway Protection Zone, A-1 and A-2 zones at a slope of seven to one (7:1) to where they intersect with the Horizontal Surface.

(7) *Buffer Zone* – A buffer zone is established on the ground located within 500 feet of the existing and proposed future Airport property line shown on the Airport Layout Drawing.

(b) *Land Use Restrictions* – The following table specifies Non-Compatible and Compatible Land Uses permitted within each Overlay Zone. The definitions for each land use are set forth in the Land Use Matrix contained in Chapter 5 of the San Marcos Development Code. Where the land uses or densities specified in this ordinance conflict with the zoning regulations in Chapter 4 of the San Marcos Development Code, the most stringent requirement shall apply.

Overlay Zone	**Non-Compatible Land Use**	**Compatible Land Use**
Primary Zone	Any use <u>not</u> included in the Airport Layout Drawing	Any use included in the approved Airport Layout Drawing
Runway Protection Zone	Recreational, Commercial, Industrial, Residential	Undeveloped, Agriculture
Approach 1 Zone (A-1)	Residential	Undeveloped, Agriculture/Recreational, Commercial, Industrial
Approach 2 Zone (A-2)	Residential – density above 3 dwelling units per acre	Undeveloped, Agriculture/Recreational, Residential - density not to exceed 3 dwelling units per acre, Commercial, Industrial
Approach 3 Zone (A-3)	Residential – density above 6 dwelling units per acre	Undeveloped, Agriculture/Recreational, Residential - density not to exceed 6 dwelling units per acre, Commercial, Industrial

Transition Zone	Residential – density above the prescribed density of the adjacent Zone.	Undeveloped, Agriculture/Recreational, Commercial, Industrial, Residential - same density as adjacent Zone

(c) *Plat Note* – The following plat note shall be added to all subdivision plats located within the Overlay Zones: "This subdivision is subject to the City of San Marcos airport hazard zoning district standards."

Sec. 10.042. Height Hazard Regulations

The purpose of this section is to provide height hazard zoning regulations for the airport by establishing standards that will protect the airspace surrounding the Airport from Airport Hazards.

(a) *Notice Requirements* – All developments meeting the criteria set forth under 14 CFR Part 77.9 *Construction or Alteration Requiring Notice* must be reviewed by the FAA. All proposed developments meeting these requirements must be submitted to the FAA via a FAA Form 7460-1 within the time parameters set forth in 14 CFR Part 77.7 *Form and Time of Notice*. The notification requirements set forth in CFR Part 77.9 are shown on the map that is on file with the City of San Marcos' Engineering and CIP Department and is available upon request.

The FAA has established a Notice Criteria Tool on its website which can be used to determine whether a FAA Form 7460-1 needs to be submitted per 14 CFR Part 77.9.

(b) *Zones* – In order to carry out the provisions of these regulations, there are hereby created and established certain zones which include all of the land lying beneath the Approach Surfaces, Conical Surface, Horizontal Surface, and Transitional Surfaces as they apply to the Airport. Such surfaces are shown in the Airport's Height Hazard Map which is available for review in the City of San Marcos' Engineering and CIP Department and further described in the following subsections.

(1). *Approach Zones* - An approach zone is established beneath the Approach Surface at the end of all existing and proposed Runways at the Airport. The dimensions of the approach zones associated with each Runway end at the San Marcos Regional Airport are defined in the table below. All approach zones and surfaces begin 200 ft. from the end of the paved Runway and start at the established Runway end elevation.

Runway	Inner Width (ft.)	Outer Width (ft.)	Length (ft.)	Slope
Runway 8	1,000	3,500	10,000	34:1
Runway 13	1,000	16,000	50,000	50:1 (1st 10,000 ft.) 40:1 (remaining 40,000 ft.)
Runway 17	1,000	4,000	10,000	34:1
Runway 26	1,000	4,000	10,000	34:1
Runway 31	1,000	4,000	10,000	34:1
Runway 35	1,000	4,000	10,000	34:1

(2). *Transition Zones* – Transition zones are hereby established beneath the Transitional Surface adjacent to each Runway and Approach Surface as indicated on the Airport's Height Hazard Map. Transitional Surfaces, symmetrically located on either side of Runways, have variable widths as shown in the Airport's Height Hazard Map. Transitional Surfaces extend outward and upward at right angles to the Runway centerline and the Runway centerline

extended. The slope of the surfaces is seven to one (7:1) from the sides of the Primary Surface and from the sides of Approach Surfaces.

