

Minot International Airport

Land Use Compatibility Plan

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Minot
International Airport

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Chapter I

Introduction

Plan Purpose

The purpose of this plan is to achieve compatible uses of lands surrounding Minot International Airport (MOT) that are within the planning jurisdiction of the city of Minot. Use of this plan will help the city of Minot fulfill its contractual obligations to prevent and remove airport hazards and incompatible land uses as established in airport improvement grants it has received from the Federal Aviation Administration (FAA).

North Dakota Century Code enables governmental jurisdictions to create zoning and other controls for purposes of achieving and maintaining airport land use compatibility. Further, the Century Code declares that incompatible land uses which obstruct the airspace required for the flight of aircraft in landing or taking off at any airport are airport hazards and a public nuisance and an injury to the community served by the airport. **Appendix A contains FAA Sponsor Assurances, Paragraphs 20 and 21, and North Dakota Century Code, Airport Zoning.**

This land use compatibility plan was prepared coincidentally to an airport master plan for MOT. The 20 year outlook of the master plan in terms of aviation demand and airport development plan was used to develop the criteria contained in this land use compatibility plan and make it suitable to long-term application. City of Minot planning documents were also considered in the development of the airport master plan and this land use compatibility plan in order to help bring about a mutually compatible plan for MOT and development of surrounding lands.

Airport Compatibility and Hazard Issues

Four types of airport compatibility and hazard issues need be considered in order to achieve land use compatibility:

- Airspace
- Safety
- Wildlife
- Noise

A brief and general description of each of these issues is provided below based primarily on criteria developed by FAA and ND Aeronautics Commission. Each issue is explained in terms of the basic objective to be met, the measurement of risk, and criteria that can be used to establish land use compatibility policies. Chapter 3 contains the specific assessment of MOT in light of the four land use compatibility issues.

Airspace

The airspace objective is to avoid any development that increases risks of aircraft accidents or measurably reduces the operational utility of the airport. Types of development that may impair the airport from meeting this objective include tall structures such as radio towers and wind power towers, and visual or electronic interference such as bright lights near runways or airborne emissions from industrial plants. The risk of accidents involving airspace obstructions is low due to the efforts of the FAA to evaluate and manage airspace and communities' control of the creation of obstructing structures. This level of risk can be maintained through a continuation of these proactive efforts.

The definition of airspace is primarily accomplished through standards established by the FAA in Federal Aviation Regulation (FAR) Part 77 - Objects Affecting Navigable Airspace. FAR Part 77 is used to identify structures which may be obstructions to airspace. The standards relate to the size of the largest aircraft using the runway and the approach type and visibility minimum under which the runway is operated. Proponents of structures proposed near airports are required to file FAA Form 7460-1 with the FAA for evaluation. **Part 77 standards appear in the form of three dimensional surfaces as illustrated in**

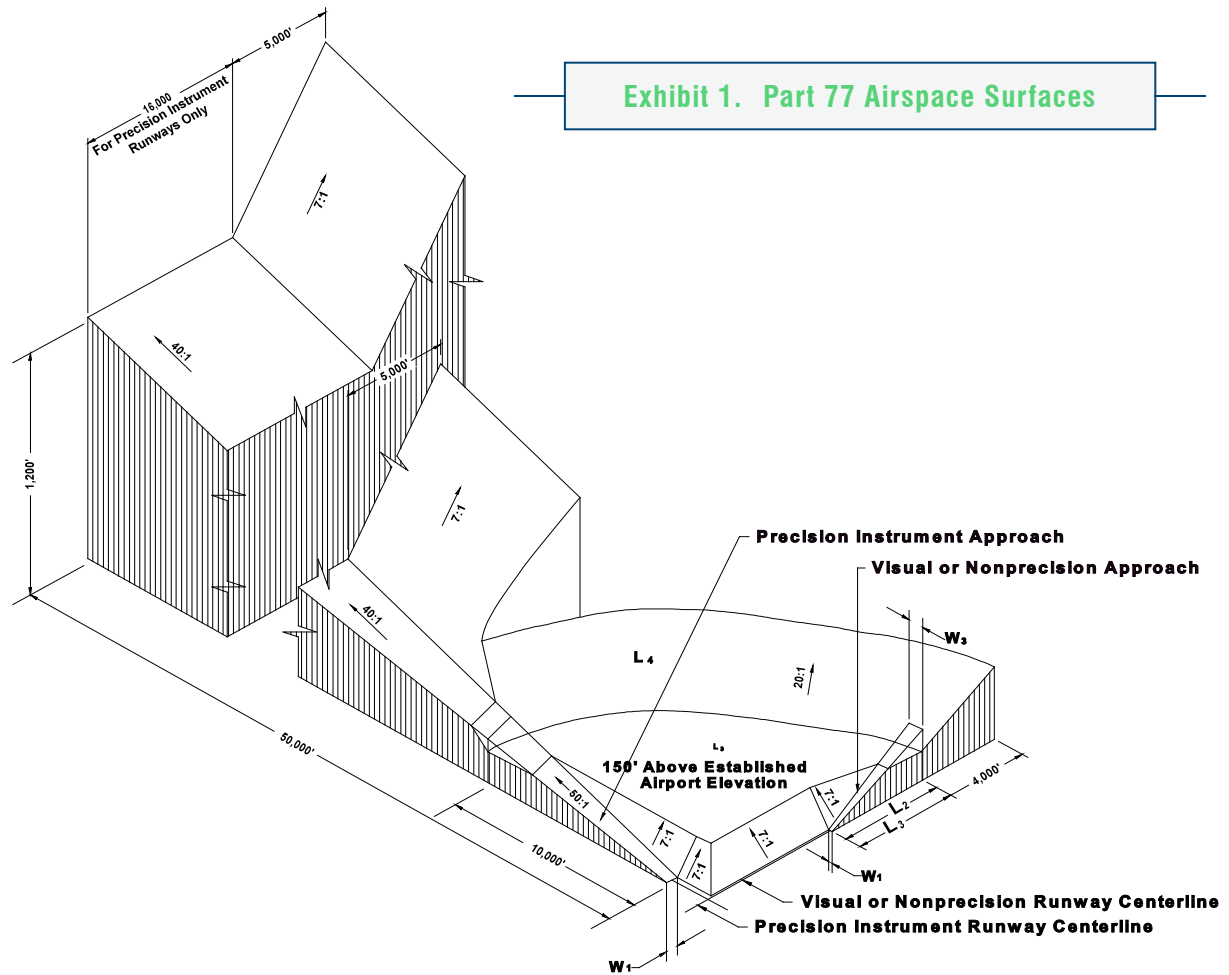
Exhibit 1.

If a proposed structure penetrates Part 77 surfaces, FAA further evaluates it to determine whether it would create an airspace obstruction that is a hazard to air navigation that may increase risks of aircraft accidents or reduce the operational utility of the airport. This further evaluation relies on standards contained in FAA Order 8260.3B TERPS. Once FAA has completed its evaluation of a proposed structure it issues one of three typical responses:

- ❶ **No Objection** - The subject construction did not exceed obstruction standards and marking/lighting is not required.
- ❷ **Conditional Determination** - The proposed construction/alteration



Exhibit 1. Part 77 Airspace Surfaces



would be acceptable contingent upon implementing mitigating measures (Marking & Lighting, etc.)

- ③ **Objectionable** - The proposed construction/alteration is determined to be a hazard and is thus objectionable. The reasons for this determination are outlined to the proponent.

It is important to acknowledge that FAA's role is limited to evaluating the aeronautical effects of proposed structures and it has no legal authority to stop the construction of any proposed structure. That is the responsibility of local authorities with jurisdiction to plan and control development. Notwithstanding, FAA does not relieve airport sponsors of their contractual obligation to prevent and remove hazards to air navigation.

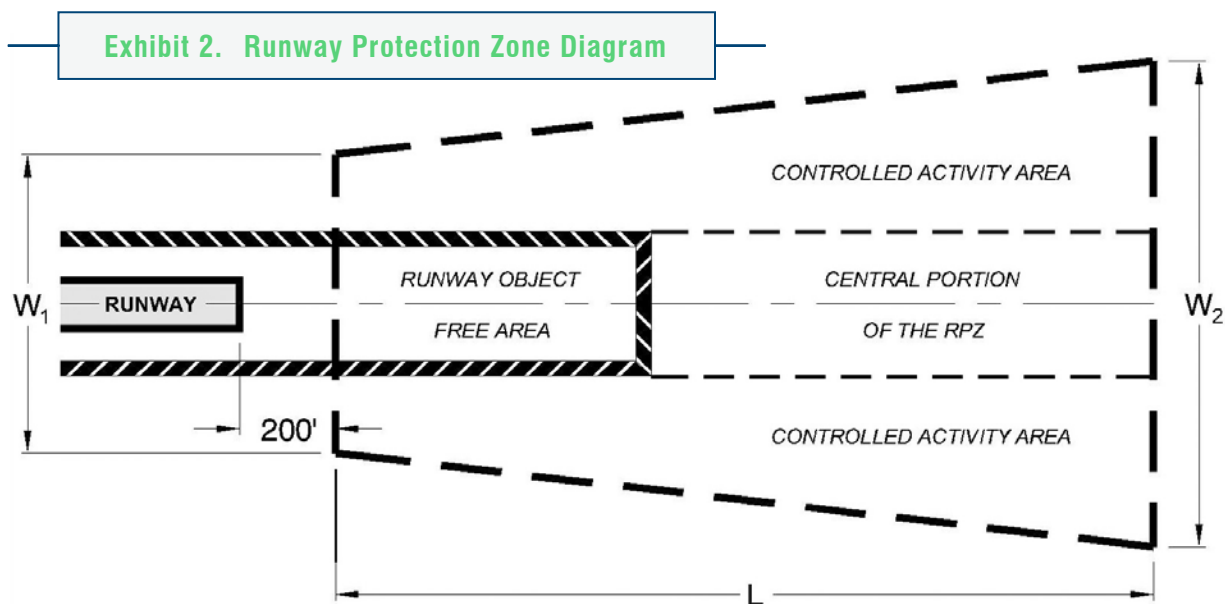
Communities typically implement height and hazard control policies in the form of overlay zoning to control the construction of structures that are airspace hazards that increase the risks of aircraft accidents or impairing the operational utility of the airport. North Dakota Century Code empowers communities to adopt zoning for airport hazards.

Safety

The safety objective is to minimize risks to persons on the ground and aircraft occupants that may be associated with aircraft accidents. Assessing the risks of aircraft accidents and creating policies to address those risks is challenging because aircraft accidents are rare and the specific circumstances of an accident are nearly impossible to predict.

National Transportation Safety Board (NTSB) data gathered between 1990 and 2000 indicate that approximately 95 percent of all aircraft accidents happen either on or near airports. This data also shows that most aircraft accidents occur during the approach or departure phases of flight. Approach accidents for multi-engine aircraft including jets occur within approximately 500 feet of both sides of the runway centerline and as much 2,200 feet from the runway threshold. Departure accidents are usually widely scattered in the vicinity of the runway.

Communities typically use FAA airport design standards and safety compatibility guidelines developed by state aeronautical agencies to formulate safety policies. FAA airport design standards, as contained in advisory circular 150/5300-13, define the dimensions for runway protection zones (RPZ) and provide land use policy for RPZs. According to this advisory circular, RPZs form the inner approach area near the runway threshold and according to the FAA, the property they encompass should be controlled by the airport sponsor such that no residences or places of public assembly exist in RPZs. Places of public assembly include churches, hospitals, schools, office buildings, shopping malls, and other uses with similar concentrations of people. FAA recommends that airport sponsors acquire all the land within RPZs. [Exhibit 2](#) and [Table 1](#) provide a diagram and dimensional requirements for RPZs.



Source: FAA AC 150/5300-13 Change 14, Airport Design Standards

Table 1. Runway Protection Zone Dimensional Requirements

Approach Visibility Minimums ¹	Facilities Expected to Serve	Dimensions			
		Length <i>L feet</i> (meters)	Inner Width <i>W₁ feet</i> (meters)	Outer Width <i>W₂ feet</i> (meters)	RPZ <i>acres</i>
Visual and not lower than 1 mile (1,600 m)	Small aircraft exclusively	1,000 (300)	250 (75)	450 (135)	8.035
	Aircraft Approach Categories A & B	1,000 (300)	500 (150)	700 (210)	13.770
	Aircraft Approach Categories C & D	1,700 (510)	500 (150)	1,010 (303)	29.465
Not lower than ¾-mile (1,200 m)	All aircraft	1,700 (510)	1,000 (300)	1,510 (453)	48.978
Lower than ¾-mile (1,200 m)	All aircraft	2,500 (750)	1,000 (300)	1,750 (525)	78.914
¹ The RPZ dimensional standards are for the runway end with the specified approach visibility minimums. The departure RPZ dimensional standards are equal to or less than the approach RPZ dimensional standards. When an RPZ begins other than 200 feet (60m) beyond the runway end, separate approach and departure RPZs should be provided. Refer to FAA AC 150/5300-13 Change II, Appendix I4 for approach and departure RPZs.					
Source: FAA AC 150/5300-13 Change I4, Airport Design Standards					

A good source for safety compatibility guidelines is the California Airport Land Use Planning Handbook. The guidelines in this document have been used as the foundation for the land use compatibility planning at many communities in the western states and several state aeronautical agencies have adapted it for use in developing their own airport land use planning handbooks. The method used in these handbooks involves the creation of upward of six safety compatibility zones that encompass airport owned property and lands surrounding the airport. Each safety compatibility zone is assigned compatible development criteria involving acceptable and prohibited land uses and acceptable maximum development densities. Each zone and its criteria approximately relate the risk of aircraft accidents and noise with each zone. Communities adopting safety compatibility zones incorporate the information in their comprehensive plans and zoning ordinances.

