

Master Plan Update

A stylized, dark silhouette of a mountain range with several peaks, positioned behind the main title text.

Durango La Plata County Airport

G. Airport Environs Land Use Planning

Airport Environs Land Use Planning

Introduction

The relationship between airports and surrounding land uses is a very sensitive issue in most communities today, and must be carefully monitored and regulated to avoid future airport/community conflicts. Therefore, local efforts to maximize the public benefit of airports, while preserving the substantial public investment in these facilities, must be balanced with obligations of public safety and policies to prevent, minimize and/or eliminate the negative impacts of air transportation. It should also be emphasized that local governmental entities have the responsibility of implementing compatible land use development in the vicinity of airports, and this obligation is set forth in the grant assurance agreements between the Federal Aviation Administration (FAA) and the local airport sponsor.

The land use planning recommendations set forth in this document are intended to present a clear and concise statement of policy and advice regarding the ownership and development of land within the airport environs to homeowners and buyers, home builders, developers and representatives of the various entities having land use control jurisdiction.

These recommendations were developed from technical information presented in the following documents:

- House Bill 1041 *Model Land Use Regulations*, 1976/prepared by: Colorado Land Use Commission.
- *Airports And Compatible Land Use Volume 1*, 1999/prepared by: The Washington State Department of Transportation (WSDOT) Aviation Division.

- *Airport Land Use Compatibility Guidelines*, 1994/prepared by: The Airport Technology and Planning Group, Inc. (AirTech) for the Oregon Department of Transportation Aeronautics Section.
- *Airport Land Use Planning Handbook*, 1993/prepared by: Hodges & Shutt for the California Department of Transportation Division of Aeronautics.

The following narrative will identify the primary issues associated with airport land use compatibility, present options which are available to the City of Durango and La Plata County for resolving and/or preventing future land use incompatibility issues and make recommendations as to which options are most appropriate for implementation to achieve land use compatibility within the airport environs.

Land Use Compatibility Issues

The two primary issues associated with land use planning in the vicinity of airports are safety and noise. The issue of safety pertains to both the public on the ground and the public involved with the flight operation. The issue of noise is related to the operation of an aircraft and its impact upon the surrounding environs of the airport. Each of these issues will be examined in the following narrative, and a detailed description of existing land uses surrounding the airport were presented in the *INVENTORY OF EXISTING CONDITIONS* chapter of this document.

Safety

The safety issue can be subdivided into two categories: 1) the safety of the public on the ground, and 2) the safety of the public in the air (i.e., the aircraft operator and any passengers). Because specific areas on and around airports are subject to varying degrees of accident potential, it is incumbent upon the airport sponsor to provide the necessary land use controls to minimize public impact from potential aircraft accidents. To assist communities in the appropriate designation of these land use control boundaries, the FAA has published two documents, Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace* and Advisory Circular (AC) 150/5300-13, *Airport Design*. FAR Part 77 defines specific airspace areas around airports, referred to as "Imaginary Surfaces", which should remain clear of objects for the protection of aircraft operators. For comparison, AC 150/5300-13 provides specific requirements for airfield design, as well as recommendations for land use control, which should be implemented to protect both the public in the air and on the ground. The general structure of most airport-related land use regulations incorporate the guidelines set forth in these two FAA documents.

Noise

The issue of aircraft noise and its impact on surrounding land uses must be carefully addressed at all airports to avoid future community conflicts. In general, the impact of aircraft noise within the airport environs is affected by the number of aircraft operations, the types of aircraft conducting the operations and the degree to which aircraft noise intrudes upon existing ambient noise levels. As noted in the *Environmental Review* chapter of this document, the forecast increase in operations at Durango will not significantly increase the size of the noise contours through the planning period; however, surrounding land uses will be subject increasing numbers of overflights, and these operations will occur within areas where ambient noise levels are relatively low.

Land Use Compatibility Strategies

Each airport is different in its role within the national transportation system and these differences are most often defined by geographical location, size, airfield configuration, ownership/operation and surrounding land use patterns. Therefore, each airport has a unique set of issues which must be evaluated in the development of land use control guidelines. The exercise of both land use and development controls is vested within the authority of local city, county or state governments, and emphasizes the importance of developing a comprehensive land use control program. It is much easier and less costly to prevent the development of incompatible land uses within the vicinity of an airport, than it is to resolve these issues after they occur. Therefore, the benefits of utilizing the following preventative land use control measures (i.e., planning, ordinances and acquisition) will be presented.

Planning¹

Community and/or regional planning efforts designed to promote compatible land uses in the vicinity of airports must be structured to achieve specified safety and noise-related guidelines through the preparation of a comprehensive plan. The City of Durango and La Plata County have taken this initial step with the completion of comprehensive plans for both the City and the County. Since the airport and its direct environs reside entirely within unincorporated areas of La Plata County, land use compatibility issues are focused on La Plata County's land use compatibility efforts and policies. The current land use regulations are an outgrowth of the *LA PLATA COUNTY MASTER PLAN* of 1984 and the initial *COUNTY COMPREHENSIVE USE PLAN: ELEMENT 1-POLICY PLAN*, created in 1990.

¹ Portions of the narrative in the planning section of this document are taken verbatim, or paraphrased from the La Plata County Planning Department website.

Today the 1990 comprehensive use plan is referred to as the *LA PLATA LAND USE CODE*. The emphasis of the *LAND USE CODE* is the concept of compatibility between adjacent properties and the mitigation of impacts to improve compatibility rather than the imposition of restrictive land use classifications. *THE LAND USE CODE* utilizes a permitting process to regulate development within unincorporated La Plata County.