(3) *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 Runways 8/26, 13/31, and 17/35 and connecting the adjacent arcs by lines tangent to those arcs.

(4). *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 twenty to one (20:1) for a horizontal distance of 4,000 feet.

In addition to the zones defined above, the FAA establishes and updates airport design related zones as set forth in FAA Advisory Circular 150-5300-13 (current edition) entitled *Airport Design*. These zones will be a consideration in evaluating the height of an object.

(c) *Height Limitations* – Except as otherwise provided in this ordinance, no Airport Hazard shall be erected, altered, maintained, or allowed to grow in any zone created by this ordinance 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 identified zones is considered to be only in the zone with the more restrictive height limitation.

Nothing contained in these regulations shall be construed as prohibiting the growth, construction, or maintenance of any structure or tree to a height of up to fifty (50) feet above the surface of the land at its location.

(d) *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 of San Marcos 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.

All procedures for permitting and enforcement of this ordinance shall be in accordance with Chapter 2 of the San Marcos Development Code.

Figure 1 – Airport Layout Drawing

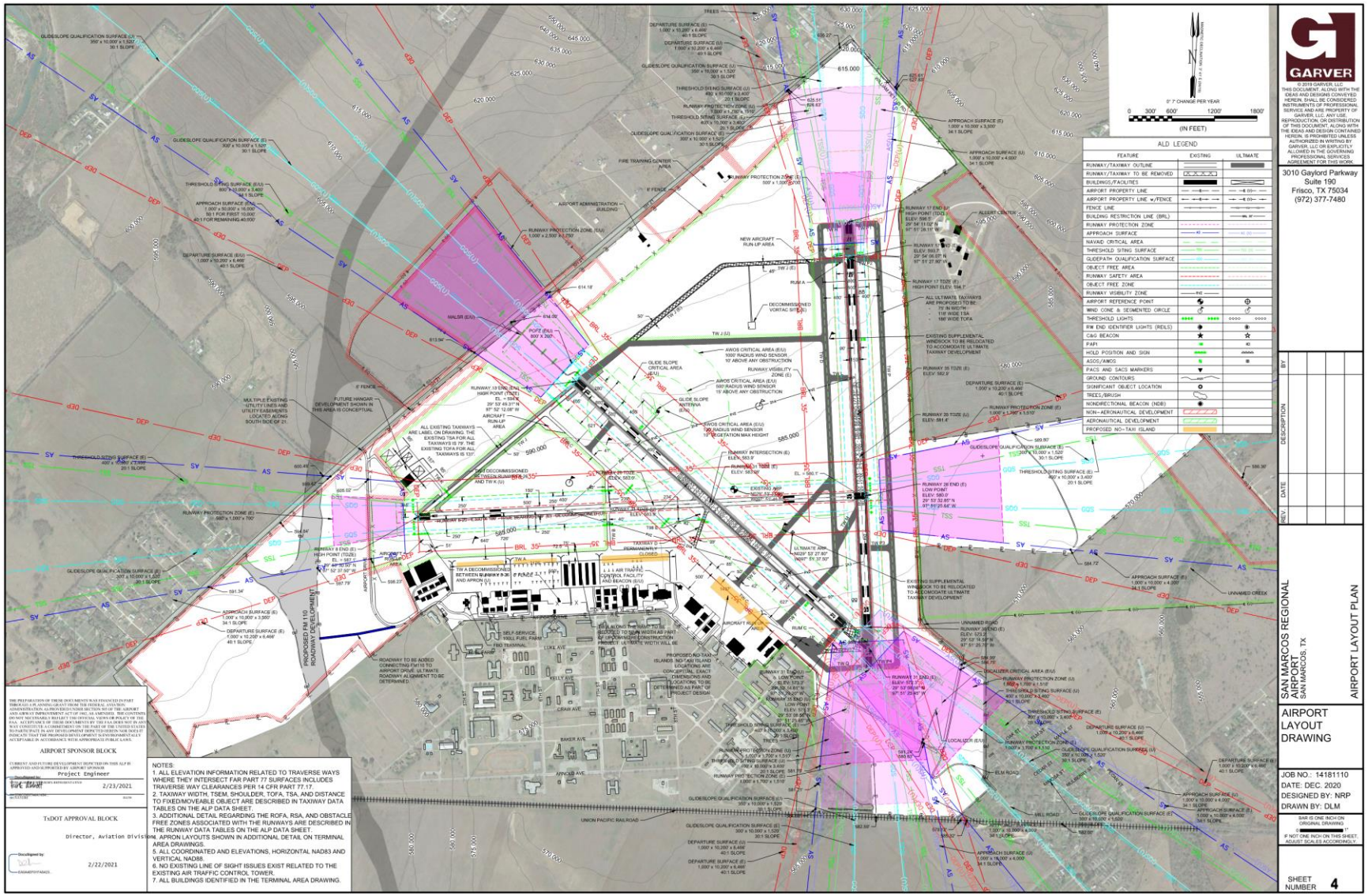

Figure 2 – Land-Use Compatibility Zones

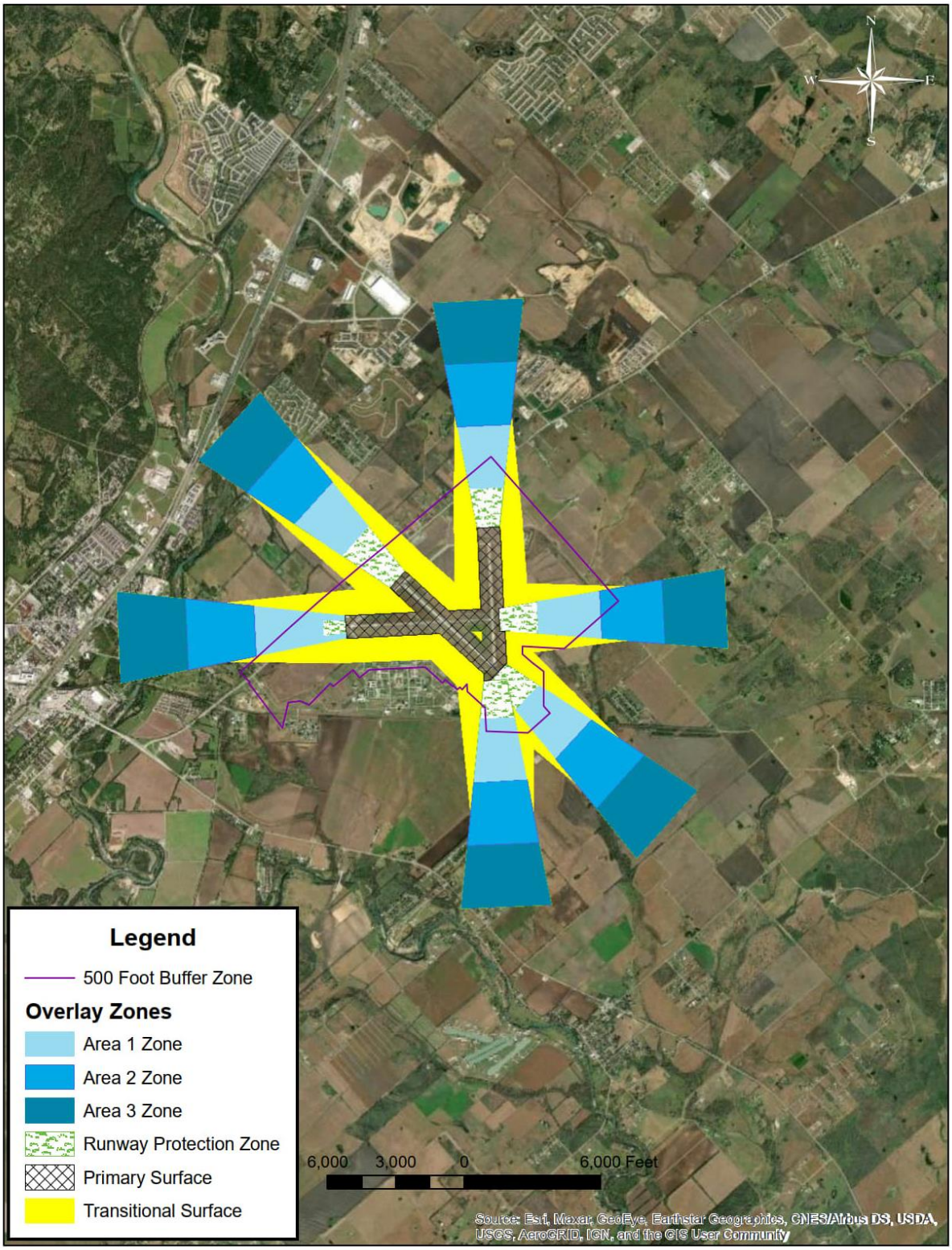

Figure 3 – 7460 Notice Criteria

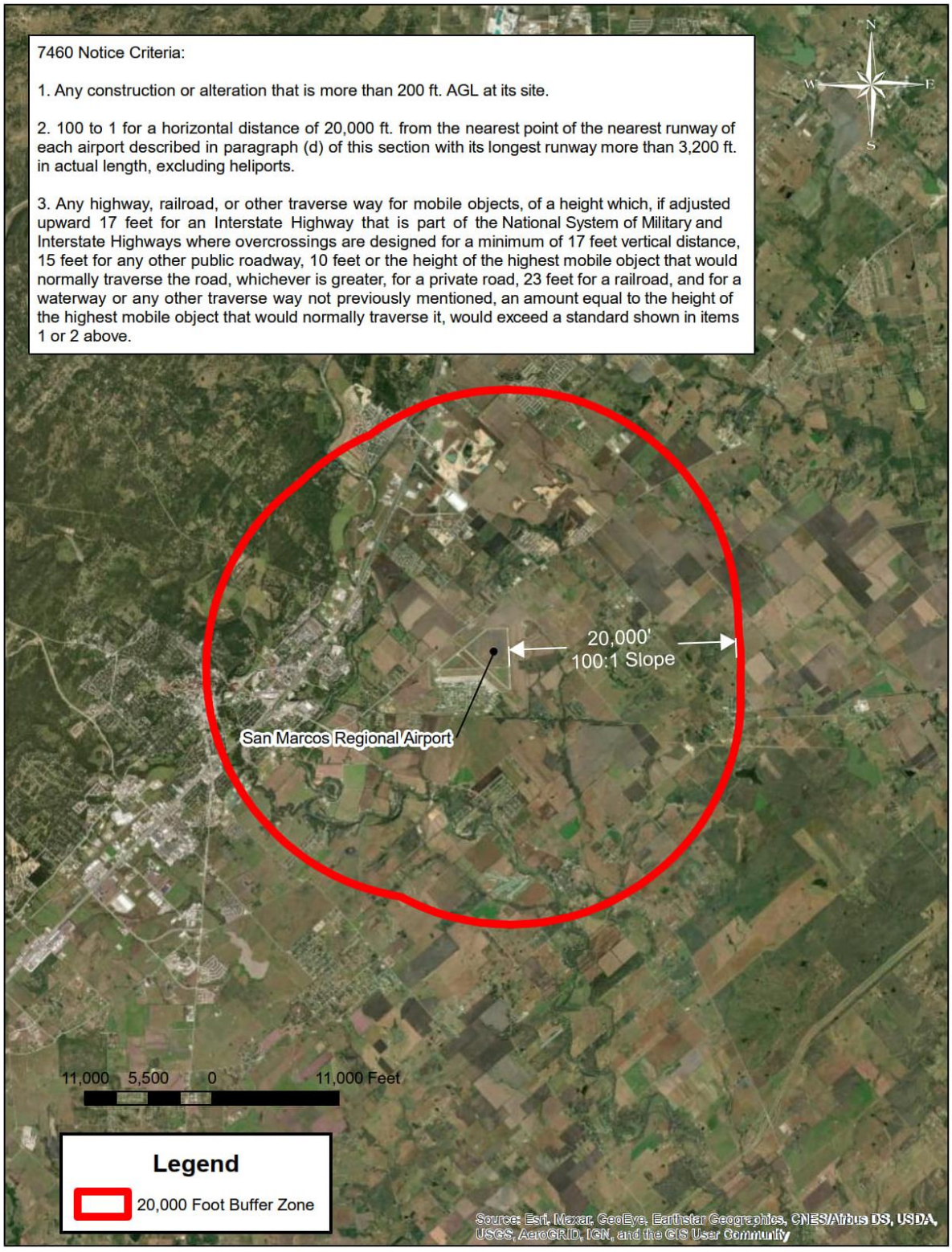

Figure 4 - Height Hazard Zones