Wildlife

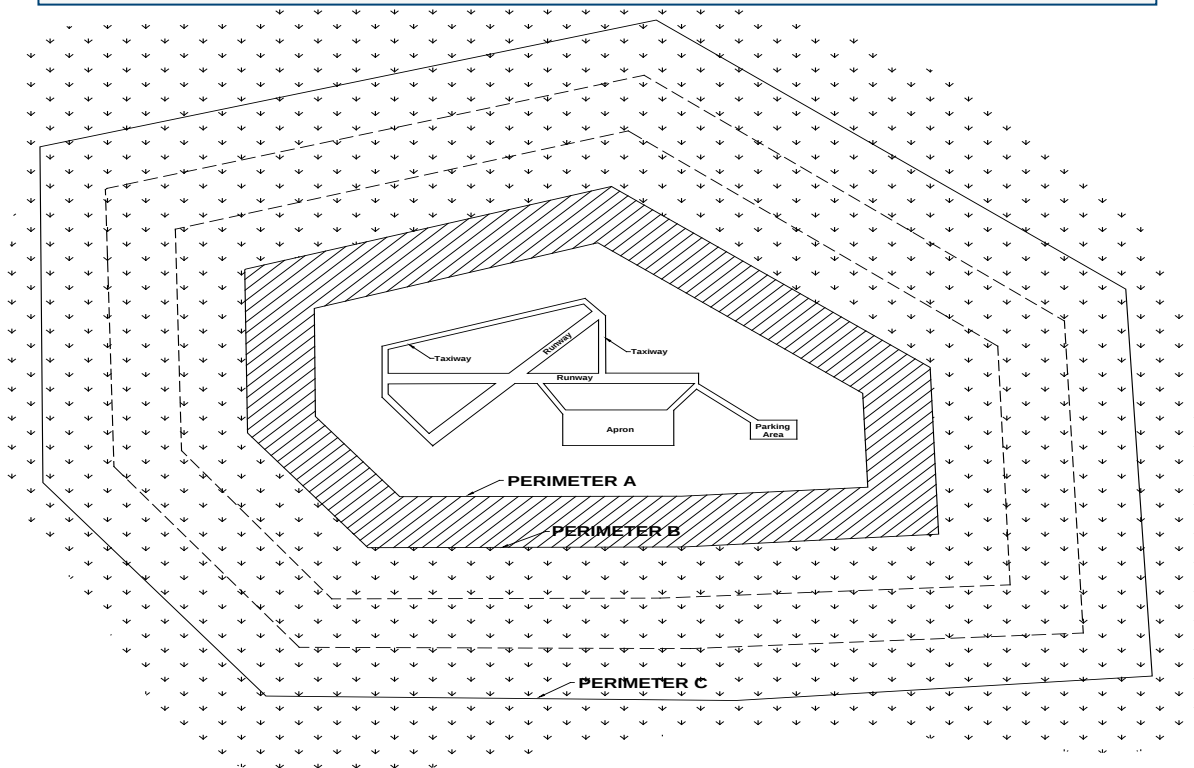
The wildlife objective is to minimize risks associated with wildlife activities, particularly birds, in the vicinity of an airport. Minimizing wildlife risks helps reduce aircraft damage costs and increases safety for aircraft occupants and persons on the ground. FAA statistics indicate that the number of aircraft bird strikes reported in the U.S. quadrupled from 1990 to 2007, rising from 1,738 per year to 7,439. These strikes caused 3,094 precautionary landings, 1,442 aborted takeoffs, 312 engine shutdowns and 1,162 minor negative effects, it said. Approximately, 80% of all strikes occur while aircraft are operating at altitudes

less than 1,000 feet above ground level which is typical for aircraft operating within an airport traffic pattern.

FAA AC 150/5200-33B, Hazardous Wildlife Attractants On or Near Airports, recommends that wildlife attractants be located at least 10,000 feet away from the airport operations area (AOA) for turbine-powered aircraft and at least five miles from the AOA for hazards that could cause wildlife to cross the approach/departure airspace. **Exhibit 3** provides an illustration of recommended separation distances for wildlife attractants.

FAA recommends that public-use airport sponsors implement the standards and practices contained in AC 150/5200-33B, Hazardous Wildlife Attractants On or Near Airports. Holders of Airport Operating Certificates issued under Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports, Subpart

Exhibit 3. Separation distances within which hazardous wildlife attractants should be avoided, eliminated, or mitigated.



PERIMETER A: For airports serving piston-powered aircraft, hazardous wildlife attractants must be 5,000 feet from the nearest air operations area.

PERIMETER B: For airports serving turbine-powered aircraft, hazardous wildlife attractants must be 10,000 feet from the nearest air operations area.

PERIMETER C: 5-mile range to protect approach, departure and circling airspace.

Source: AC 150/5200-33B, Hazardous Wildlife Attractants

D (Part 139), may use the standards, practices, and recommendations contained in this AC to comply with the wildlife hazard management requirements of Part 139. Airports that have received federal grant-in-aid assistance must use these standards. The FAA also recommends the guidance in this AC for land-use planners, operators of non-certificated airports, and developers of projects, facilities, and activities on or near airports.

Noise

The noise objective is to minimize the number of people exposed to frequent high levels of aircraft noise capable of disrupting noise-sensitive activities. Noise emitted from aircraft can affect the well-being of persons living or working near an airport. While there are several effects of aircraft noise upon people, the most common is annoyance. Annoyance can be defined as the overall adverse reaction of people to noise. Other effects of aircraft noise include sleep disturbance and speech interference.

Noise analysis for airports is typically conducted using INM (Integrated Noise Model) software. The noise measurement recommended by FAA for use in the analysis of aircraft noise is the

DNL (Day-Night Average Sound Level).

The DNL is defined as the average annual weighted sound level produced by aircraft at a location during

a 24-hour period. A 10 dB

(decibel) weight is applied to aircraft noise occurring between 10 p.m. and 7 a.m., when aircraft noise is more likely to create an annoyance. The FAA has determined that a significant noise impact would occur if a detailed noise analysis indicates an action which would result in an increase of 1.5 decibels or greater within the 65 dB DNL contour over a noise sensitive area. **Exhibit 4** provides examples of many common sounds and graphs their associated decibel levels.

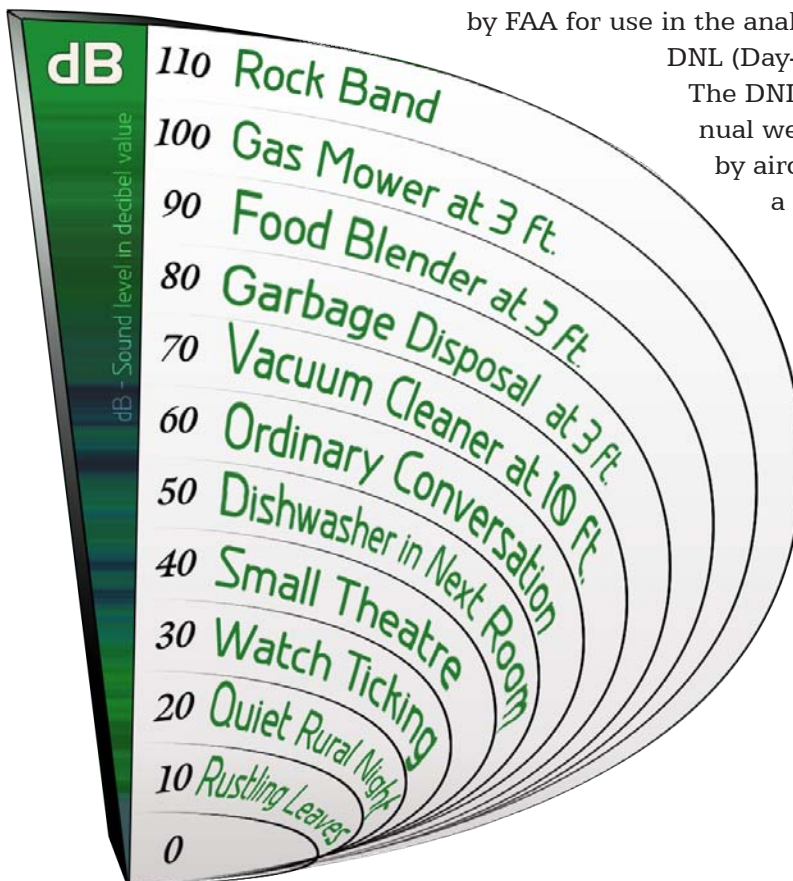


Exhibit 4. Common Sounds and Their Associated Decibel Levels

FAA has generally accepted a maximum of 65 DNL as the threshold of concern for noise impacts over residential areas. However, there have been a number of instances where FAA has supported local policies to restrict new residential development to not exceed 60 DNL, particularly in rural or less developed areas that are not already subjected to high levels of urban noise, e.g., vehicle traffic or industrial activity. Note that local noise policies commonly define separate thresholds for various types of land uses, e.g., schools, hospitals, industrial complexes, etc.) **Table 2** provides predicted community effects and reactions to noise at various DNL thresholds.

Table 2. Community Effects and Reactions to Noise

Day-Night Average Sound Level (Decibels)	Effects ¹			
	Hearing Loss (Qualitative Description)	Annoyance ² (Percentage of Population Highly Annoyed) ³	Average Community Reaction ⁴	General Community Attitude Toward Area
≥ 75	May begin to occur	37%	Very Severe	Noise is likely to be the most important of all adverse aspects of the community environment.
70	Will not likely occur	22%	Severe	Noise is one of the most important aspects of the community environment.
65	Will not occur	12%	Significant	Noise is one of the most important aspects of the community environment.
60	Will not occur	7%	Moderate to Slight	Noise may be considered an adverse aspect of the community environment.
≤ 55	Will not occur	3%		Noise considered no more important than various other environmental factors.

¹All data is drawn from National Academy of Science 1977 report *Guidelines for Preparing Environmental Impact Statements on Noise*, Report of Working Group 69 on Evaluation of Environmental Impact of Noise.

²A summary measure of the general adverse reaction of people to living in noisy environments that cause speech interference; sleep disturbance; desire for tranquil environment; and the inability to use the telephone, radio, or television satisfactorily.

³The percentage of people reporting annoyance to lesser extents are higher in each case. An unknown small percentage of people will report being "highly annoyed" even in the quietest surroundings. One reason is the difficulty all people have in integrating annoyance over a very long time. USAF Update with 400 points (Finegold et al. 1992)

⁴Attitudes or other non-acoustic factors can modify this. Noise at low levels can still be an important problem, particularly when it intrudes into a quiet environment.

NOTE:

Research implicates noise as a factor producing stress-related health effects such as heart disease, high blood pressure and stroke, ulcers and other digestive disorders. The relationships between noise and these effects, however, have not as yet been conclusively demonstrated. (Thompson 1981; Thompson et al. 1989; CHABA 1981; CHABA 1982; Hattis et al. 1980; and U.S. EPA 1981)

Chapter 2

Airport Conditions

Existing Conditions

Exhibit 5 shows the layout of the two runways and other facilities at MOT. The majority of operations conducted by the commercial airline and other operators of large jet aircraft use Runway 13-31 due to its longer length and precision instrument approach capability. Runway 8-26 is used predominately by small aircraft and large aircraft when crosswinds make it undesirable to use Runway



13-31. The only significant change anticipated by the airport master plan within the foreseeable future is relocation of Runway 8-26 approximately 870 feet to the east. This change will have the positive effect of moving the entire runway and the RPZ on the 8 end of the runway farther from commercial and residential land uses located immediately west of Highway 83. Implementing this change will avoid the acquisition of businesses and residences located west of Highway 83.

Airport Operations

Minot International Airport currently receives scheduled passenger service from Delta Airlines utilizing the Embraer EMB175 aircraft for its Minot-Minneapolis route. The Embraer EMB175 has a passenger configuration of up to 76 seats.

The current annual number of airline operations at MOT is 2,190 operations. Additional airline service is possible and if implemented

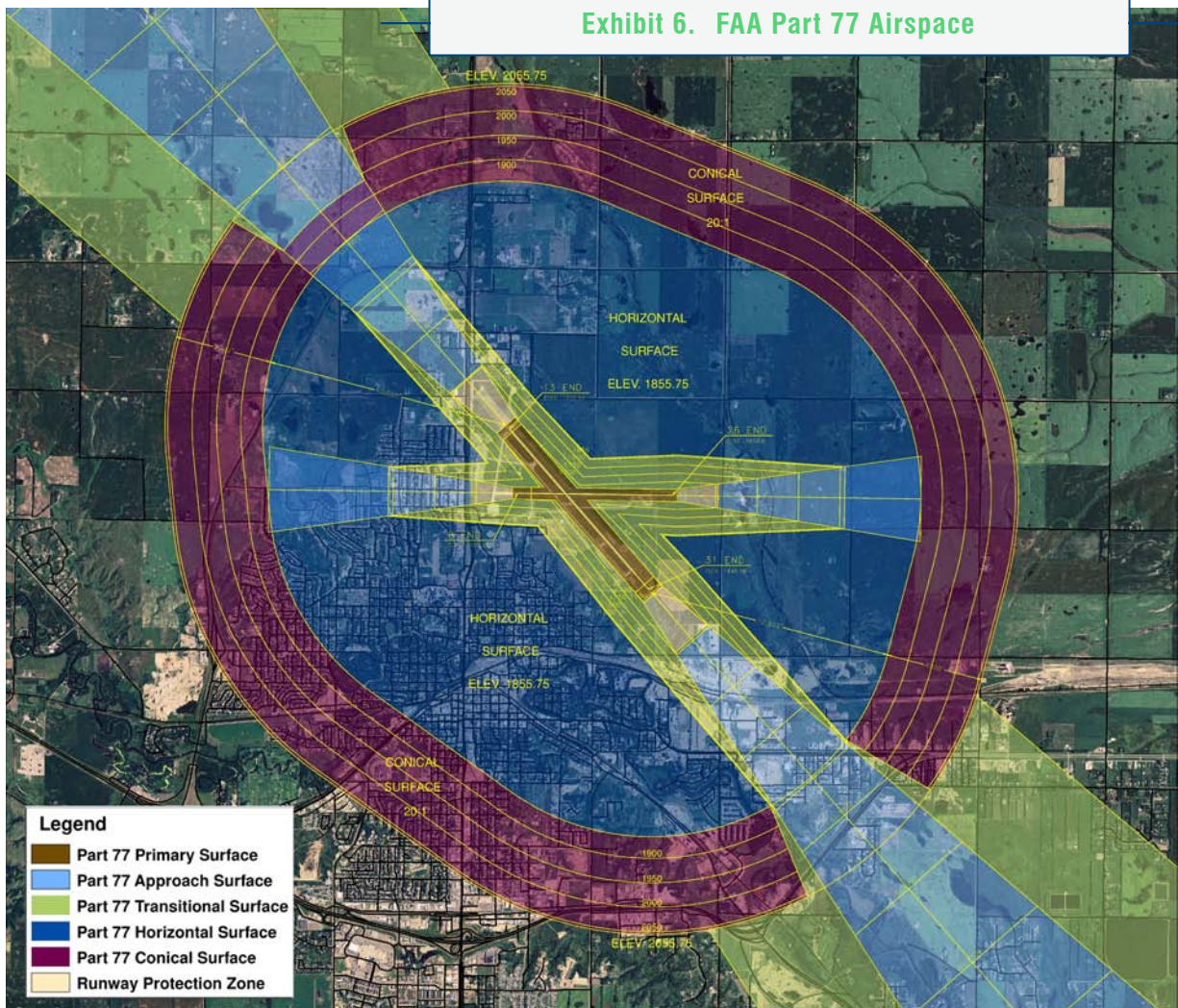
would increase the number of airline operations. Total current annual operations is approximately 45,000, and is expected to increase to approximately 75,000 over the next 20 years.



