

## **ARTICLE XVIII. AIRPORT ZONES AND HEIGHT LIMITATIONS**

### **Section 1. REPEALING**

The Hardin County Zoning Ordinance of 1999 Article XVIII is hereby repealed and this section shall replace.

### **Section 2. AUTHORITY**

This Ordinance shall regulate and restrict the height of structures, objects, and growth of natural vegetation, as well as land uses; otherwise regulating the use of property, within the vicinity of the Iowa Falls Airport. Creation of appropriate zones and establishing the boundaries thereof, as well as providing for changes in the restrictions and boundaries of such zones is vested in this Ordinance. Iowa Falls Airport Land Use & Height Zoning Maps, are incorporated into and made part of this Ordinance. The Ordinance also provides for the enforcement of the Ordinance, the establishment of a Board of Adjustment; and imposition of penalties related to the implementation of the Ordinance.

### **Section 3. STATEMENT OF PURPOSE AND FINDINGS**

1. The Iowa Falls Airport is acknowledged as an essential public facility to the State of Iowa and the local community.
2. The creation or establishment of an airport hazard is a public nuisance and poses a potential concern to the surrounding communities served by the Iowa Falls Airport.
3. There shall be no creation or establishment of a hazard that endangers public health, safety, welfare, and impacts an individual's quality of life nor prevents the safe movement of aircraft at the Iowa Falls Airport.
4. For the protection of the public health, safety, and general welfare, and for the promotion of the most appropriate use of land, it is necessary to prevent the creation or establishment of airport hazards.
5. The prevention of airport hazards shall be accomplished, to the extent legally possible, by proper exercise of the police power.
6. The prevention of new airport hazards, and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards, are considered to be a public purpose for which Hardin County may raise and expend public funds, as an incident to the operation of airports, to acquire or property interest therein.

### **Section 4. APPLICABILITY**

This ordinance encompasses the prescribed areas defined in this ordinance around the Iowa Falls Airport – Exhibit A.

### **Section 5. DEFINITIONS**

**Airport Overlay Zones.**

A zone intended to place additional land use conditions on land impacted by the airport while retaining the existing underlying zone. The FAR Part 77 Surfaces and RPZs have been combined to create five airport overlay zones. The five specific zones create a comprehensive area focused on maintaining compatible land use around airports.

- **Zone A (Runway Protection Zone)**- shall be a clear area that is free of above ground obstructions and structures. This zone is closest to the individual runway ends.
- **Zone B (Runway Approach Surface)**- is a critical overlay surface that reflects the approach and departure areas for each runway at an airport. The size of Zone B is predicated upon the type of approach (visual, non-precision, or precision) that a specific runway has and the type/size of aircraft utilizing the runway.
- **Zone C (Transitional Surface)**- includes those areas that are parallel to the runway pavement and extend 1,050' from the edge of the primary surface paralleling the runway and extended runway centerline until they reach the end of Zone A at a 90 degree angle.
- **Zone D (Horizontal Surface)** - is typically elliptical in shape, depending upon the runway types and configurations at an individual airport.
- **Zone E (Conical Surface)** - is the outermost zone of the overlay areas and has the least number of land use restriction considerations. The zone begins at the edge of the horizontal surface and is 4,000 feet in width paralleling the horizontal surface.

#### **Airport Zoning Permit.**

Airport zoning permit allowing new development or alteration or expansion of a nonconforming use.

#### **Approach and Runway Protection Zone Map.**

The approach and Runway Protection Zone Map is compiled from the criteria in FAR Part 77, "Objects Affecting Navigable Airspace." It shows the area affected by the Airport Overlay Zoning Ordinance, and includes the layout of runways, airport boundaries, elevations, and area topography. Applicable height limitation areas are shown in detail.

#### **Transitional surface.**

The transitional surface extends outward and upward at right angles to the runway centerline and extend at a slope of seven feet horizontally for each one foot vertically (7:1) from the sides of the primary and approach surfaces. The transitional surfaces extend to the point at which they intercept the horizontal surface at a height of 150 feet above the established airport elevation.

#### **Horizontal surface.**

The horizontal surface is a horizontal plane located 150 feet above the established airport elevation and encompasses an area from the transitional surface to the conical surface. The perimeter is constructed by generating arcs from the center of each end of the primary surface and connecting the adjacent arcs by lines tangent to those arcs.