As the *LAND USE CODE* matured, a county-wide survey indicated that there was a shift in attitudes regarding land use within the unincorporated areas of the county. This new sentiment suggested that mitigation of impacts was only addressing a part of the land use issue. County-wide organization was needed. To meet this need the county established 10 planning districts. The district planning process identified a future vision for each district. It further developed goals and objectives, preferred land use types, locations and densities. While each planning district possesses its own unique vision, goals and objectives, several prevailing themes tie each plan together. These themes emphasize retaining rural character, accommodating new growth, protecting the environment, respecting private property rights and ensuring housing affordability.

While the district plans share common themes, there are a number of county-wide issues that are either inadequately addressed in the district plans or were not addressed during the district planning process at all. Therefore, *while the comprehensive plan is intended to incorporate and uphold the intent of the district plans, it is also intended to provide further detail and guidance to the overall growth management system of La Plata County.*

The current *LA PLATA COUNTY COMPREHENSIVE PLAN* consists of 12 plan elements. Element number 8 of the comprehensive plan is for the Airport Area and the focus of efforts of this report. The Airport Area is made up of two La Plata County planning districts; one, the *Florida Mesa Planning District* and, two, the *Southeast Planning District*. As of 2001, only the Florida Mesa District had an adopted land use plan identifying preferred land uses in the District. This plan identified lands directly northwest of Durango-La Plata County Airport as appropriate for agriculture and low-density residential. The balance of the land that surrounds the Durango-La Plata County Airport resides within the Southeast Planning District of La Plata County and has no specific designated land uses. Development in the Southeast District is based solely on county land use code requirements which are largely based on mitigating impacts and providing compatibility with existing surrounding land uses.

Regulations, Ordinances and Enforceable Land Use Policies

The next step in the planning process for communities wishing to protect the airport and its environs from the development of obstructions and/or incompatible land uses is the adoption of specific airport-related zoning ordinances. References made hereafter to the term “zoning” are made using the term merely in a generic sense and it is not the

intended purpose of this document to propose the establishment of new zoning regulations for La Plata County. It is understood that any such "zoning recommendations" for La Plata County would take the form of enforceable land use policies. In general, traditional zoning defines the uses permitted on a parcel of land within an established boundary, and is enforced through the use of police powers of the state and/or local governments. Therefore, zoning should be used carefully to accommodate the specific characteristics of the airport and the unique conditions affecting both the community and surrounding area.

Height Restrictions. As identified previously, the FAA has adopted FAR Part 77 to identify those objects around airports which may, or may become an obstruction and/or a hazard to air navigation. Current obstructions within the existing defined FAR Part 77 surfaces are identified on Airport Obstruction Charts published by the National Ocean Service. The FAA also requires that an "airspace form" (i.e., FAA Form 7460-1 *Notice of Proposed Construction or Alteration*) be completed by any person wanting to erect an object within 20,000-feet of the runway at Durango that would exceed a slope of 100:1 from the established airport elevation. The FAA has also published AC 150/5190-4A, *A Model Zoning Ordinance to Limit Height of Objects Around Airports*, for use by local jurisdictions to regulate and/or control the height of objects in the vicinity of airports. A model of this ordinance prepared for Durango-La Plata County Airport is included in Appendix Four of this document.

Airport-Related Noise. To assist local jurisdictions address the issues of noise, the FAA has generated a recommended land use table (published in FAR Part 150 guidelines), which provides guidelines to communities on what constitutes a local land use incompatibility. These guidelines were developed following years of experience and numerous studies on airport-related noise, and its effect on individuals. However, state and local governments must define and establish official land use regulations and determine what constitutes land use incompatibility. A copy of the Land Use Compatibility Matrix will be presented in the *Environmental Review* chapter of this document.

House Bill (HB) 74-1041. Pursuant to HB 74-1041, the State of Colorado adopted and published specific land use compatibility guidelines in 1976, entitled *Model Regulations for Areas Around Airports*. These regulations, which were developed for implementation through "airport overlay zoning" techniques, sought to combine the FAA's FAR Part 77 height restriction guidelines and airport noise data with the future design parameters of the airport. Today, variations of the HB 74-1041 regulations are being developed which combine FAA's FAR Part 77 and Part 150 development guidelines with current airport design standards, as specified by AC 150/5300-13. The *LA PLATA COUNTY COMPREHENSIVE PLAN* recommends that development of a new land use overlay district be prepared to revise the airport's existing land use designation. This new

overlay district will likely incorporate both the airport environs land use recommendations specified in this document and the development guidelines specified in HB 74-1041.

Land Use Planning Authority. In general, authority for planning is granted to counties by the State of Colorado under Section 30-28-106 of the Colorado Revised Statutes (C.R.S.). In part, the statute reads:

It is the duty of a county planning commission to make and adopt a master plan for the physical development of the unincorporated territory of the County.

The aforementioned *LA PLATA COUNTY COMPREHENSIVE PLAN* is intended to guide planned growth while protecting the environment and enhancing the lives of county residents. The *COMPREHENSIVE PLAN* is the vehicle that propels this *AIRPORT MASTER PLAN UPDATE* to the called for action steps described in the next section of this chapter.