Airspace Structure

FAR Part 77 airspace surfaces taken from the airport master plan are shown in [Exhibit 6](#). An airport layout plan will be prepared as part of the airport master plan and submitted to FAA for a formal airspace analysis and official approval. The exhibit includes the proposed relocation of Runway 8-26 which moves the runway protection zone onto airport property, avoiding acquisition of businesses, residences and public facilities located west of Highway 83. This proposed change to Runway 8-26 is subject to additional environmental analysis and documentation before it may be implemented.

Exhibit 6. FAA Part 77 Airspace



Noise Contours

Noise contours were prepared using FAA's Integrated Noise Model 7.0 based on the operations forecasts in the airport master plan, airline flight schedule, and information on flight tracks and traffic distribution to runway ends from the MOT FAA Air Traffic Control Tower. **Anticipated increased activity at MOT was taken into consideration and Exhibit 7, Exhibit 8, and Exhibit 9 show current and anticipated noise contours for years 2008, 2018, and 2028, respectively.**

As shown on the exhibits, the total area included within the noise contours is expected to decrease over time. This positive change is the result of the introduction of quieter, more technologically advanced aircraft that replace older aircraft now in use by the airline. This is a positive step toward improving the compatibility of the airport with its environs.

Exhibit 7. Year 2008 Noise Contours

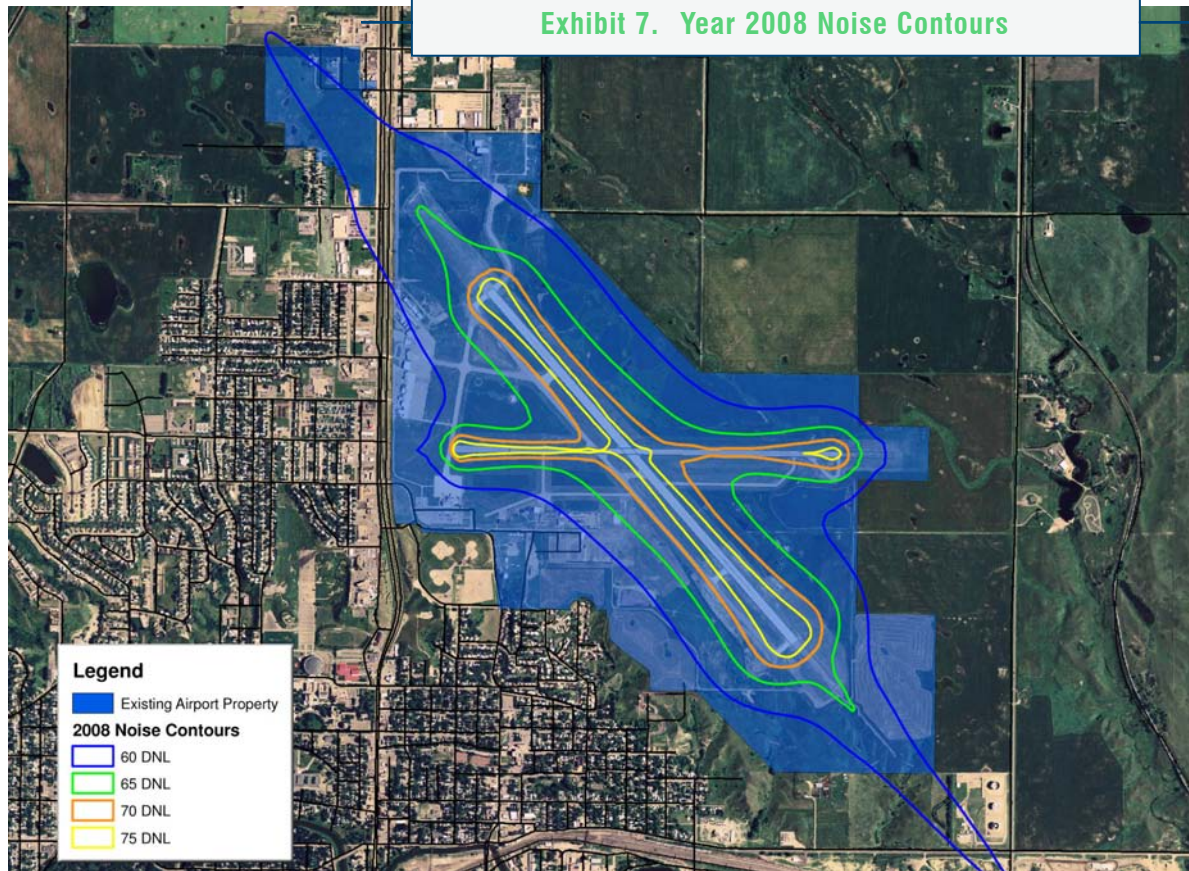
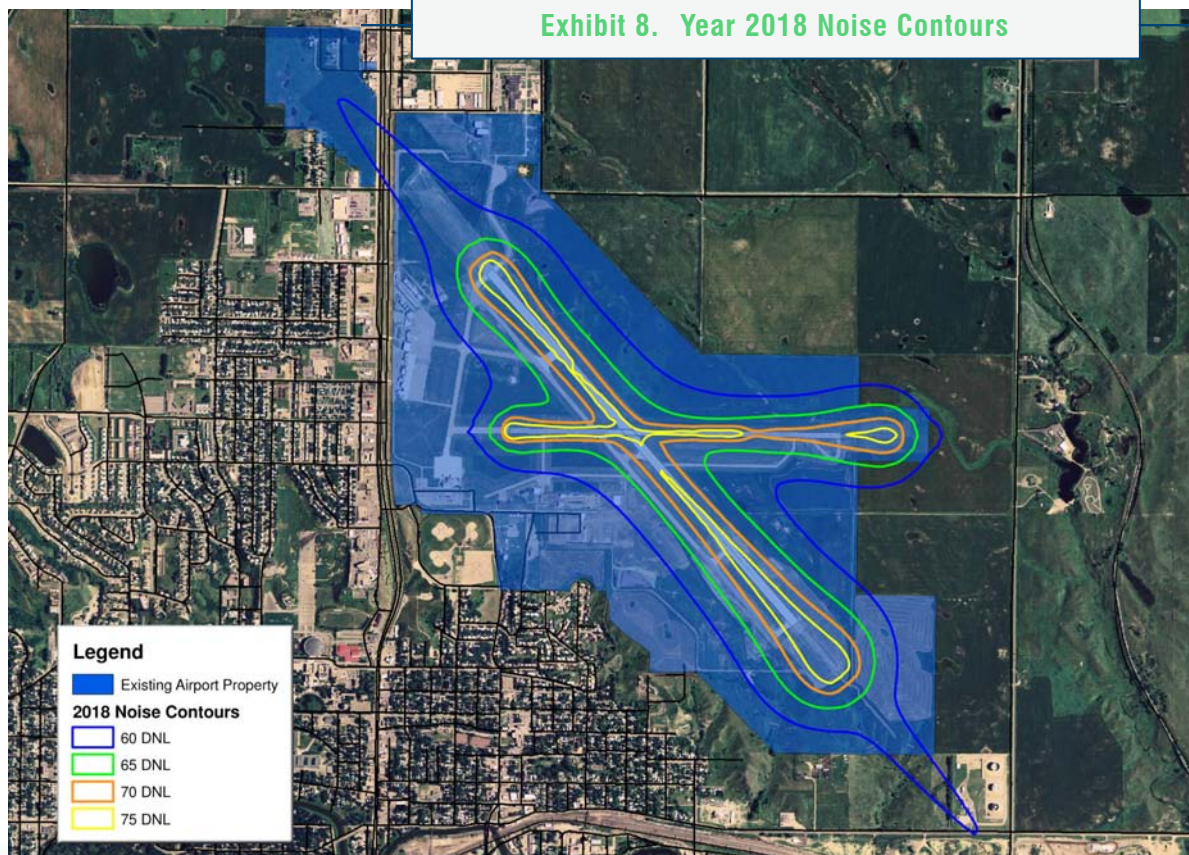
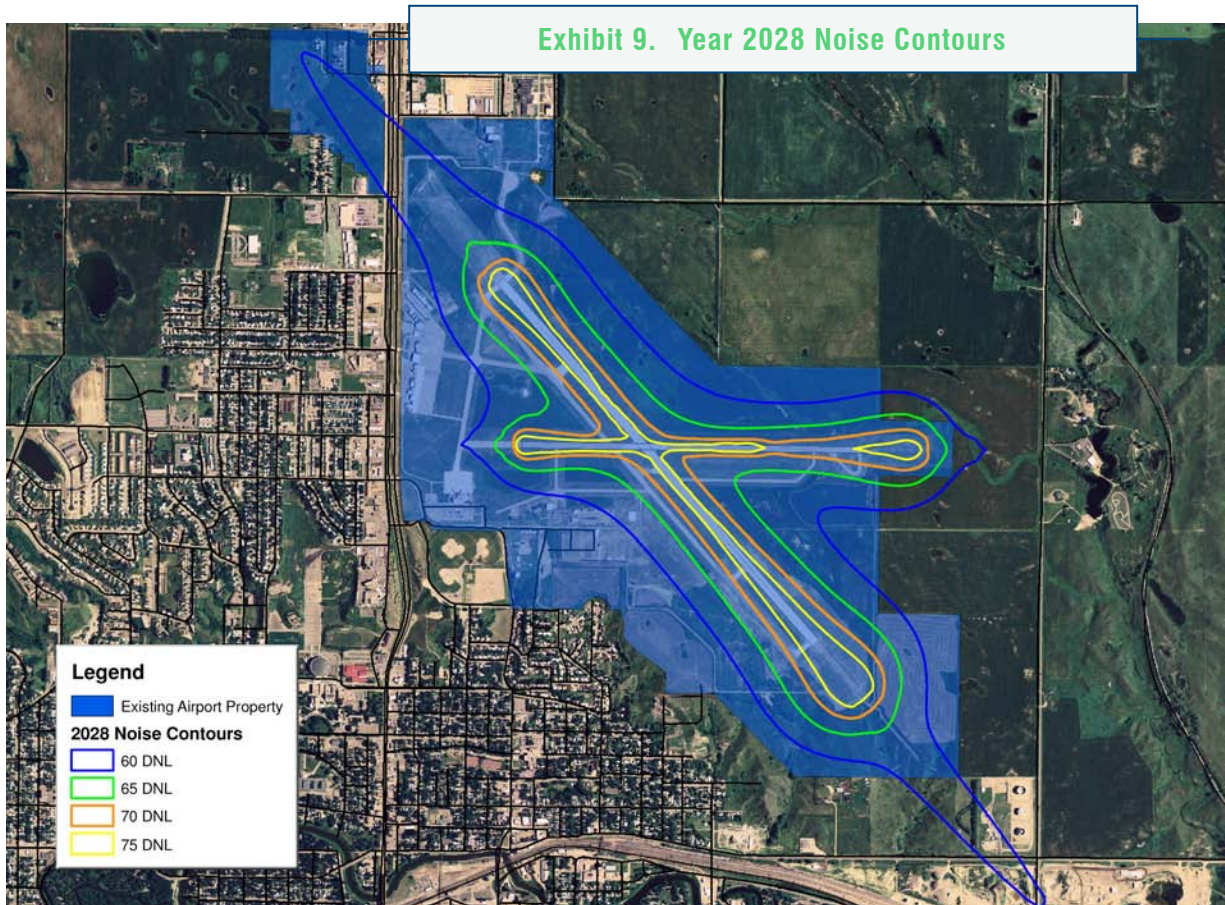