#### **Conical surface.**

The conical surface extends upward and outward from the periphery of the horizontal surface at a slope of 20 feet horizontally for every one foot vertically (20:1) for a horizontal distance of 4,000 feet.

#### **Approach surface.**

The approach surface is longitudinally centered on the extended runway centerline and extends outward and upward from the end of the runway primary surface. The approach slope of a runway is a ratio of 20:1, 34:1, or 50:1, depending on the approach type. The length of the approach surface varies from 5,000 to 50,000 feet and also depends upon the approach type.

#### **Runway Protection Zone (RPZ).** (FAA AC 150/5300-13)

An area off the runway end designed to enhance the protection of people and property on the ground.

## Section 6. LAND USE SAFETY ZONES

### 6.A. Definition of Zones

The five Airport Overlay Zones are Zone A, B, C, D, and E. The Airport Height Overlay Zoning Districts established by an Ordinance are attached as Exhibit A to this Ordinance. These Zones are formally defined in the definitions and on the attached maps – Exhibit A. Specific dimensions and permitted uses within the individual zones are noted in the following tables and text.

#### Zone A – Runway Protection Zone (RPZ)

##### Dimensional Requirements

Runway End ID	Approach Visibility Minimums	Dimensions			
		Length L feet	Inner Width W feet	Outer Width W feet	RPZ acres
Runway 13	1 mile	1000	500	700	13.82
Runway 31	1 mile	1000	500	700	13.82
Runway 2	¾ mile	1700	1000	1510	48.98
Runway 20	¾ mile	1700	1000	1510	48.98

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**6.B. Zone Compatibility.** The Compatible uses defined below shall be issued a permit if they follow all provisions of this ordinance. The not compatible uses are not permitted or allowed within Zones A-E. The airport zoning administrator shall evaluate the following factors for those uses with an "AR":

1. How will the project be impacted by airport noise;
2. Will the project attract a concentration of people that could be at risk with aircraft problems;
3. Will the proposed project pose a height obstacle for aircraft;
4. Will the proposed project cause light or glare reflection upward: down shielded light fixtures encouraged, no reflective building materials – mirrored/reflective glass, solar panels, metal roof, water bodies;
5. Will the proposed land use create or emit smoke, steam, or dust that will be hazards for aircraft;
6. Will the proposed land use have standing water: will there be controls or methods to reduce wildlife, or will the water dissipate in 48 hours;
7. Will the proposed project contain flammable substances or materials; and
8. Will the land use cause of source of electrical, navigational, or radio interference,

Iowa Falls Airport Overlay Zones Zone Chart					
C = Compatible		AR = Additional Review Required		NC = Not Compatible	
Land Uses	Zone A	Zone B	Zone C	Zone D	Zone E
<b>"A", Agriculture District Permitted, Provisional, and Conditional Uses as prescribed in the current Hardin County Zoning Ordinance</b>					
Farms (plant and animal only – no residences or facilities)	AR	AR	AR	C	C
Farms (residential related, and	NC	NC	NC	AR	AR