Airport Environs Land Use Plan

As in previously presented in sections of this chapter, future land use compatibility planning efforts undertaken by La Plata County, within the airport environs, are to address specific safety, height restriction and noise issues associated with the operation of Durango-La Plata County Airport. To this end, specific airport environs land use planning objectives for Durango-La Plata County Airport are found in *Chapter Nine: Airport Area*, of the *LA PLATA COUNTY COMPREHENSIVE PLAN*. The goals and key points of chapter nine are taken from the Comprehensive Plan chapter summary as follows:

GOALS

Goal 9.1: To protect the safety of persons and property surrounding the airport.

Goal. 9.2: To protect the present and future operations of the airport.

KEY POINTS

1. Land uses around the airport are typically of concern if they pose a safety hazard to residents or are a threat to the continued operation of the facility.
2. Lands around the airport that are located within the Southeast Planning District are not designated for any particular use, thus providing little guidance for decision-makers to determine what may be appropriate in the area.

3. Due to the unique importance of the airport to the economic health and livability of La Plata County it is critical that the land uses surrounding the airport do not unduly interfere with airport operations.

These goals and key points were then transformed into individual Action Items (AI) in Chapter 12 of the Comprehensive Plan as prioritized below:

AI9.1: Continue to participate in airport commission's update of airport master plan.

AI9.2: Establish an Airport Area of Influence around the airport, developing a land use plan for that area that incorporates the needs of the airport facility as well as the concerns of area residents and property owners.

AI9.3: In accordance with C.R.S. 24-65-102(1) adopt "1041 Powers" to regulate land uses around the Durango-La Plata County Airport as an area of State interest.

AI9.4: Identify and consider adoption of land use code requirements for Aviation easements.

AI9.5: Identify lands surrounding the airport that Airport Commission expects to need for further expansion.

AI9.6: Identify and consider establishment of requirements for special construction techniques to be used on projects within the airport area of influence.

The regulations set forth in HB 74-1041, as mentioned in the previous section of this chapter, should be utilized as the framework for addressing the individual land use compatibility issues through the implementation of a single zoning ordinance. The new ordinance would likely be implemented as an "overlay district", with the specified restrictions and requirements of the district being supplemental to those of the underlying district.

The first step in the land use planning process is to accurately define the appropriate boundaries of the proposed overlay district through the identification of the Airport Influence Area. A definition of the Airport Influence Area and a description of its various components are described in the following text.

Airport Influence Area

The Airport Influence Area (AIA) is defined as that property within the environs of the airport, where particular land uses are either influenced by, or will influence the operation of the airport, in a positive or negative manner. The AIA at Durango-La Plata

County Airport delineates those areas, within the jurisdictional unincorporated boundary of La Plata County, where residents may hear or see aircraft operating at the airport, or where certain types of land uses may impact the safe operation of the facility.

The AIA boundary presented on the following illustrations was established based on a number of factors, which include: typical flight paths for aircraft operating at the airport, aircraft noise contours associated with the operation of these aircraft and FAR Part 77 regulations defining the height of objects that may affect the navigable airspace. Therefore, it is recommended that the outer boundary of the airport's Part 77 horizontal surface be designated as the AIA. The AIA is further subdivided into several individual zones, which specify various land use regulations and guidelines. Two potential overlay zoning development scenarios have been prepared to analyze the future zoning recommendations for the Durango La Plata County Regional Airport Environs.

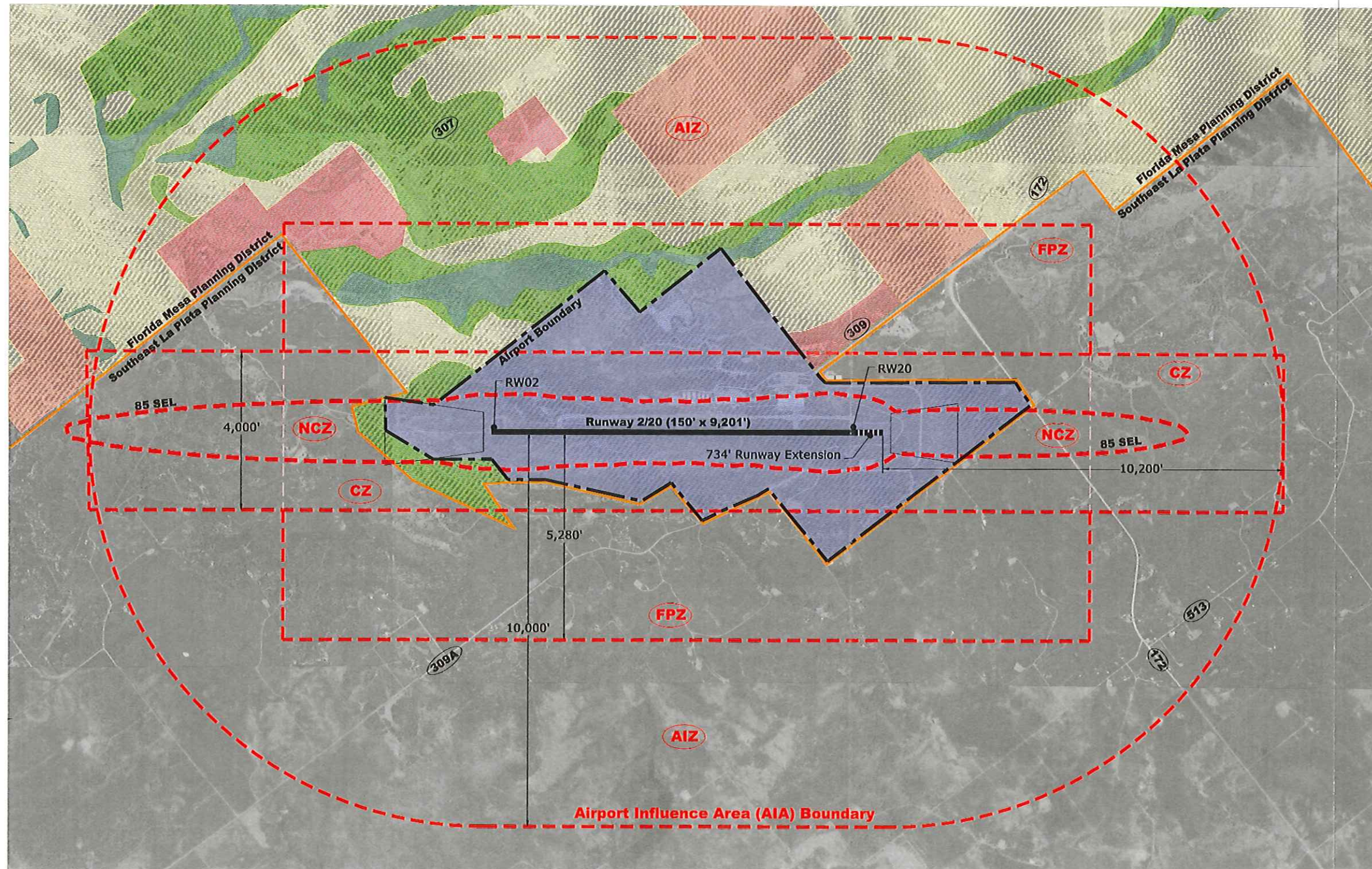
For Scenario One, as specified by HB 74-1041, these individual zones include the Critical Zone, the Noise Control Zone, the Flight Pattern Zone and the Airport Influence Zone. For Scenario Two, as specified by WSDOT's aviation land use document, these individual zones include the Runway Protection Zone, the Inner Safety Zone, Inner Turning Zone, Outer Safety Zone, Sideline Safety Zone, and the Traffic Pattern Zone.