Exhibit 8. Year 2018 Noise Contours



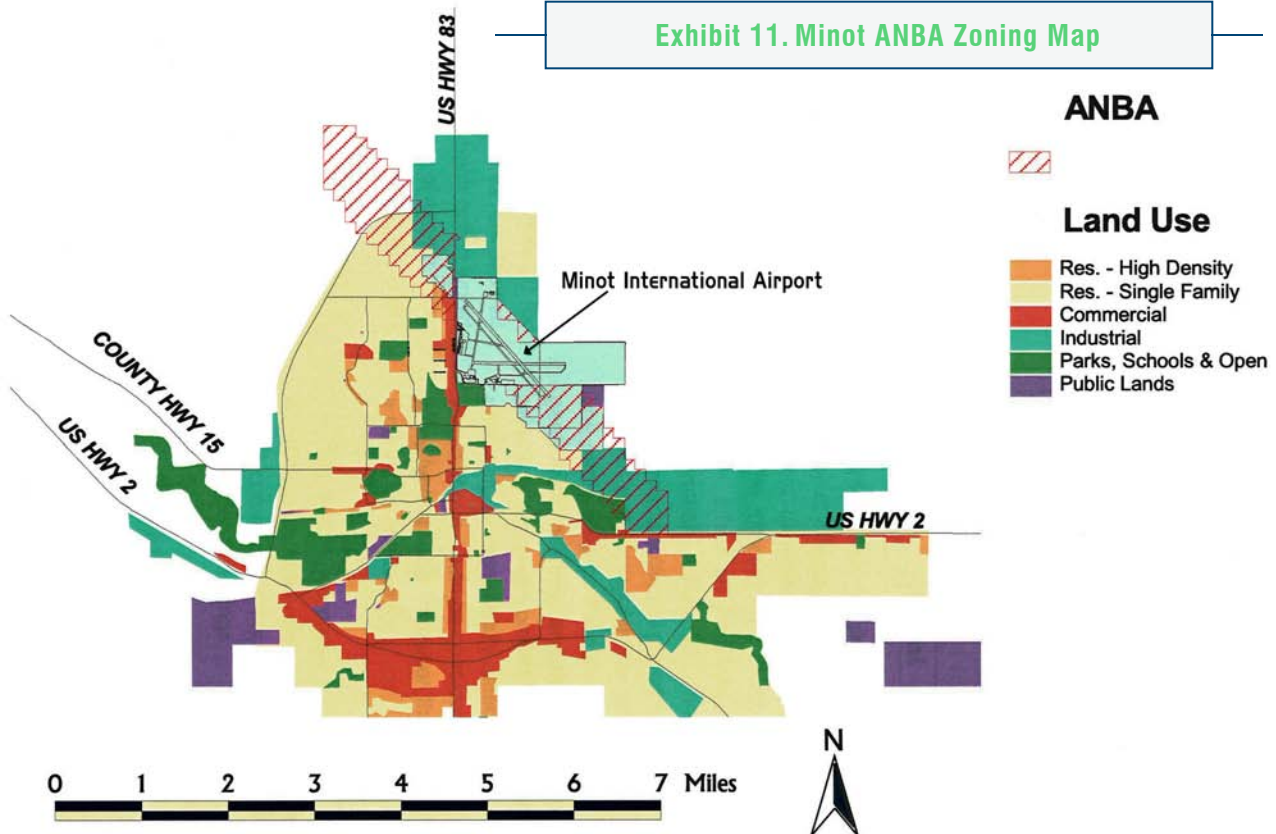
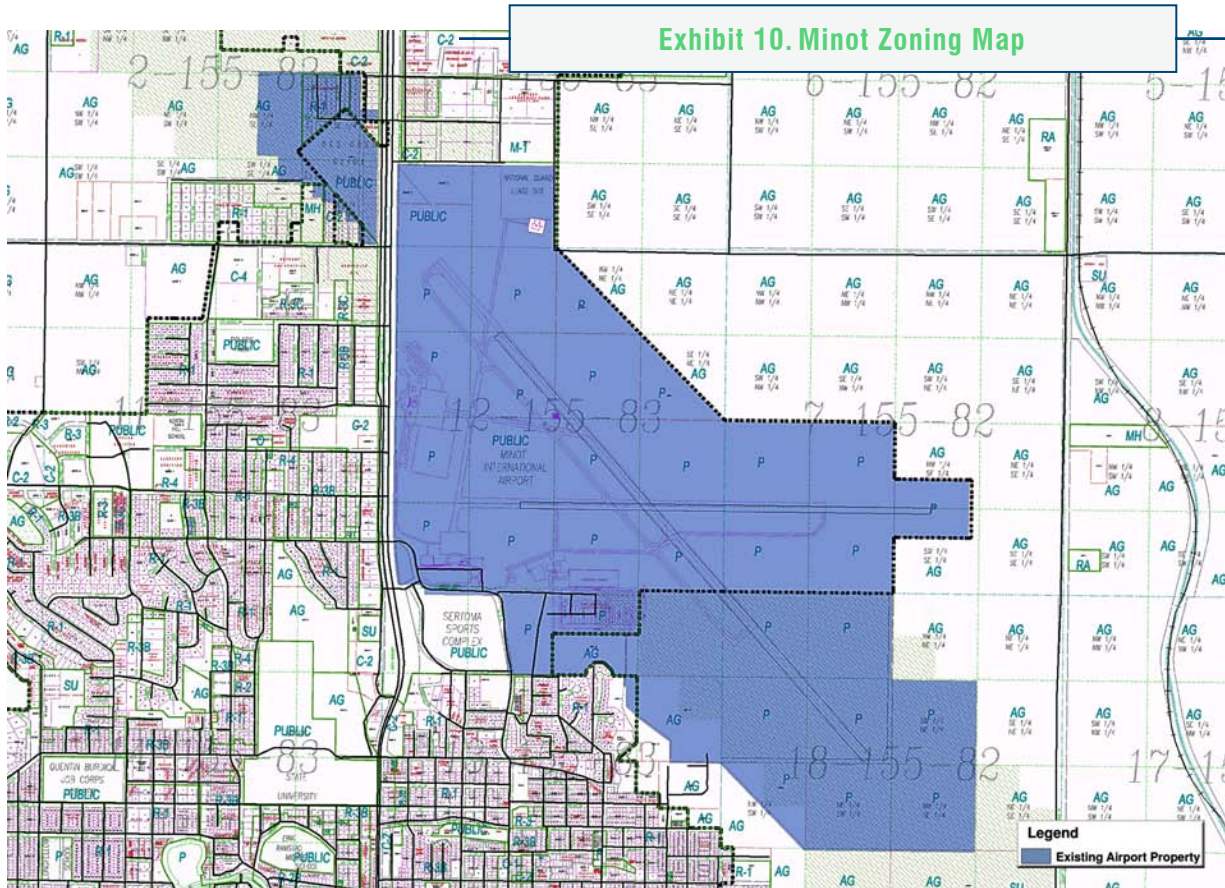


Existing Zoning

The city of Minot last updated its zoning ordinance on May 14, 2004. This was a minor update. **The city's zoning map appears in [Exhibit 10](#).** The zoning ordinance defines an Airport Noise Buffer Area (ANBA) along the extended centerlines of Runway 13-31. Within the ANBA the following uses are prohibited: mobile home parks, outdoor music shows, amphitheaters, nature exhibits and zoos. Noise level reductions (NLR) for occupied buildings are also required as follows:

- **NLR of 25:** governmental services, transportation, parking, business and professional offices, the wholesale and the retailing of building materials, hardware and farm equipment, general retail trade; utilities, communications, general manufacturing, photographic and optical manufacturing, golf courses, riding stables, and water recreation.
- **NLR of 30:** residential other than mobile homes, transient lodgings, schools, hospitals, nursing homes, churches, auditoriums, and concert halls.

A representation of the ANBA is provided by [Exhibit 11](#).



Chapter 3

Compatibility Guidelines

Introduction

This chapter contains guidelines the city of Minot may use to establish additional policies governing the planning and development of lands surrounding MOT. The approach used in this effort is to identify a best scenario to airport land use compatibility and then balance that best scenario with existing and planned land uses surrounding MOT. A comparison to existing zoning ordinances and recommended changes to those ordinances is also presented. The two mile extraterritorial jurisdiction held by the city of Minot for planning and zoning purposes and close proximity of MOT to the city center places policy decisions with the city of Minot. The recommended guidelines in this report are consistent with North Dakota Century Code requirements for airport zoning.

There are a number of proactive steps that airport sponsors can take to facilitate airport land use compatibility. Below are suggestions taken from the ND Airport Managers Manual.

- Ensure land use restrictions for all surrounding jurisdictions are in place and reflect current operational levels by aircraft type.
- Assist surrounding jurisdictions in understanding how the airport operates, the airport's flight patterns and the type of aircraft operating at the airport. Also assist surrounding jurisdictions in understanding how the airport benefits the local economy and community's health, welfare, and safety.
- Stay involved because land use is fluid and subject to a public process that is constantly changing. By staying involved, the airport manager/sponsor can influence the compatibility of land use surrounding the airport.
- Maintain awareness of land use actions proposed by the local county or municipality and all adjacent jurisdictions in the airport environs.
- Stay apprised of the existing zoning or land use, how it is being enforced, and changing airport operations and associated needs and impacts on areas adjacent to the airport.

- Assist local jurisdictions in understanding Federal Aviation Regulations Part 77 notification requirements and the special needs for protecting the safety and efficiency of aircraft operations.
- Provide copies of the Airport Layout Plan (ALP) to the local planning commission.
- Attend planning meetings on land use decisions in the vicinity of the airport.
- Be sensitive to operations at the airport and the impact they have on neighboring land uses.
- Invite local government officials and planners to be part of airport advisory committee meetings to keep them informed of the airport's plans and needs.

These guidelines offer the airport sponsor an opportunity to establish or strengthen their relationship with their local community officials, to show them the issues associated with airport land use compatibility and to explain how the airport and the community can most rationally be protected. By staying involved in local land use issues and the formulation and updating of their local growth management plan, airport managers and sponsors can ensure that their airport's needs are brought to the attention of the local government who can help control the surrounding land use designations through zoning or other appropriate controls.

Land Use Compatibility Categories

The land use compatibility issues introduced in this report are treated as separate categories with individual policy recommendations for each issue. The land use compatibility categories for which criteria have been developed are airspace, safety and wildlife. The issue of noise was not addressed because the city of Minot has already adopted Airport Noise Buffer Area zoning for this purpose.

The developed nature of much of the areas bordering MOT makes an individualized approach to each land use compatibility issue the most effective method. The city of Minot has also adopted zoning ordinances that at least partially satisfy land use compatibility concerns and an individualized approach allows a more specific analysis of the suitability of existing zoning with the intent of minimizing the number of recommended zoning changes.

Airspace Category

Airspace definition is well established through FAR Part 77 as explained earlier in this document and there is no need to improve upon the current arrangement of airspace surfaces as shown in the FAA approved airport layout plan. See [Exhibit 6](#) for MOT's approved airspace surfaces.

FAR Part 77 requires proponents of tall structures to give notice to FAA of their intent to construct structures near airports. Chapter 1 provides an overview of this procedure. It is important to acknowledge that FAA's role in concerning

proposed tall structures is limited to evaluating the resulting aeronautical effects of proposed structures and has no legal authority to stop the construction of any structure.

Responsibility for planning and controlling the placement of tall structures obstructing MOT's airspace rests solely with the city of Minot. FAA places this responsibility on the city through sponsor assurances on federal grants the city has received for airport improvements. Noncompliance with sponsor assurances could result in demands for repayment of grants,



revocation of the FAA Airport Operating Certificate required by FAR Part 139 for commercial airline service, or a significant diminishment of the airport's capability to serve all aircraft operations resulting from the obstruction of airspace caused by construction of a tall structure.

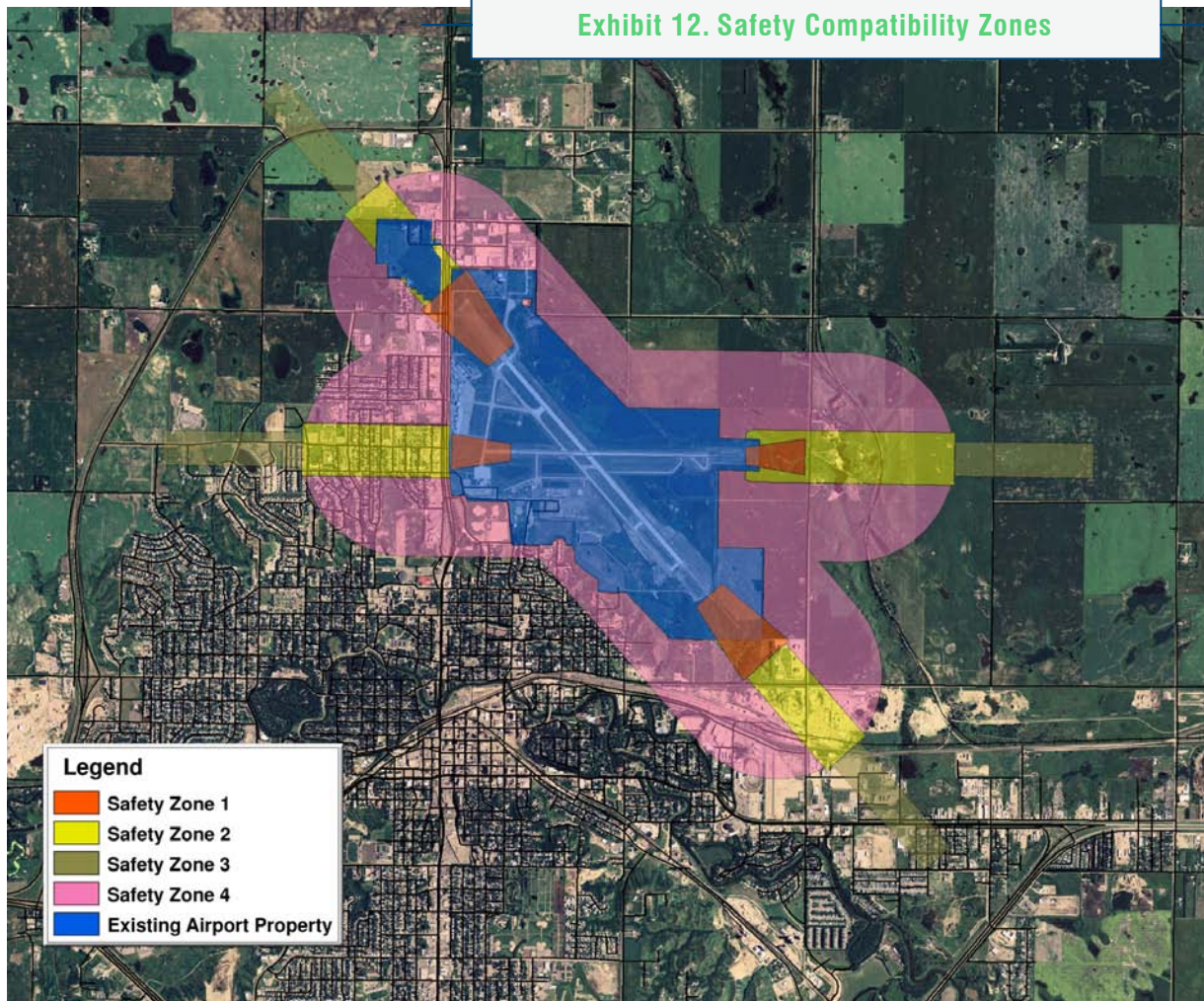
The city of Minot recognizes its role in controlling airspace but has not formerly adopted zoning that specifically protects airspace required for the safe and effective operation of MOT. The commonly accepted method of implementing height and hazard control policies is through adoption of overlay zoning. North Dakota Century Code empowers the city to adopt zoning for airport hazards.

Appendix B contains a sample airport overlay zoning ordinance from the North Dakota Airport Managers Manual. Overlay zoning specifically for airspace adds height and hazard controls to the existing zoning ordinance without otherwise superseding the existing zoning ordinance. This sample ordinance could be adapted for Minot's use in developing a suitable zoning ordinance as part of a comprehensive airport land use compatibility review process.