Airport Land Use Overlay District/Scenario One

The individual overlay zoning recommendations for Scenario One are presented in the following text.

Critical Zone (CZ). The CZ boundary is rectangular in shape and centered about the runway. It is defined by a 2,000 foot centerline offset on each side of the runway that extends approximately 10,200 feet beyond the runway end, but does not include the defined Noise Control Zone (NCZ). This area is identified as CZ on Figure G2 *AIRPORT LAND USE OVERLAY DISTRICTS/SCENARIO ONE*.

Land use development restrictions within the zone should apply to all noise sensitive uses (e.g., schools, churches, hospitals, etc.) and any uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, explosive/hazardous storage, overhead utilities, wildlife hazards, etc.). However, residential development would be permitted to a maximum density of one dwelling unit per 35 acres. Development densities within non-residential areas would be limited to less than 40 people per acre. The achievement of these maximum densities is dependent the La Plata County Land Use Code (LPLUC) standards related to lot size, protection of critical lands, avoidance of hazard areas, roadway setbacks, and other sited development and subdivision standards. Future land use development guidelines, as presented in Table G1 entitled *RECOMMENDED OVERLAY ZONING GUIDELINES/SCENARIO ONE*, should



Overlay Zoning Legend

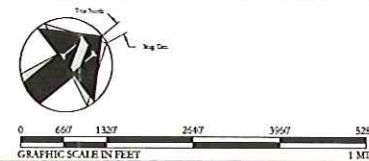
- CZ** **Critical Zone (CZ).** Land use development restrictions within the CZ should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), including uses that promote public assembly and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, etc.). Residential uses and uses that promote public assembly would be discouraged, but not prohibited requiring consideration of special criteria by the permit authority. Residential unit density to be determined by county planning officials.
- NCZ** **Noise Control Zone (NCZ).** Land use development restrictions within a specified NCZ should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), uses that promote public assembly and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, etc.). In addition, residential development would likely be restricted outright or density restricted depending on the specified noise metric utilized. Either DNL or SEL contour modeling could be generated to define various NCZs. (Boundary to be determined after development and review of airport noise contours.)
- FPZ** **Flight Pattern Zone (FPZ).** Land use development restrictions within the FPZ should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.). Uses that promote public assembly would be discouraged, but not restricted requiring consideration of special criteria by the permit authority. Residential unit density to be determined by county planning officials.
- AIZ** **Airport Influence Zone (AIZ).** Land use development restrictions within the AIZ should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.); however, residential development would be permitted.

Land Use Legend

- Agricultural/Rural Residential
- Industrial
- Public
- Tribal Lands
- Pinon-Juniper Bands
- Critical Lands

Figure G1 **Airport Land Use Overlay Districts/Scenario One**
(Generalized HB 74-1041 Guidelines)

Source: Aerial photography by Aerial Data Service, Tulsa, OK, on May 1st, 2001 and USGS Digital Ortho Quad, 1993.
Land Use taken from Florida Mesa Planning District Land Use Classification Map, La Plata County, 1999.



require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB(A) noise reduction level within residential development and the public spaces of permitted uses.

Noise Control Zone (NCZ). The NCZ boundary is defined by the 85 Single Event Sound Exposure Level (SEL) noise contour of the Canadair Regional Jet (CRJ-200) commercial service aircraft. The CRJ-200 was selected because of its' projected increased operational use through the planning period and its' existing noise metrics, which correspond to the Canadair Challenger business jet. The 85 SEL noise contour was selected for use in defining the NCZ due to the limited coverage of the Day Night Level (DNL) contours and the fact that the 85 SEL level generally defines the threshold of sleep disturbance for individual aircraft operational occurrences. This area was identified as the NCZ on Figure G1.

Land use development restrictions within the NCZ should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), including residential uses, uses that promote public assembly and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, explosive/hazardous storage, overhead utilities, wildlife hazards, etc.). Future land use development guidelines should also require dedication of an aviation easement and include construction methods to achieve a minimum 30 dB(A) noise reduction level within the public spaces of permitted uses.

Flight Pattern Zone (FPZ). The FPZ boundary is defined by a rectangular area that is offset approximately 2,000 feet on each side of the runway. The FPZ is 3,280 feet wide overall and extends approximately 5,280 feet beyond each end of the runway. These areas were identified as FPZ on Figure G2.





















Land use development restrictions within the FPZ should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.); however, residential development would be permitted to a maximum density of one dwelling unit per 20 acres. Development densities within non-residential areas would be limited to less than 40 people per acre. The achievement of these maximum densities is dependent the LPLUC standards related to lot size, protection of critical lands, avoidance of hazard areas, roadway setbacks, and other sited development and subdivision standards. Future land use development guidelines, as presented in Table G1 entitled *RECOMMENDED OVERLAY ZONING GUIDELINES/SCENARIO ONE*, should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB(A) noise reduction level within residential development and the public spaces of permitted uses.

Airport Influence Zone (AIZ). The AIZ boundary, which includes the balance of the AIA, is defined by an approximate 10,000-foot offset on each side of the Runway 02/20 centerline, which is connected by an approximate 10,200-foot arc that extends from each

runway end. These areas were identified as the AIZ on Figure G1 entitled *AIRPORT LAND USE OVERLAY DISTRICTS/SCENARIO ONE*, and are generally defined by typical traffic pattern airspace boundaries for approach Category C aircraft.




Land use development restrictions within the AIZ should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.); however, residential development would be permitted in accordance with density standards specified by the LPLUC. Development densities within non-residential areas would be limited to less than 100 people per acre. Future land use development guidelines, as presented in Table G1 entitled *RECOMMENDED OVERLAY ZONING GUIDELINES/SCENARIO ONE*, should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB(A) noise reduction level within residential development and the public spaces of permitted uses.

Table G1
RECOMMENDED OVERLAY ZONING GUIDELINES/SCENARIO ONE
Durango-La Plata County Master Plan Update

Land Use ⁽¹⁾	CZ ⁽²⁾	NCZ ⁽²⁾	FPZ ⁽³⁾	AIZ ⁽³⁾
Residential				
Commercial				
Industrial				
Recreational ⁽⁴⁾				
Public ⁽⁵⁾				

Source: Overlay zoning recommendations generated by Barnard Dunkelberg & Company, Inc. in accordance with guidelines specified by Washington State Department of Transportation/Aviation Division, and contained in Airports and Compatible Land Use/Volume 1, February 1999.

Legend:

Prohibited	
Acceptable w/ Restrictions	
Acceptable	

- 1) These development guidelines are not retroactive and shall not be construed to require a change or alteration in the use of any property not conforming to these regulations, or otherwise interfere with the continuance of a nonconforming use. Nothing contained herein shall require any change in the use of any property, the platting, construction, or alteration of which was begun prior to the effective date of this amendment, and is diligently prosecuted. Nor do these guidelines prohibit the development of existing undeveloped lots.
- 2) Specified development guidelines will include dedication of an avigation easement, use of non-reflective roofing and siding material, mandatory disclosure of the overlay zoning boundaries to the purchaser of property, subdivision plat requirements, construction methods to achieve a minimum 30 dB(A) noise reduction level within the public spaces of permitted uses, and adherence to height restriction development guidelines as specified by FAR Part 77 imaginary surfaces.
- 3) Specified development guidelines will include dedication of an avigation easement, use of non-reflective roofing and siding material, mandatory disclosure of the overlay zoning boundaries to the purchaser of property, subdivision plat requirements, construction methods to achieve a minimum 25 dB(A) noise reduction level within the public spaces of permitted uses, and adherence to height restriction development guidelines as specified by FAR Part 77 imaginary surfaces.
- 4) Restrictions would apply to the establishment of public-use parks and campgrounds; however, golf courses would be permitted.
- 5) Restrictions would apply to noise sensitive uses (i.e., schools, hospitals, nursing homes, churches, auditoriums, and concert halls).

CZ: Critical Zone
 NCZ: Noise Control Zone
 FPZ: Flight Pattern Zone
 AIZ: Airport Influence Zone