Safety Category

A safety compatibility map was derived for MOT that includes four compatibility zones. Each safety compatibility zone is assigned development criteria involving acceptable and prohibited land uses and maximum development densities where structures are acceptable. **Exhibit 12 provides an illustration of the safety compatibility zones and Table 3 outlines the development criteria for each zone.** Each zone and its criteria approximately relate to the degree risk of aircraft accidents within each zone. As compared to the California Airport Land Use Planning Handbook, the proposed safety compatibility map for MOT uses fewer

Exhibit 12. Safety Compatibility Zones



zones and less intense development criteria. This change was made to reflect the actual development character of the city of Minot. Communities adopting safety compatibility zones incorporate the information into their comprehensive plans and zoning ordinances.

A description of each of the MOT safety compatibility zones is detailed in the following paragraphs. Note that the land designated as airport property is not included in the safety compatibility zones because it is already designated solely for airport compatible uses. Existing developed land uses would not be affected by the proposed safety compatibility criteria.

Table 3. Safety Compatibility Zones

Safety Zone	Locations	Standards			Additional Criteria	
		Minimum Parcel Size	Other Uses		Unacceptable Uses ³	Other Development Conditions
			<i>maximum people / ac</i> ²	Average ⁴ / Single Acre ⁵		
1	Within Runway Protection Zone ⁶	No Buildings Allowed	0	0	- All structures except ones with location set by aeronautical function - Assemblages of people - Storage of hazardous materials - Hazards to flight⁷	Avigation easement dedication⁸
2	Inner Approach/Departure Zone	No New Dwellings Allowed Except on Existing Legal Lot ¹	40	100	- Children's schools, day care centers, libraries - Hospitals, nursing homes; places of worship - Buildings with >2 above ground habitable floors. - Above ground bulk storage of hazardous materials⁹ - Highly noise-sensitive outdoor nonresidential uses¹⁰ - Hazards to flight⁷	- Locate structures maximum distance from extended runway centerline - Critical community infrastructure facilities generally unacceptable^{11, 12} - Avigation easement dedication⁸

continued on page 20

- Single-family dwellings on legal lots or record are permissible. Clustering of units is encouraged. Densities are to be calculated in terms of site size. Noise level reduction and avigation easement requirements for the compatibility zone in which the dwellings are to be located are to be applied.
- Usage intensity calculations shall include all people (e.g., employees, customers/visitors, etc.) who may be on the property at a single point in time, whether indoors or outside.
- The uses listed here are ones that are explicitly unacceptable regardless of whether they meet the intensity criteria. In addition to these explicitly unacceptable uses, other uses will not be permitted in the respective compatibility zones because they do not meet the usage intensity criteria.
- The total number of people permitted on a project site at any time, except rare special events, must not exceed the indicated usage intensity times the gross acreage of the site. Rare special events are ones (such as an air show at the airport) for which a facility is not designed and normally not used and for which extra safety precautions can be taken as appropriate.
- Clustering of nonresidential development is permitted. However, no single acre of a project site shall exceed the indicated number of people per acre.
- Runway protection zone (RPZ) that delineate *Zone 1* are derived from locations indicated on the airport layout plan. *Zone 1* is typically on airport property or otherwise under airport control.
- Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also unacceptable.
- As part of certain real estate transactions involving residential property within any compatibility zone (that is, anywhere within an airport influence area), information regarding airport proximity and the existence of airport overflights should be disclosed. Easement dedication and deed notice requirements indicated for specific compatibility zones would apply only to new development and to reuse if discretionary approval is required.
- Storage of aviation fuel and other aviation-related flammable materials on the airport is exempted from this criterion. Storage of up to 6,000 gallons of nonaviation flammable or other hazardous materials is also exempted.
- Examples of highly noise-sensitive outdoor nonresidential uses that are unacceptable include amphitheaters and drive-in theaters. Caution should be exercised with respect to uses such as poultry farms and nature preserves.
- Critical community facilities include power plants, electrical substations, and public communications facilities.
- Generally unacceptable uses are those that are incompatible with airport operations. These uses should not be permitted unless no feasible alternative is available.
- Although no explicit upper limit on usage intensity is defined for Zone 4, land uses of the types listed—uses that attract very high concentrations of people in confined areas—are generally unacceptable in locations below or near the principle arrival and departure flight tracks.

Safety Zone Locations		Standards			Additional Criteria	
		Minimum Parcel Size	Other Uses		Unacceptable Uses ³	Other Development Conditions
			<i>maximum people / ac ²</i>			
			Average ⁴	Single Acre ⁵		
3	Flight Corridor Zone	≤ 40.0 ac ¹	100	250	■ Children’s schools, day care centers, libraries ■ Hospitals, nursing homes ■ Buildings with >3 above ground habitable floors. ■ Highly noise-sensitive outdoor nonresidential uses ¹⁰ ■ Hazards to flight ⁷	■ Above ground bulk storage of hazardous materials generally unacceptable ⁹ ■ Deed notice required ⁸
4	Traffic Pattern Protection Zone	No Restriction ¹³			■ Highly noise-sensitive outdoor nonresidential uses ¹⁰ ■ Hazards to flight ⁷	■ Children’s schools, hospitals, nursing homes generally unacceptable ¹² ■ Major spectator-oriented sports stadiums, amphitheaters, concert halls generally unacceptable ■ Deed notice required ⁸

1. Single-family dwellings on legal lots or record are permissible. Clustering of units is encouraged. Densities are to be calculated in terms of site size. Noise level reduction and aviation easement requirements for the compatibility zone in which the dwellings are to be located are to be applied.

2. Usage intensity calculations shall include all people (e.g., employees, customers/visitors, etc.) who may be on the property at a single point in time, whether indoors or outside.

3. The uses listed here are ones that are explicitly unacceptable regardless of whether they meet the intensity criteria. In addition to these explicitly unacceptable uses, other uses will not be permitted in the respective compatibility zones because they do not meet the usage intensity criteria.

4. The total number of people permitted on a project site at any time, except rare special events, must not exceed the indicated usage intensity times the gross acreage of the site. Rare special events are ones (such as an air show at the airport) for which a facility is not designed and normally not used and for which extra safety precautions can be taken as appropriate.

5. Clustering of nonresidential development is permitted. However, no single acre of a project site shall exceed the indicated number of people per acre.

6. Runway protection zone (RPZ) that delineate *Zone 1* are derived from locations indicated on the airport layout plan. *Zone 1* is typically on airport property or otherwise under airport control.

7. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also unacceptable.

8. As part of certain real estate transactions involving residential property within any compatibility zone (that is, anywhere within an airport influence area), information regarding airport proximity and the existence of airport overflights should be disclosed. Easement dedication and deed notice requirements indicated for specific compatibility zones would apply only to new development and to reuse if discretionary approval is required.

9. Storage of aviation fuel and other aviation-related flammable materials on the airport is exempted from this criterion. Storage of up to 6,000 gallons of nonaviation flammable or other hazardous materials is also exempted.

10. Examples of highly noise-sensitive outdoor nonresidential uses that are unacceptable include amphitheaters and drive-in theaters. Caution should be exercised with respect to uses such as poultry farms and nature preserves.

11. Critical community facilities include power plants, electrical substations, and public communications facilities.

12. Generally unacceptable uses are those that are incompatible with airport operations. These uses should not be permitted unless no feasible alternative is available.

13. Although no explicit upper limit on usage intensity is defined for Zone 4, land uses of the types listed—uses that attract very high concentrations of people in confined areas—are generally unacceptable in locations below or near the principle arrival and departure flight tracks.

Zone 1 – Runway Protection Zones. This zone consists of the runway protection zone (RPZ) located within the inner approach area at each runway end. The total area, shape and development criteria used for Zone 1 are consistent with the ultimate RPZ's shown on the FAA approved ALP and comply with the RPZ design standards in FAA AC 150/53000-13.

Zone 1 prohibits all development that is not necessary for aeronautical purposes. All land within this zone should be owned by the airport in order to provide the level of control commensurate with the high level of accident risk the area is subject to. The high level of aircraft noise experienced in this area also makes nearly all forms of development incompatible. When airport ownership is not possible, aviation easements should be secured. Aviation easements convey rights of aircraft overflight, creation of noise and vibrations, limitations on the heights of structures and trees, and prohibit uses that involve congregations of people.

Zone 2 – Inner Approach & Departure Zone. This zone includes the portion of the inner, final approach located immediately outside of the RPZ's (Zone 1). Zone 2 is the area normally residing outside of airport property that is exposed to the highest noise levels and greatest risk of an aircraft accident. Aircraft in this zone operate at very low altitudes and during takeoffs, under full thrust power. This combination of aircraft operation factors creates the moderate levels of noise and increased risk of accidents. Crosswind Runway 8-26 is seeing an increase in use as the airline transitions to smaller aircraft. For that reason, the safety compatibility zones are the same dimensions as those proposed for Runway 13-31.

Zone 2 prohibits all new residential buildings except on existing legal lots. Ownership of residential development rights for this area is recommended if the area is subject to residential development. When airport ownership is not possible, aviation easements should be secured. Commercial and industrial development is acceptable for uses involving low densities of people per acre (average of no more than 40 people per acre). Schools, hospitals, churches and similar uses are not acceptable uses. Above ground storage of fuel or other hazardous materials should be avoided. When airport ownership is not possible, aviation easements should be secured. Aviation easements convey rights of aircraft overflight, creation of noise and vibrations, limitations on the heights of structures and trees, and prohibit uses that involve concentrations of people.

Zone 3 – Flight Corridor Zone. This zone includes the outer portion of the final approach and departure corridor. Aircraft operate within this zone at altitudes of approximately 800 to 1,500 feet above airport elevation. Development in this area is exposed to moderate levels of aircraft noise and moderate risk of aircraft accidents by virtue of its location on the extended centerline of the runway. The outer boundary of Zone 3 extends approximately 10,000 feet from the runway end to which it is associated.

Zone 3 should be avoided for residential development in order to minimize the number of persons living near the flight corridor. Where residential development is allowed, rural residential densities should be maintained. Deed notices should be required for all residential development, and notice should also be required in residential rental agreements. Schools, hospitals, churches and similar uses are not acceptable uses. Above ground storage of fuel or other hazardous materials should be avoided. Commercial and industrial development is acceptable for uses involving moderate densities of people per acre (average of no more than 100 people per acre).

Zone 4–Traffic Pattern Protection Zone. This zone is representative of the traffic pattern flown by small aircraft the use MOT. Whereas large aircraft typically operate straight in/out runway operations, small aircraft typically fly a traffic pattern that parallels the runways as part of takeoff or landing maneuvers. Small aircraft generally fly the traffic pattern at an altitude that is approximately 1,000 feet above the airport and remain within no more than one-half mile from the runway centerline. Zone 4 extends approximately one-half mile from each runway in order to encompass the traffic pattern flown by small aircraft. Zone 4 is subject to low levels of noise occurring during individual events as an airplane flies overhead. The risk of an accident is also low within this zone.

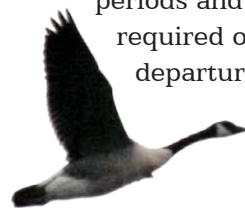
Zone 4 requires no specific restrictions on residential or other forms of development. Schools, hospitals, churches and similar uses are not acceptable uses. Deed notices should be required for all residential development, and notice should also be required in residential rental agreements. Major spectator oriented facilities should be avoided due to the concentrations of people they produce and exposure to aircraft noise interference.

Implementation of the above safety compatibility zones by the city of Minot requires further analysis to determine whether the existing zoning ordinance can be modified to incorporate the intent of the zones as presented, or whether new zoning in the form of overlay zoning should be adopted. Preliminarily, it appears that the existing zoning ordinance is largely compatible with the existing zoning ordinance, and perhaps it may be most effective to modify the existing ordinance to address the few differences that there are between the ordinance and the safety compatibility zones.



Wildlife

Wildlife, particularly birds, are of concern for aircraft operating within the central migration flyway in which MOT is located. Activity by migrating birds is particularly intense during spring and fall migration periods and extra vigilance to monitor bird numbers and movements is required of pilots, the MOT departure radar operators FAA Air Traffic Control Tower and approach/located Minot Air Force Base.



MOT is operated according to the requirements of an FAA approved Wildlife Hazard Management Plan. This plan was prepared using data on actual wildlife activity recorded in a Wildlife Hazard Assessment prepared by the USDA Wildlife Services. It is important to note that the Wildlife Hazard Assessment and Wildlife Hazard Management Plan focused on wildlife activity within airport property whereas land use compatibility that is the subject of the present effort deals primarily with land surrounding the airport. Where land use compatibility is addressed in the Wildlife Hazard Management Plan, the arrangement specified is that the airport director would be vigilant of development proposals that may cause the attraction of wildlife activity near the airport. This is the manner in which potential wildlife attractants are presently addressed in Minot and has been an effective means to date.

MOT has received federal grant-in-aid assistance and must use the standards and practices contained in AC 150/5200-33B, Hazardous Wildlife Attractants On or Near Airports. MOT services commercial airline operations under the authority of an Airport Operating Certificate issued under Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports, Subpart D (Part 139). FAR Part 139 requires holders of an Airport Operating Certificate to comply with the wildlife hazard management requirements of Part 139. Compliance would normally be satisfied through implementation of the standards and practices contained in AC 150/5200-33B.

Exhibit 13 was prepared for MOT and the city of Minot to illustrate the zones surrounding the airport where land use compatibility controls must be implemented to help minimize wildlife attractants. **Table 4** lists from AC 150/5200-33B the types of facilities and activities that are not considered compatible with airport operations because they typically attract wildlife of concern to aircraft safety.

Implementation of these land use compatibility standards for wildlife attractants may be effected through comprehensive planning and a plan review and permitting process. The nature of many of these types of activities and facilities makes zoning a less effective method of producing an effective outcome for all participants. For example, storm water management facilities are on the list of facilities to be avoided but may be designed to greatly minimize the attractiveness of the facility to wildlife. The best method of implementing the land use compatibility related to wildlife attractants will be determined by the city of Minot.



It should be noted that the Wildlife General Zone which extends at least five miles from the airport encompasses portions of Ward County and the cooperation of the county will be required on lands located northeast of MOT.