Airport Land Use Overlay District/Scenario Two

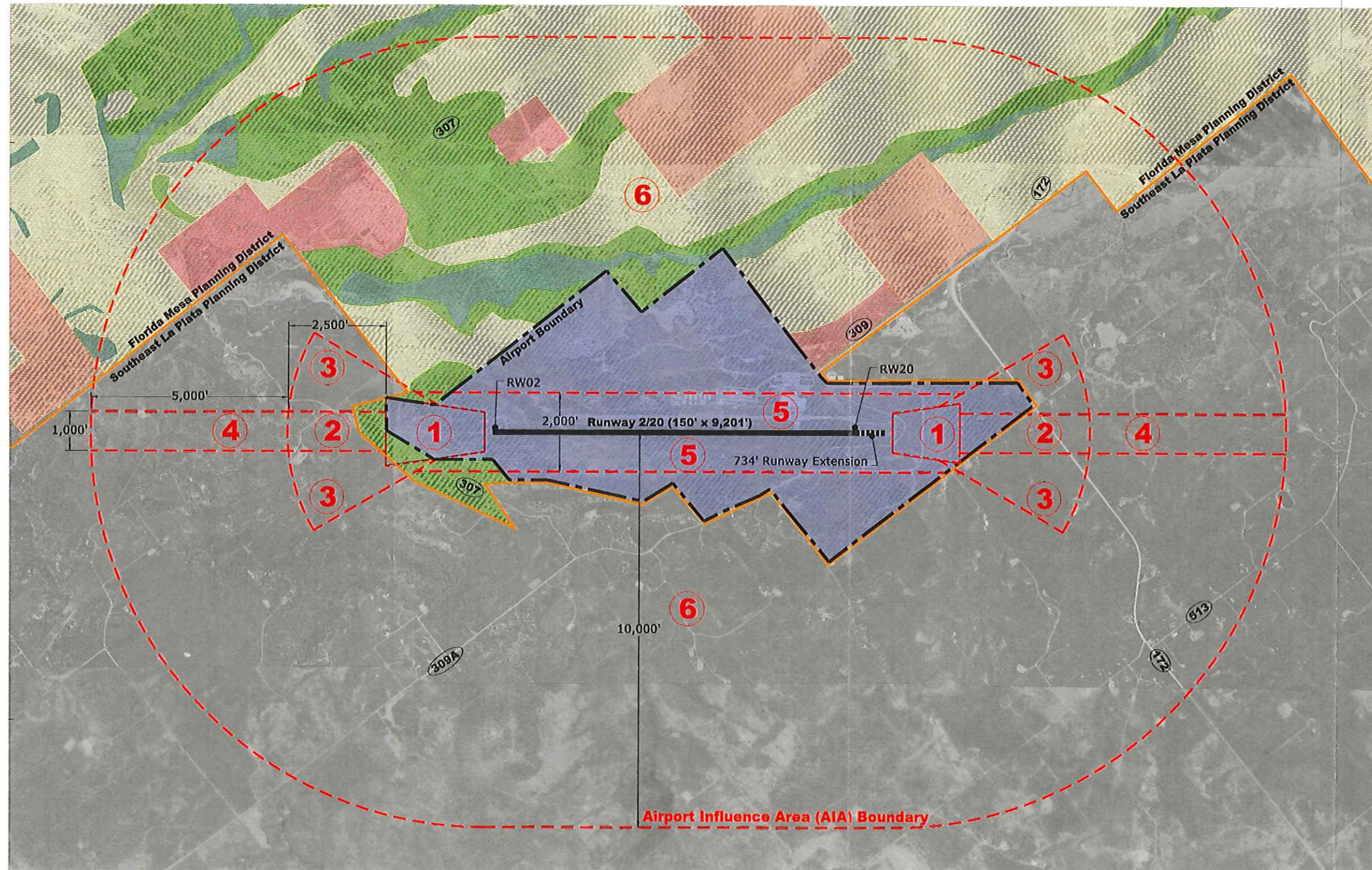
The individual overlay zoning recommendations for Scenario Two are presented in the following text.

Runway Protection Zone (RPZ)/Zone 1. The RPZ boundary is trapezoidal in shape and centered about the extended runway centerline. It begins 200 feet beyond the end of the area usable for takeoff or landing. The RPZ dimensions are functions of the type of aircraft operating at the airport and the approach visibility minimums associated with each runway end. Based on the instrument approach improvements that are recommended in the Airport Master Plan Update, the future RPZ boundaries will be identified. The existing/future Runway 02 RPZ boundary is dimensioned 1,000 feet at the inner width, 1,750 feet at the outer width, and 2,500 feet in length. The future Runway 20 RPZ is to be dimensioned 1,000' x 1,510' x 1,700' respectively. These areas are identified as Zone 1 on Figure G1 entitled *AIRPORT LAND USE OVERLAY DISTRICTS/SCENARIO TWO*.

The function of the RPZ is to enhance the protection of people and property on the ground beyond the runway ends; therefore, it is desirable to clear all objects within the RPZ boundary. Land use development restrictions within the zone should apply to all residential and non-residential uses, including any uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, explosive/hazardous storage, overhead utilities, wildlife hazards, etc.).

Inner Safety Zone (ISZ)/Zone 2. The ISZ boundary is defined by a rectangular area that is positioned on the extended runway centerline, and adjacent to the RPZ boundary. The ISZ is 1,000 feet wide overall (extending 500 feet laterally from the runway centerline) and extends approximately 2,500 feet beyond the Runway 02 RPZ boundary and 3,250 feet beyond the Runway 20 RPZ boundary. The ISZ length differential is dictated by the future length of the RPZ boundaries. These areas were identified as Zone 2 on Figure G1.

Land use development restrictions within Zone 2 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), including residential uses, uses that promote public assembly, and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, explosive/hazardous storage, overhead utilities, wildlife hazards, etc.). This zone should be relatively unoccupied by people, and future structures should be located away from the runway centerline. If possible the majority of the area should remain as open space. Future land use development guidelines should also require dedication of an avigation easement and include construction methods to achieve a minimum 30 dB(A) noise reduction level within the public spaces of permitted uses.