Exhibit 13. Wildlife Attractant Zones

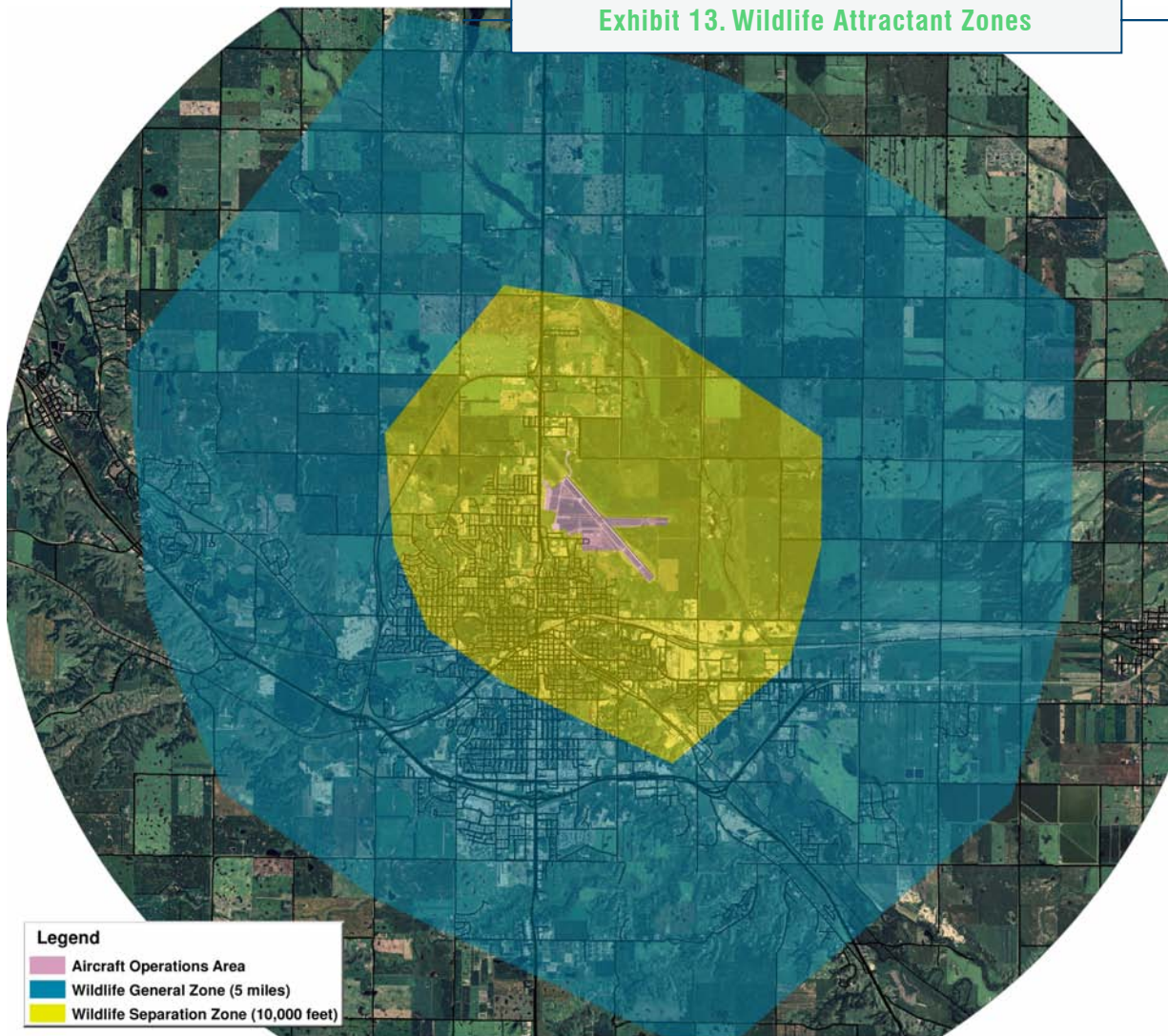


Table 4. FAA AC 150/5200-33B, "Hazardous Wildlife Attractants On or Near Airports"

Land Use Guidance as Related to Wildlife Attractants	
<i>Typically not recommended within 10,000 feet of airports using turbine-powered aircraft</i>	
1.	New Landfills (prohibited within 6 statute miles of airports)
2.	Existing waste disposal facilities (unless they can show it does not pose a bird hazard)
3.	Underwater waste discharges
4.	Existing storm water management facilities (unless modified so as to minimize attractiveness to wildlife)
5.	New storm water management facilities (unless designed so as to minimize attractiveness to wildlife)
6.	Existing wastewater treatment facilities
7.	Artificial marshes, stock ponds and recreational lakes
8.	Wastewater discharge and sludge disposal
9.	Wetlands that attract wildlife
10.	Dredge spoil containment areas (if they contain materials that would attract wildlife)
11.	Agricultural crops (may be grown w/in 10,000 feet-follow separation distances in "Minimum Distances Between Certain Airport Features and Any On Airport Agricultural Crops")
12.	Confined livestock operations (feedlots, dairy operations, hog/chicken production facilities, etc)
13.	Aquaculture (unless they can show it does not pose a bird hazard)
14.	Golf courses (allowed if they develop a program to reduce wildlife attractiveness)
<i>Typically not recommended within 5 mile radius of airport:</i>	
1.	New Landfills: prohibited within 6 statute miles of airports
2.	New wastewater treatment facilities
3.	New golf courses
4.	Any items listed above if they would cause wildlife movement across approach/departure surface
<i>Typically compatible with airports:</i>	
1.	Enclosed trash transfer stations
2.	Composting operations (yard waste; does not include food/municipal solid waste)
3.	Recycling centers
4.	Construction and demolition debris facilities
5.	Fly ash disposal

Conclusion

The implementation of the recommended measures in this chapter will help bring about compatibility between the uses of land surrounding the airport and airport operations. Implementation will also help ensure that MOT remains in compliance with applicable FAA and state requirements for airport land use compatibility and flight hazards. Additional work on the part of the city will be required to arrive at the best methods of transforming these recommendations into active land use policies.

Adjustments to some of the zone boundaries and development criteria may be necessary to arrive at the best solution. These adjustments may be made to best fit zone boundaries to area topographic and geographic features. Consideration should be given to existing urban development, or lack of development, in order to arrive at the final zone boundaries and development criteria. Further, land use is a dynamic process and periodic updates to map boundaries, development criteria and overall policies will be necessary.

This draft plan was reviewed and discussed with the Airport Director and City Planner. Their comments were incorporated into the plan. It was determined that the best course of action to implement the airport land use compatibility plan is to incorporate it into a forthcoming planning process that will result in an update to the city's comprehensive plan. According to North Dakota law (40-47-03), zoning regulations shall be consistent with the community's comprehensive plan. Approaching implementation in this manner ensures an effective planning process, meets state laws, and provides public involvement opportunities.

Some important things to keep in mind in drafting final airport land use policies are listed below:

- The approach/departure corridors at each runway end are critical for the safe passage of aircraft and protection of persons and property on the ground. Runway protection zones should be owned and controlled by the airport, and low density land uses that are compatible with aircraft noise and vibrations should be developed within the remaining portions of the approach/departure corridors.
- The aircraft used by Delta Airlines recently transitioned from DC-9 to EMB-175. The EMB-175 is a smaller aircraft and is suited to regular operations on Runway 8-26. The ATC tower reported that between the middle of June 2009 and end of September 2009, approximately 18 percent of jet takeoffs and landings occurred on Runway 8-26. The majority of these operations were conducted by airline aircraft. This change in the airline fleet indicates that future uses for undeveloped land within Runway 8-26 approach/departure corridors should be formulated similar to Runway 13-31.
- Additionally, coordination between the airport, ATC control tower, airline and other jet operators should occur with emphasis on avoiding jet

takeoffs on Runway 26 and jet landings on Runway 8. Information from ATC tower shows that approximately five percent of all jet operations involve takeoffs on Runway 26 and landings on Runway 8. Both types of operations should be avoided when wind conditions allow. This step would reduce impacts to residential and other incompatible land uses in the area immediately west of the airport. Note that future proposed plans to relocate the Runway 8 threshold farther east will improve this situation but will not entirely mitigate impacts.

Appendix A

FAA Sponsor Assurances, Paragraphs 20 & 21

North Dakota Century Code, Airport Zoning

operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary.

In furtherance of this assurance, the sponsor will have in effect arrangements for-

- (1) Operating the airport's aeronautical facilities whenever required;
- (2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and
- (3) Promptly notifying airmen of any condition affecting aeronautical use of the airport.

Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

- b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. Hazard Removal and Mitigation. It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. Compatible Land Use. It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. Economic Nondiscrimination.

- a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.
- b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-
 - (1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and
 - (2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

CHAPTER 2-04 AIRPORT ZONING

2-04-01. Definitions. As used in this chapter, unless the context otherwise requires:

1. "Airport" means any area of land or water designed and set aside for the landing and taking off of aircraft and utilized or to be utilized in the interests of the public for such purposes.
2. "Airport hazard" means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft.
3. "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 chapter.
4. "Person" means any individual, firm, copartnership, corporation, limited liability company, company, association, joint-stock association, the state of North Dakota or any political subdivision thereof, and includes any trustee, receiver, assignee, or other similar representative thereof.
5. "Political subdivision" means any county, city, park district, or township.
6. "Structure" means any object constructed or installed by man, including, but without limitation, buildings, towers, smokestacks, and overhead transmission lines.
7. "Tree" means any object of natural growth.

2-04-02. Airport hazards contrary to public interest. It is hereby found that an airport hazard endangers the lives and property of users of the airport and of occupants of land in its vicinity, and also, if of the obstruction type, in effect reduces the size of the area available for the landing, taking off, and maneuvering of aircraft, thus tending to destroy or impair the utility of the airport and the public investment therein. Accordingly, it is hereby declared that:

1. The creation or establishment of an airport hazard is a public nuisance and an injury to the community served by the airport in question;
2. It is therefore necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of airport hazards be prevented; and
3. This should be accomplished, to the extent legally possible, by exercise of the police power, without compensation.

It is further declared that both the prevention of the creation or establishment of airport hazards and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are public purposes for which political subdivisions may raise and expend public funds and acquire land or property interests therein.

2-04-03. Power to adopt airport zoning regulations.

1. In order to prevent the creation or establishment of airport hazards, every political subdivision having an airport hazard area within its territorial limits may adopt, administer, and enforce, under the police power and in the manner and upon the conditions hereinafter prescribed, airport zoning regulations for such airport hazard area, which regulations may divide such area into zones, and, within such zones, specify the land uses permitted and regulate and restrict the height to which structures and trees may be erected or allowed to grow.

2. Where an airport is owned or controlled by a political subdivision and any airport hazard area appertaining to such airport is located outside the territorial limits of said political subdivision, the political subdivision owning or controlling the airport and the political subdivision within which the airport hazard area is located may, by ordinance or resolution duly adopted, create a joint airport zoning board, which board has the same power to adopt, administer, and enforce airport zoning regulations applicable to the airport hazard area in question as that vested by subsection 1 in the political subdivision within which such area is located. Each such joint board shall have as members two representatives appointed by each political subdivision participating in its creation and in addition a chairman elected by a majority of the members so appointed.
3. If in the judgment of a political subdivision owning or controlling an airport, the political subdivision within which is located an airport hazard area appertaining to that airport, has failed to adopt or enforce reasonably adequate airport zoning regulations for such area under subsection 1 and if that political subdivision has refused to join in creating a joint airport zoning board as authorized in subsection 2, the political subdivision owning or controlling the airport may itself adopt, administer, and enforce airport zoning regulations for the airport hazard area in question. In the event of conflict between such regulations and any airport zoning regulations adopted by the political subdivision within which the airport hazard area is located, the regulations of the political subdivision owning or controlling the airport govern and prevail.

2-04-04. Relation to comprehensive zoning regulations.

1. Incorporation. In the event that a political subdivision has adopted, or hereafter adopts, a comprehensive zoning ordinance regulating, among other things, the height of buildings, any airport zoning regulations applicable to the same area or portion thereof, may be incorporated in and made a part of such comprehensive zoning regulations, and be administered and enforced in connection therewith.
2. Conflict. In the event of conflict between any airport zoning regulations adopted under this chapter and any other regulations applicable to the same area, whether the conflict be with respect to the height of structures or trees, the use of land, or any other matter, and whether such other regulations were adopted by the political subdivision which adopted the airport zoning regulations or by some other political subdivision, the more stringent limitation or requirement governs and prevails.

2-04-05. Procedure for adoption of zoning regulations.

1. No airport zoning regulations shall be adopted, amended, or changed under this chapter except by action of the legislative body of the political subdivision in question, or the joint board provided for in subsection 2 of section 2-04-03 after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. At least fifteen days' notice of the hearing shall be published in an official newspaper, or a newspaper of general circulation, in the political subdivision or subdivisions in which is located the airport hazard area to be zoned.
2. Prior to the initial zoning of any airport hazard area under this chapter, the political subdivision or joint airport zoning board which is to adopt the regulations shall appoint a commission, to be known as the airport zoning commission, to recommend the boundaries of the various zones to be established and the regulations to be adopted therefor. The commission shall make a preliminary report and hold public hearings thereon before submitting its final report, and the legislative body of the political subdivision or the joint airport zoning board shall not hold its public hearings or take other action until it has received the final report of such

commission. If a city planning commission or zoning commission already exists, it may be appointed as the airport zoning commission.

2-04-06. Airport zoning requirements.

1. Reasonableness. All airport zoning regulations adopted under this chapter must be reasonable and none may impose any requirement or restriction which is not reasonably necessary to effectuate the purposes of this chapter. In determining what regulations it may adopt, each political subdivision and joint airport zoning board shall consider, among other things, the character of the flying operations expected to be conducted at the airport, the nature of the terrain within the airport hazard area, the character of the neighborhood, and the uses to which the property to be zoned is put and adaptable.
2. Nonconforming uses. No airport zoning regulations adopted under this chapter may require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations when adopted or amended, or otherwise interfere with the continuance of any nonconforming use, except as provided in subsection 3 of section 2-04-07.

2-04-07. Permits and variances.