Overlay Zoning Legend

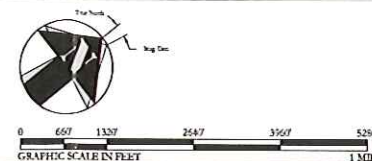
- 1 **Runway Protection Zone (RPZ)/Zone 1.** The function of the RPZ is to enhance the protection of people and property on the ground beyond the runway ends; therefore, it is desirable to clear all objects within the RPZ boundary. Land use development restrictions within the zone should apply to all residential and non-residential uses, including any uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, etc.).
- 2 **Inner Safety Zone (ISZ)/Zone 2.** Land use development restrictions within Zone 2 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), including residential uses, uses that promote public assembly and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, etc.). Future land use development guidelines should also require dedication of an aviation easement and include construction methods to achieve a minimum 30 dB noise reduction level within the public spaces of permitted uses.
- 3 **Inner Turning Zone (ITZ)/Zone 3.** Land use development restrictions within the Zone 3 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), uses that promote public assembly and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, etc.). However, residential development would be permitted at densities to be determined by county planning officials. Development densities non-residential areas would be limited to less than 25 people per acre. Future land use within development guidelines should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB noise reduction level within residential development and the public spaces of permitted uses.
- 4 **Outer Safety Zone (OSZ)/Zone 4.** Land use development restrictions within Zone 4 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.); however, residential development would be permitted at densities to be determined by county planning officials. Development densities within non-residential areas would be limited to less than 40 people per acre. Future land use development guidelines should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB noise reduction level within residential development and the public spaces of permitted uses.
- 5 **Sideline Safety Zone (SSZ)/Zone 5.** Land use development restrictions within the Zone 5 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), including residential uses, and uses that promote public assembly and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, etc.). Future land use development guidelines, as presented in Table C1 entitled RECOMMENDED OVERLAY ZONING GUIDELINES, should also require dedication of an aviation easement and include construction methods to achieve a minimum 30 dB noise reduction level within the public spaces of permitted uses.
- 6 **Traffic Pattern Zone (TPZ)/Zone 6.** Land use development restrictions within the Zone 6 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.); however, residential development would be permitted. Development densities within non-residential areas would be limited to less than 100 people per acre. Future land use development guidelines should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB noise reduction level within residential development and the public spaces of permitted uses.

Land Use Legend

- Agricultural/Rural Residential
- Industrial
- Public
- Tribal Lands
- Pinon-Juniper Bands
- Critical Lands

Figure G2 Airport Land Use Overlay Districts/Scenario Two

Source: Aerial photography by Aerial Data Service, Tulsa, OK, on May 1st, 2001 and USGS Digital Ortho Quad, 1993.
Land Use taken from Florida Mesa Planning District Land Use Classification Map, La Plata County, 1999.



Inner Turning Zone (ITZ)/Zone 3. The ITZ boundary is defined by a triangular shaped area that is positioned along each side of the RPZ and ISZ boundaries. The ITZ extends approximately 5,000 feet from the inner width of the RPZ, within a 60° sector of the extended runway centerline. These areas were identified as Zone 3 on Figure G1.

Land use development restrictions within the Zone 3 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), uses that promote public assembly, and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, explosive/hazardous storage, overhead utilities, wildlife hazards, etc.). However, residential development would be permitted to a maximum density of one dwelling unit per 35 acres. Development densities within non-residential areas would be limited to less than 25 people per acre. The achievement of these maximum densities is dependent the LPLUC standards related to lot size, protection of critical lands, avoidance of hazard areas, roadway setbacks, and other sited development and subdivision standards. Future land use development guidelines, as presented in Table G2 entitled *RECOMMENDED OVERLAY ZONING GUIDELINES/SCENARIO TWO*, should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB(A) noise reduction level within residential development and the public spaces of permitted uses.

Outer Safety Zone (OSZ)/Zone 4. The OSZ boundary is defined by a rectangular area that is also centered on the runway. The OSZ is 1,000 feet wide overall (extending 500 feet laterally from the runway centerline) and extends approximately 5,000 feet beyond the ISZ. These areas were identified as Zone 4 on Figure G1.

Land use development restrictions within Zone 4 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), uses that promote public assembly, and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, explosive/hazardous storage, overhead utilities, wildlife hazards, etc.). However, residential development would be permitted to a maximum density of one dwelling unit per 20 acres. Development densities within non-residential areas would be limited to less than 40 people per acre. The achievement of these maximum densities is dependent the LPLUC standards related to lot size, protection of critical lands, avoidance of hazard areas, roadway setbacks, and other sited development and subdivision standards. Future land use development guidelines, as presented in Table G2, should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB(A) noise reduction level within residential development and the public spaces of permitted uses.































Sideline Safety Zone (SSZ)/Zone 5. The SSZ boundary is defined by a 1,000 foot centerline offset on each side of the runway that connects the ITZs on each end of the runway. These areas were identified as Zone 5 on Figure G1.

Land use development restrictions within the Zone 5 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.), including residential uses, and uses that promote public assembly and uses that could create hazards to flight (e.g., distracting lights, glare, smoke, electronic interference, etc.). Future land use development guidelines, as presented in Table G2, should also require dedication of an aviation easement and include construction methods to achieve a minimum 30 dB(A) noise reduction level within the public spaces of permitted uses.

Traffic Pattern Zone (TPZ)/Zone 6. The TPZ boundary is defined by an approximate 10,000-foot offset on each side of the Runway 02/20 centerline, which is connected by an approximate 10,200-foot arc that extends from each runway end. These areas were identified as Zone 6 on Figure G1 entitled *AIRPORT LAND USE OVERLAY DISTRICTS/SCENARIO ONE*, and are generally defined by typical traffic pattern airspace boundaries for approach Category C aircraft.