1. Permits. Any airport zoning regulations adopted under this chapter may require that a permit be obtained before any new structure or use may be constructed or established and before any existing use or structure may be substantially changed or substantially altered or repaired. In any event, however, all such regulations must provide that before any nonconforming structure or tree may be replaced, substantially altered or repaired, rebuilt, allowed to grow higher, or replanted, a permit must be secured from the administrative agency authorized to administer and enforce the regulations, authorizing such replacement, change, or repair. No permit may be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming structure or tree or nonconforming use to be made or become higher or become a greater hazard to air navigation than it was when applicable regulation was adopted or than it is when the application for a permit is made. Except as provided herein, all applications for permits must be granted.
2. Variances. Any person desiring to erect any structure, or increase the height of any structure, or permit the growth of any tree, or otherwise use that person's property in violation of airport zoning regulations adopted under this chapter may apply to the board of adjustment for a variance from the zoning regulations in question. Such variances must be allowed where a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship and the relief granted would not be contrary to the public interest but do substantial justice and be in accordance with the spirit of the regulations and this chapter; provided, that any variance may be allowed subject to any reasonable conditions that the board of adjustment may deem necessary to effectuate the purposes of this chapter.
3. Hazard marking and lighting. In granting any permit or variance under this section, the administrative agency or board of adjustment may, if it deems such action advisable to effectuate the purposes of this chapter and reasonable in the circumstances, so condition such permit or variance as to require the owner of the structure or tree in question to permit the political subdivision, at its own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard.

2-04-08. Appeals.

1. Any person aggrieved, or taxpayer affected, by any decision of an administrative agency made in its administration of airport zoning regulations adopted under this

chapter, or any governing body of a political subdivision, or any joint airport zoning board, which is of the opinion that a decision of such administrative agency is an improper application of airport zoning regulations of concern to such governing body or board, may appeal to the board of adjustment authorized to hear and decide appeals from the decisions of such administrative agency.

2. All appeals taken under this section must be taken within a reasonable time, as provided by the rules of the board, a notice of appeal specifying the grounds thereof. The agency from which the appeal is taken shall forthwith transmit to the board all the papers constituting the record upon which the action appealed from was taken.
3. An appeal stays all proceedings in furtherance of the action appealed from, unless the agency from which the appeal is taken certifies to the board, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate a stay would, in its opinion, cause imminent peril to life or property. In such cases, proceedings may not be stayed otherwise than by order of the board on notice to the agency from which the appeal is taken and on due cause shown.
4. The board shall fix a reasonable time for the hearing of appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time. Upon the hearing, any party may appear in person or by attorney.
5. The board may, in conformity with the provisions of this chapter, reverse or affirm wholly or partly, or modify, the order, requirement, decision, or determination appealed from and may make such order, requirement, decision, or determination as ought to be made, and to that end has all the powers of the administrative agency from which the appeal is taken.

2-04-09. Administration of airport zoning regulations. All airport zoning regulations adopted under this chapter must provide for the administration and enforcement of such regulations by an administrative agency which may be an agency created by such regulations or any official, board, or other existing agency of the political subdivision adopting the regulations or of one of the political subdivisions which participated in the creation of the joint airport zoning board adopting the regulations, if satisfactory to that political subdivision, but in no case may such administrative agency be or include any member of the board of adjustment. The duties of any administrative agency designated pursuant to this chapter include that of hearing and deciding all permits under subsection 1 of section 2-04-07, but such agency shall not have or exercise any of the powers herein delegated to the board of adjustment.

2-04-10. Board of adjustment.

1. All airport zoning regulations adopted under this chapter must provide for a board of adjustment to have and exercise the following powers:
 - a. To hear and decide appeals from any order, requirement, decision, or determination made by the administrative agency in the enforcement of the airport zoning regulations, as provided in section 2-04-08.
 - b. To hear and decide any special exceptions to the terms of the airport zoning regulations upon which such board may be required to pass under such regulations.
 - c. To hear and decide specific variances under subsection 2 of section 2-04-07.
2. If a zoning board of appeals or adjustment already exists, it may be appointed as the board of adjustment. Otherwise, the board of adjustment shall consist of five members, each to be appointed for a term of three years by the authority adopting the regulations and to be removable by the appointing authority for cause, upon written charges and after public hearing.

3. The concurring vote of a majority of the members of the board of adjustment is sufficient to reverse any order, requirement, decision, or determination of the administrative agency, or to decide in favor of the applicant on any matter upon which it is required to pass under the airport zoning regulations, or to effect any variation in such regulations.
4. The board shall adopt rules in accordance with the provisions of the ordinance or resolution by which it was created. Meetings of the board shall be held at the call of the chairman and at such other times as the board may determine. The chairman, or in the chairman's absence the acting chairman, may administer oaths and compel the attendance of witnesses. All hearings of the board must be public. The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or, if absent, or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which must immediately be filed in the office of the board and shall be a public record.

2-04-11. Judicial review.

1. Any person aggrieved, or taxpayer affected, by any decision of a board of adjustment, or any governing body of a political subdivision or any joint airport zoning board which is of the opinion that a decision of a board of adjustment is illegal, may present to the district court a verified petition setting forth that the decision is illegal, in whole or in part, and specifying the grounds of the illegality. Such petition must be presented to the court within fifteen days after the decision is filed in the office of the board.
2. Upon presentation of such petition the court may allow a writ of certiorari directed to the board of adjustment to review such a decision of the board. The allowance of the writ does not stay proceedings upon the decision appealed from, but the court may, on application, on notice to the board and on due cause shown, grant a restraining order.
3. The board of adjustment is not required to return the original papers acted upon by it, but it is sufficient to return certified or sworn copies thereof or of such portions thereof as may be called for by the writ. The return must concisely set forth such other facts as may be pertinent and material to show the grounds of the decision appealed from and must be verified.
4. The court has exclusive jurisdiction to affirm, modify, or set aside the decision brought up for review, in whole or in part, and if need be, to order further proceedings by the board of adjustment. The findings of fact of the board, if supported by substantial evidence, must be accepted by the court as conclusive, and no objection to a decision of the board may be considered by the court unless such objection has been urged before the board, or, if it was not so urged, unless there were reasonable grounds for failure to do so.
5. Costs may not be allowed against the board of adjustment unless it appears to the court that it acted with gross negligence, in bad faith, or with malice, in making the decision appealed from.
6. In any case in which airport zoning regulations adopted under this chapter, although generally reasonable, are held by a court to interfere with the use or enjoyment of a particular structure or parcel of land to such an extent, or to be so onerous in their application to such a structure or parcel of land, as to constitute a taking or deprivation of that property in violation of the Constitution of North Dakota or the Constitution of the United States, such holding does not affect the application of such regulations to other structures and parcels of land.

2-04-12. Enforcement and remedies. Each violation of this chapter or of any regulations, orders, or rulings promulgated or made pursuant to this chapter, constitutes a class B misdemeanor. In addition, the political subdivision or agency adopting zoning regulations under this chapter may institute in any court of competent jurisdiction, an action to prevent, restrain, correct, or abate any violation of this chapter, or of airport zoning regulations adopted under this chapter, or of any order or ruling made in connection with their administration or enforcement, and the court shall adjudge to the plaintiff such relief, by way of injunction (which may be mandatory) or otherwise, as may be proper under all the facts and circumstances of the case, in order fully to effectuate the purposes of this chapter and of the regulations adopted and orders and rulings made pursuant thereto.

2-04-13. Acquisition of air rights. In any case in which:

1. It is desired to remove, lower, or otherwise terminate a nonconforming structure or use;
2. The approach protection necessary cannot, because of constitutional limitations, be provided by airport zoning regulations under this chapter; or
3. It appears advisable that the necessary approach protection be provided by acquisition of property rights rather than by airport zoning regulations,

the political subdivision within which the property or nonconforming use is located or the political subdivision owning the airport or served by it may acquire, by purchase, grant, or condemnation in the manner provided by the law under which political subdivisions are authorized to acquire real property for public purposes, such air right, navigation easement, or other estate or interest in the property or nonconforming structure or use in question as may be necessary to effectuate the purposes of this chapter.

2-04-14. Short title. This chapter must be known and may be cited as the "Airport Zoning Act".

Appendix B

Sample Airport Overlay Zoning Ordinance

EXAMPLE 3

AIRPORT OVERLAY ZONE

SECTION _____. Purpose. In order to carry out the provisions of these overlay zones, there are hereby created and established certain zones which include all of the land lying beneath the Airport Imaginary Surfaces as they apply to _____ (airport/currently existing or future public use airport) in the City of _____, _____ County. Such zones are shown on the current Airport Airspace and Runway Protection Zone drawings, prepared by _____ and dated _____.

Further, these overlay zones are intended to prevent the establishment of airspace obstructions in airport approaches and surrounding areas through height restrictions and other land use controls as deemed essential to protect the health, safety, and welfare of the people of the (City/Cities) of _____ and _____ County.

SECTION _____. Special Definitions.

1. Utility Runway. A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.
2. Visual Runway. A runway that is intended solely for the operation of aircraft using visual approach procedures with no instrument approach procedures has been approved, or planned, or indicated on an FAA or state planning document or military service airport planning document.
3. 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 nonprecision instrument approach procedure has been approved, or planned, or indicated on an FAA or state planning document or military service airport planning document.
4. Precision Instrument Runway. A runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), Microwave Landing System (MLS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is not indicated by an FAA approved airport layout plan; any other FAA or state planning document, or military service airport planning document.
5. Airport Imaginary Surfaces. Those imaginary areas in space which are defined by the Approach Surface, Transitional Surface, Horizontal Surface, and Conical Surface and in which any object extending above these imaginary surfaces is an obstruction.
6. Airport Hazard. Any structure, tree, or use of land which exceeds height limits established by the Airport Imaginary Surfaces.
7. Approach Surface. A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the Primary Surface. The inner edge of the approach surface is the same width as the Primary Surface and extends to a width of: 1,250 feet for utility runway having only visual approaches; 1,500 feet for a runway other than a utility runway having only visual approaches; 2,000 feet for a utility runway having a nonprecision instrument approach; 3,500 feet for a nonprecision instrument runway other than utility, having visibility minimums greater than three-

fourths of a statute mile; 4,000 feet for a nonprecision instrument runway having visibility minimums as low as three-fourths statute mile; and 16,000 feet for precision instrument runways. The Approach Surface extends for a horizontal distance of 5,000 feet at a slope of 20 feet outward to each foot upward (20:1) for all utility and visual runways; 10,000 feet at a slope of 34 feet outward for each foot upward (24:10) for all nonprecision instrument runways other than utility; and for all precision instrument runways extends for a horizontal distance of 10,000 feet at a slope of 50 feet outward for each foot upward (50:1); thence slopes upward 40 feet outward for each foot upward (40:1) an additional distance of 40,000 feet.

8. Primary Surface. A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the Primary Surface extends 200 feet beyond each end of that runway. 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 is 250 feet for utility runways having only visual approaches, 500 feet for utility runways having nonprecision instrument approaches, 500 feet for other than utility runways having only visual approaches or nonprecision instrument approaches with visibility minimums greater than three-fourths of a mile and 1,000 feet for nonprecision instrument runways with visibility minimums of three-fourths of a mile or less and for precision instrument runways.
9. Transitional Surface. Extend seven feet outward for each one foot upward (7:1) beginning on each side of the Primary Surface which point is the same elevation as the runway surface, and form the sides of the approach surfaces thence extending upward to a height of 150 feet above the airport elevation (Horizontal Surface).
10. Horizontal Surface. A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of 5,000 feet from the center of each end of the Primary Surface of each visual or utility runway and 10,000 feet from the center of each end of the Primary Surface of all other runways and connecting the adjacent arcs by lines tangent to those arcs.
11. Conical Surface. Extends 20 feet outward for each one foot upward (20:1) for 4,000 feet beginning at the edge of the horizontal surface (5,000 feet from the center of each end of the Primary Surface of each visual and utility runway or 10,000 feet for all nonprecision instrument runways other than utility at 150 feet above and airport elevation) and upward extending to a height of 350 feet above the airport elevation.
12. Runway Protection Zone (RPZ). An area off the runway end (formerly the clear zone) used to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended runway centerline. It begins 200 feet (60 m) beyond the end of the arcs usable for takeoff or landing. The RPZ dimensions are functions of the type of aircraft and operations to be conducted on the runway.
13. Airport Approach Safety Zone. The land that underlies the approach surface, excluding the RPZ.
14. Noise Sensitive Areas. Within 1,500 feet of an airport or within established noise contour boundaries exceeding 65 DNL.
15. Place of Public Assembly. Structure of place which the public may enter for such purposes as deliberation, education, worship, shopping, entertainment, amusement, awaiting transportation, or similar activity.

SECTION _____. No Development Area (ND)

1. Purpose and Intent

The purpose of this zone is to protect airport facilities from incompatible uses; to provide for future airport expansion; and to preserve lands adjacent to airports for future commercial and light industrial uses which will be directly dependent on air transportation.

2. Uses Permitted

The following uses are permitted subject to issuance of a land use permit:

- A. Accepted Farming Practices
- B. Air cargo terminals.
- C. Aircraft sales, repair, service, storage, and schools related to aircraft operations, and facilities on the airport property essential for the operation of airports, such as fuel storage, hangar use, F.B.O. offices, etc.
- D. Air passenger terminals.
- E. Public and semi-public buildings, structures, and uses essential to the welfare of an area, such as fire stations, pump stations, and water storage.
- F. Taxi and bus terminals.
- G. Snack shop for airport clientele with a total floor area of no larger than _____ square feet.
- H. Other uses where the ongoing operations and the use must be directly dependent upon and directly associated with the Airport.

3. Uses Subject to a Conditional Use Permit

The following conditional uses will be permitted by the _____, provided they meet all the criteria outlines in Section _____ and meet the requirements of Article _____:

- A. Light industrial, as permitted in the _____ zone.
- B. Truck terminals.

4. Conditional Use Criteria

The _____ may grant a Conditional Use Permit for uses described in Section _____ if each of the below criteria is met, as determined by the _____:

- A. The ongoing operations or the use must be directly dependent upon and directly associated with the airport.
- B. The use shall not discharge smoke, fumes, noise, sewage, or other nuisances beyond the property on which it is located.
- C. The use shall not conflict with any present or planned operations of the airport.
- D. Height Restriction standards will be met.

5. Limitations of Use

In an Airport Development Zone area, the following conditions shall apply.

A. Liquid and Solid Wastes:

Storage of animal, vegetable, or other wastes which attract insects, rodents, or birds or otherwise create a health hazard shall be prohibited.

B. Discharge Standards:

There shall be no emission of smoke, fly ash, dust, vapor, gases, or other forms of air pollution that may cause nuisance or injury to human, plant, or animal life, or to property, or that may conflict with any present or planned operations of the airport.