Land use development restrictions within the Zone 6 should apply to noise sensitive uses (e.g., schools, churches, hospitals, etc.); however, residential development would be permitted in accordance with density standards specified by the LPLUC. Development densities within non-residential areas would be limited to less than 100 people per acre. Future land use development guidelines, as presented in Table G2, should require dedication of an aviation easement and include construction methods to achieve a minimum 25 dB(A) noise reduction level within residential development and the public spaces of permitted uses.

Table G2
RECOMMENDED OVERLAY ZONING GUIDELINES/SCENARIO TWO
Durango-La Plata County Master Plan Update

Land Use ⁽¹⁾	Zone 1/ RPZ	Zone 2/ ISZ ⁽²⁾	Zone 3/ ITZ ⁽³⁾	Zone 4/ OSZ ⁽³⁾	Zone 5/ SSZ ⁽²⁾	Zone 6/ TPZ ⁽³⁾
Residential						
Commercial						
Industrial						
Recreational ⁽⁴⁾						
Public ⁽⁵⁾						

Source: Overlay zoning recommendations generated by Barnard Dunkelberg & Company, Inc. in accordance with guidelines specified by Washington State Department of Transportation/Aviation Division, and contained in Airports and Compatible Land Use/Volume 1, February 1999.

Legend:

Prohibited	
Acceptable w/ Restrictions	
Acceptable	

- 1) These development guidelines are not retroactive and shall not be construed to require a change or alteration in the use of any property not conforming to these regulations, or otherwise interfere with the continuance of a nonconforming use. Nothing contained herein shall require any change in the use of any property, the platting, construction, or alteration of which was begun prior to the effective date of this amendment, and is diligently prosecuted. Nor do these guidelines prohibit the development of existing undeveloped lots.
- 2) Specified development guidelines will include dedication of an aviation easement, use of non-reflective roofing and siding material, mandatory disclosure of the overlay zoning boundaries to the purchaser of property, subdivision plat requirements, construction methods to achieve a minimum 30 dB(A) noise reduction level within the public spaces of permitted uses, and adherence to height restriction development guidelines as specified by FAR Part 77 imaginary surfaces.
- 3) Specified development guidelines will include dedication of an aviation easement, use of non-reflective roofing and siding material, mandatory disclosure of the overlay zoning boundaries to the purchaser of property, subdivision plat requirements, construction methods to achieve a minimum 25 dB(A) noise reduction level within the public spaces of permitted uses, and adherence to height restriction development guidelines as specified by FAR Part 77 imaginary surfaces.
- 4) Restrictions would apply to the establishment of public-use parks and campgrounds; however, golf courses would be permitted.
- 5) Restrictions would apply to noise sensitive uses (i.e., schools, hospitals, nursing homes, churches, auditoriums, and concert halls).

RPZ: Runway Protection Zone
 ISZ: Inner Safety Zone
 ITZ: Inner Turning Zone
 OSZ: Outer Safety Zone
 SSZ: Sideline Safety Zone
 TPZ: Traffic Pattern Zone

Acquisition

Acquisition strategies, when utilized for land use control and development are most effective (i.e., less costly and less controversial) if implemented under preventative conditions. However, acquisition can also be used to resolve existing non-standard design or development issues, which can result from upgrades in a runway's Airport Reference Code (ARC) or improvements in approach visibility minimums. The two types of acquisition generally employed by airport sponsors include fee simple land purchases and easements.

Land Purchase. Fee simple land acquisition is an effective, but sometimes costly means of land use control. The FAA recommends that airport sponsors own in fee, that property which is typically required for the operation and protection of the airport (i.e., airside and landside development), as well as the property within the boundary of the runway protection zones (RPZs). RPZ acquisition is typically eligible for FAA funding participation when the airport is included in the National Plan of Integrated Airport Systems (NPIAS), and this funding eligibility can also apply to properties which have existing noise sensitive uses as specified by FAR Part 150 guidelines.

Easements. Easement acquisition can be a useful and less costly method for land use control when compared to fee simple property acquisition. An avigation easement is the standard easement acquired within the airport environs. The purchase of these easements is most common within RPZs or along the extended approach surface, where existing development (either the airport or the adjacent community) has encroached upon the other, making property acquisition too costly. Avigation easements are typically structured to contain all or portions of the following rights: right of flight of aircraft; the right to cause noise, dust, etc.; the right to prohibit and/or remove all objects which penetrate the defined airspace and the right to access the property as needed to exercise the rights acquired. In addition, avigation easements acquired on undeveloped property within the RPZ (i.e., an RPZ easement) should include a restriction on the current and future use of the land surface to preclude incompatible development. It should be noted that the acquisition costs of an RPZ easement can often approach the cost of acquiring the entire property in fee.

Summary

The land use planning recommendations set forth in this document are intended to provide the La Plata County with the necessary overlay zoning options to prevent or minimize future land use incompatibilities within the airport environs. The selected airport overlay zoning regulations should apply to those lands within the defined Airport Influence Area and the Airport Height Zone as specified by FAR Part 77 guidelines; however, their application would be limited to only future development or reconstruction of non-conforming uses.

In conjunction with existing zoning ordinances and classifications, the County should develop specific compatibility criteria identifying those land uses which are *prohibited*, *not recommended* and *normally accepted* within each zone. These land use guidelines should specify any unique development conditions (e.g., aviation easement requirements, subdivision plat notification, building permit requirements, residential dwelling unit density requirements, etc.) required of future property owners concerning their proximity to existing airport development.

It should be restated that County efforts to promote compatible land use planning within the airport environs is an obligation set forth in all grant assurance agreements with the FAA. But more importantly, these regulations are designed to enhance the safety of those citizens which live and work within the Airport Influence Area and to minimize their impact to airport generated noise.