C. Lighting:

1. Sign lighting and exterior lighting shall not project directly into an adjoining residential zone.
2. Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project directly into the runway, taxiway, or approach zone.

D. Landscaping:

1. Site plan submitted with an application for a land use permit must include a landscaping plan which shows the location and type of plant materials.
2. New uses which abut a residential zone shall provide and maintain a dense evergreen landscape buffer, sight obscuring fence, or landscaped berm which attains a (mature) height of at least six (6) feet.
3. All unused property shall be maintained in native or existing vegetative ground cover or planted grass, shrub, and barkdust, or other suitable ground cover in an uncluttered manner.
4. Responsibility for establishment and maintenance of landscaping rests with the property owner.

E. Parking:

1. Site plan(s) submitted with an application for a land use permit must include a parking plan which shows the location and number of parking spaces, circulation patterns, and ingress and egress provisions.
2. All industrial uses within a No Development Area shall provide at least two parking spaces for every three employees on the major shift during normal season.
3. All Commercial Uses shall follow the Zoning Ordinance for the required number of parking spaces.
4. All parking lots shall have an all weather surface.
5. Adequate provisions for safe and convenient circulation, ingress, and egress shall be provided.

F. Glare and Electro-magnetic Interference:

1. Building materials shall not produce glare which may conflict with any present or planned operations of the airport.
2. No use may produce electro-magnetic interference which may conflict with any present or planned operations of the airport.

SECTION _____. Limited Development Area (LD). In an LD Area, the following regulations shall apply:

1. Uses Permitted Outright. In an LD Area, the following uses and their accessory uses are permitted outright:
 - A. Airport.
 - B. Farm use, excluding livestock feed or sales yard and excepting those uses set forth in subsection (2) of this section.
2. Conditional Uses. In an LD Area, the following uses and their accessory uses are permitted when authorized in accordance with the requirements of this section and Article ____ of this ordinance:
 - A. Farm accessory buildings and uses.
 - B. Mining, quarrying, or other extraction activity, including the processing or refining of ore or other raw materials.
 - C. Utility facility necessary of public service.
 - D. Golf course.
 - E. Water supply and treatment facility.
 - F. Manufacturing and warehousing.
 - G. Retail and wholesale trade facilities.
3. Use Limitations. In an LD Area, the following limitations and standards shall apply to all uses permitted:
 - A. The height of any structure or part of a structure such as chimneys, towers, antennas, etc. shall be limited according to requirements established by the County or any governmental agency relative to uses in the vicinity of an airport, but in no case shall any building or structure exceed 35 feet.
 - B. In approach zones beyond the Runway Protection Zones, no meeting place for public or private purposes which is designed to accommodate more than 25 persons at any one time shall be permitted, nor shall any residential use be permitted.
 - C. All parking demand created by any use permitted by this section shall be accommodated on the subject premises entirely off-street.
 - D. No use permitted by this section shall require the backing of traffic onto a public or private street or road right-of-way to accommodate ingress or egress to any use or the premises thereof.

- E. There shall not be more than one ingress and one egress from properties accommodating uses permitted by this section per each 800 feet of frontage on an arterial or per each 300 feet of frontage on a collector. If necessary to meet this requirement, permitted uses shall provide for shared ingress and egress.
 - F. No use permitted under the provisions of this section that generates more than 30 truck-trailer or other heavy equipment trips per day to and from the subject property shall be permitted to locate on a lot adjacent to or across from a residential use or lot in a duly platted subdivision, nor shall a residential use or lot be permitted adjacent to or across the street from an existing or planned use that is expected to generate such traffic.
 - G. No use permitted under the provisions of this section that generates more than 20 auto-truck trips during the busiest hour of the day to and from the premises shall be permitted unless served directly by an arterial or collector, or other improved street or road designed to serve such types of uses, and in no case shall such traffic be permitted to utilize a street or road which passes through a residential use area.
 - H. Any use permitted under the provisions of this section that is determined to be incompatible with an existing or planned use adjacent thereto or across the street from shall be screened from such incompatible uses by densely planted trees and shrubs or sight-obscuring fencing.
 - I. Mining or quarry operation permitted by subsection (2) (B) of this section may not be permitted if such use will allow or cause ponding which is likely to attract birds.
 - J. No use permitted by subsection (2)(C) of this section shall permit any power lines to be located in clear zones and any power line located within an approach zone shall be in conformance with designated approach slope ratios.
 - K. No use permitted by this section shall be allowed if such use is likely to attract an unusual quantity of birds, particularly birds which are normally considered high flight.
4. Design and Use Criteria. In the consideration of an application for a proposed use in an LD Area, the Commission shall take into account the impact of the proposed use on nearby residential and commercial uses, on resource carrying capacities, on the capacity of transportation and other public facilities and services, and on the appearance of the proposal. In approving a proposed use the Commission shall find that:
- A. Proposal is in compliance with the Airport Master Plan, and more specifically, the Land Use Element thereof.
 - B. Proposal is in compliance with the Comprehensive Plan.
 - C. Proposal is in compliance with the intent and provisions of this ordinance and more particularly with this section.
 - D. That economic and environmental considerations are in balance.
 - E. That any social, economical, physical, or environmental impacts are minimized.
 - F. Any application for a proposed use in an LD Area may be denied if, in the opinion of the Planning Commission, the proposed use is not related to the present land use patterns in the area.

- G. An application for a proposed use in an LD Area may be denied if the applicant fails to demonstrate that the proposed use is essential to the public interest and to the full development of the area.
 - H. In approving a proposed use in an LD Area, the Commission shall be satisfied that the applicant is fully appraised of the County's policy relative to development in the area in relation to the existing airport and accessory uses thereof.
 - I. The Planning Commission may require establishment and maintenance of screenings, the use of glare resistant material in construction and landscaping, or may attach other similar conditions or limitations that will serve to reduce hazards to airport operations.
5. Additional Requirements. As a condition of approval of any use proposed within an LD Area, the _____ may require:
- A. An increase in required setbacks.
 - B. Additional off-street parking and loading facilities and building standards.
 - C. Limitations on signs or lighting, time of operations, points of ingress and egress, and building heights.
 - D. Additional landscaping, screening, and other improvement.
 - E. Any other conditions considered necessary to achieve compliance with the intent and purpose of this ordinance and policies of the Comprehensive Plan.

SECTION _____. Height Restricted Development Area (HR).

1. Height Limitations

Except as otherwise provided in this Ordinance, no structure shall be erected, altered, or maintained, and no tree shall be allowed to grow in any zone created by this Section to a height in excess of the applicable height limit herein established for such zone. Such applicable height limitations are hereby established for each of the zones in question as follows:

- A. Utility Runway Visual Approach Zone - Slopes twenty (20) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline.
- B. Utility Runway Nonprecision Instrument Approach Zone - Slopes twenty (20) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline.
- C. Runway Larger Than Utility Visual Approach Zone - Slopes twenty (20) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline.
- D. Runway Larger Than Utility With A Visibility Minimum Greater Than 3/4 Mile Nonprecision Instrument Approach Zone - Slopes thirty-four (34) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline.

- E. Runway Larger Than Utility With A Visibility Minimum As Low As 3/4 Mile Nonprecision Instrument Approach Zone - Slopes thirty-four (34) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline.
- F. Precision Instrument Runway Approach Zone - Slopes fifty (50) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline; thence slopes upward forty (40) feet horizontally for each foot vertically to an additional horizontal distance of 40,000 feet along the extended runway centerline.
- G. Transitional Zones - Slope seven (7) 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 100 feet above mean sea level. In addition to the foregoing, there are established height limits sloping seven (7) feet outward for each one (1) foot upward beginning at the sides of and at the same elevation as the approach surface, and extending to where they intersect the conical surface.
- H. Horizontal Zone - The horizontal zone is established for visual approach airports by swinging arcs of 5,000 feet radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.
- I. 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 outward to a distance of 4,000 feet and to a height of 350 feet above the airport elevation.
- J. Excepted Height Limitations - Nothing in this Section shall be construed as prohibiting the construction or maintenance of any structures, or growth of any tree to a height of up to _____³ feet above the surface of the land.

2. Use Restrictions

Notwithstanding any other provisions of this Section, no use may be made of land or water within any zone established by this Section, in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and other, 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, takeoff, or maneuvering of aircraft intending to use the airport.

3. Nonconforming Uses

- A. Regulations Not Retroactive - The regulations prescribed by this Section shall not be construed to require the removal, lowering, or other change or alternation of any structure or tree not conforming to the regulations as of the effective date of this Section, or otherwise interfere with the continuance of a nonconforming use. Nothing contained herein shall require any change in the construction, alternation, or intended use of any structure, the construction or alternation of which was begun prior to the effective date of this Section, and is diligently prosecuted.

³ The adoption of height limits should be reasonable and based on land use considerations in the vicinity of the airport and the nature of the area to be zoned. The adoption of height limits should not be so low as to constitute a taking of private property without due process of law.

- B. Marking and Lighting - Notwithstanding the preceding provision of this Section, the owner of any existing nonconforming structure or tree is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the _____⁴ to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport obstruction. Such markers and lights shall be installed, operated, and maintained at the expense of the _____⁵.

4. Permits

- A. Future Uses - Except as specifically provided in a, b, and c hereunder, 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 hereby created unless a permit therefor shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient particularity to permit it to be determined whether the resulting use, structure, or tree would conform to the regulations herein prescribed. If such determination is in the affirmative, the permit shall be granted. No permit for a use inconsistent with the provisions of this Ordinance shall be granted unless a variance has been approved in accordance with Section _____.
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 seventy-five 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 seventy-five feet of vertical height above the ground, except when such tree or structure would extend above the height limit prescribed for such approach zones.
 3. In the areas lying within the limits of the transition zones beyond the perimeter of the horizontal zone, no permit shall be required for any tree or structure less than seventy-five feet of vertical height above the ground, except when such tree or structure, because of terrain, land contour, or topographic features, would extend above, the height limit prescribed for such transition zones.

Nothing contained in any of the foregoing exceptions shall be construed as permitting or intending to permit any construction, or alternation of any structure, or growth of any tree in excess of any of the height limits established by this Ordinance except as set forth in Section _____.

- B. Existing Uses - No permit shall be granted that would allow the establishment or creation of an obstruction or permit a nonconforming use, structure, or tree to become a greater hazard to air navigation than it was on the effective date of this Ordinance or any amendments thereto or than it is when the application for a permit is made. Except as indicated, all applications for such a permit shall be granted.

⁴ Insert the title of the appropriate official who has been charged with the responsibility for determining the necessity for marking and lighting.

⁵ Insert name of the appropriate political body of subdivision.

- C. Nonconforming Uses Abandoned or Destroyed - Whenever the _____⁶ determines that a nonconforming tree or structure has been abandoned or more than 80 percent torn down, physically deteriorated, or decayed, no permit shall be granted that would allow such structure or tree to exceed the applicable height limit or otherwise deviate from the zoning regulations.
- D. Variances - Any person desiring to erect or increase the height of any structure, or permit the growth of any tree, or use property, not in accordance with the regulations prescribed in this Section, may apply to the Board of Adjustment for a variance from such regulations. 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 variances shall be allowed where it is duly found that a literal application or enforcement of the regulations will result in unnecessary hardship and relief granted, will not be contrary to the public interest, will not create a hazard to air navigation, will do substantial justice, and will be in accordance with the spirit of this Section. Additionally, no application for variance to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the _____⁷ for advice as to the aeronautical effects of the variance. If the _____⁷ does not respond to the application within 15 days after receipt, the Board of Adjustment may act on its own to grant or deny said application.
- E. Obstruction Marking and Lighting - Any permit or variance granted may, if such action is deemed advisable to effectuate the purpose of this Section and be reasonable in the circumstances, be so conditioned as to require the owner of the structure or tree in question to install, operate, and maintain, at the owner's expense, such markings and lights as may be necessary. If deemed proper by the Board of Adjustment, this condition may be modified to require the owner to permit the _____⁷, at its own expense, to install, operate, and maintain the necessary markings and lights.

SECTION _____. Procedures. An applicant seeking a conditional use under Section _____ above, shall provide the following information:

1. Property boundary lines as they relate to the Airport Imaginary Surfaces.
2. Location and height of all existing and proposed buildings, structures, utility lines, and roads. In accordance with _____, _____ Planning Authority shall notify the owner of the airport and North Dakota Aeronautics Commission on land use permits or zone changes within 5,000 feet of a visual and 10,000 feet of instrument airport so as to provide North Dakota Aeronautics Commission an opportunity to review and comment.

SECTION _____. Limitations.

1. To meet the standards established in FAA Regulations, Part 77 and _____, no structure shall penetrate into the Airport Imaginary Surfaces as defined above under Section _____.
2. No place of public assembly shall be permitted in the Airport Development Zone or RPZ.

⁶ Insert here the title of the appropriate official charged with making this determination.

⁷ Insert here the official or body responsible for operation and maintenance of the airport to be zoned; e.g., Airport Manager.

3. No structure or building shall be allowed within the RPZ.
4. Whenever there is a conflict in height limitations prescribed by this overlay zone and the primary zoning district, the lowest height limitation fixed shall govern; provided, however, that the height limitations here imposed shall not apply to such structures customarily employed for aeronautical purposes.
5. No glare producing materials shall be used on the exterior of any structure located within the Limited Development Zone.
6. In noise sensitive areas (within 1,500 feet of an airport or within established noise contour boundaries of 65 DNL and above for identified airports) where noise levels are a concern, a declaration of anticipated noise levels shall be attached to any building permit, land division appeal, deed, and mortgage records. In areas where the noise level is anticipated to be 65 DNL and above, prior to issuance of a building permit for construction of noise sensitive land use (real property normally used for sleeping or normally used as schools, churches, hospitals, or public libraries) the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design which will achieve an indoor noise level equal to or less than 65 DNL. The planning and building department will review building permits or noise sensitive developments.
7. No development that attracts or sustains hazardous bird movements from feeding, watering, or roosting across the runways and/or approach and departure patterns of aircraft. Planning authority shall notify North Dakota Aeronautics Commission of such development (e.g., waste disposal sites and wetland enhancements) within the airport overlay zone so as to provide North Dakota Aeronautics Commission an opportunity to review and comment on the site in accordance with FAA AC 150/5200-33.