<i>facilities)</i>					
<i>Single Family &amp; Manufactured Homes</i>	NC	AR	NC	AR	C
<i>Man-made resources (detention ponds, wetlands, lakes, mining)</i>	NC	AR	AR	AR	AR
<i>Public parks, recreation areas, playgrounds</i>	NC	NC	NC	AR	C
<i>Roadside stands</i>	NC	AR	AR	AR	C
<i>Veterinary establishments, stables, private riding stables, academies and clubs, but not including the feeding or disposal of community or collected garbage; provided that all buildings, including animal runways and exercise yards, be at least 200 feet from all adjacent dwellings</i>	NC	AR	AR	AR	C
<i>Publicly owned and operated buildings, except those whose chief function is an activity conducted for commercial purposes</i>	NC	AR	AR	AR	C
<i>Public and parochial schools of general instruction</i>	NC	NC	NC	AR	C
<i>Churches and similar places of worship and instruction</i>	NC	NC	NC	AR	C
<i>Community centers</i>	NC	AR	AR	AR	C
<i>Semi-public recreation areas and centers, including country clubs, swimming pools and golf courses, but not including such uses as miniature golf courses or practice driving tees which are operated for commercial purposes</i>	NC	NC	NC	AR	C
<i>Child day care</i>	NC	NC	NC	AR	C
<i>Correctional and penal institutions</i>	NC	NC	NC	AR	AR
<i>Commercial amusement or recreational developments for temporary, seasonal or permanent uses, such as carnivals, circuses, expositions, and fairgrounds; including skeet trap shooting</i>	NC	NC	NC	AR	AR
<i>Temporary sawmills, batch plants, etc.... for processing timber, gravel, sand, rock, cement, concrete, asphalt, and other like materials</i>	NC	NC	NC	AR	C
<i>Go-kart tracks</i>	NC	NC	NC	AR	AR
<i>Campgrounds</i>	NC	NC	NC	AR	C
<i>Hospitals, clinics, sanitariums, and charitable institutions, except correctional and penal institutions</i>	NC	NC	NC	AR	C
<i>Sanitary landfills</i>	NC	NC	NC	NC	NC
<i>Grain storage bins</i>	NC	NC	NC	AR	AR
<i>Mining and extraction of minerals or raw materials</i>	NC	NC	NC	AR	AR
<i>Utility substation facilities, electrical substations, water and sewer lift stations, and water towers</i>	NC	NC	NC	AR	AR
<i>Solar power, generation equipment, wind generation, wind farms</i>	NC	NC	NC	AR	AR
<i>Communication transmission facilities (broadcast, wireless, emergency, point to point, and antenna, etc....)</i>	NC	NC	NC	AR	AR
<i>Outdoor Storage, Signs, and Displays</i>	NC	AR	AR	AR	C
<i>Permitted uses in "C", Commercial District (</i>	NC	AR	AR	AR	C
<i>Permitted uses in "M" Manufacturing District</i>	NC	NC	NC	AR	C

## **Section 7. USE RESTRICTIONS**

No use may be made of land or water within Hardin County in such a manner as to interfere with the operation of any airborne aircraft. The following special requirements shall apply to each permitted use:

1. No installation and use of flashing or illuminated advertising or business signs, billboards, spotlights, or any other type of illuminated structure or light source that will be hazardous for pilots shall be permitted.
2. A use that emits or discharges smoke (eg exhaust from a smoke stack) that interferes with the health and safety of pilots and the public in the use of airport, or that is otherwise detrimental or injurious to the health, safety, and general welfare of the public in use of the airport.
3. A use that emits thermal discharge (eg steam from power plant source) that interferes with the pilot's vision in the use of the airport.
4. A use that significantly causes air turbulence (eg exhaust from a peaker plant) where aircraft loads may be exceeded.
5. No installation of any use that creates bird strike hazards or otherwise interfere with the landing, takeoff, or maneuvering of aircraft/
6. No operations from any use in Hardin County shall produce electronic interference with navigation signals, radio, or radar communication between the airport and aircraft.
7. Any person who erects and maintains a smokestack, flag pole, elevated tank, radio station tower, antenna, building structure, any object of natural growth or other obstruction to the operation of aircraft that exceeds these height standards by zone:
  - The maximum height allowed in Zones B & C is 50 feet.
  - The maximum height allowed in Zone D is 150 feet.
  - The maximum height allowed in Zone E starts at 150 feet and ends at 350 feet over the 4,000 foot conical zone. The maximum height increases 20 feet for each ground travel foot.
  - This zoning ordinance does not control heights after the conical zone.

## **Section 8. ORDINANCE ADMINISTRATION**

1. It shall be the duty of the Hardin County Zoning Administrator referred to herein as the "Airport Zoning Administrator", to administer the regulations prescribed herein. Applications for airport zoning permits and variances shall be made to the Airport Zoning Administrator upon forms furnished by the Airport Zoning Administrator. Applications for action by the Board of Adjustment shall be forthwith transmitted by the Airport Zoning Administrator should an applicant request review. Permit applications shall be either granted or denied by the Airport Zoning Administrator according to the regulations prescribed herein.
2. The "AR" additional review process shall be as described below:
  - a. The Airport Zoning Administrator shall contact the Hardin County Engineer and Iowa Falls Airport manager for comments on the proposed activity. Comments shall be made in writing - email is acceptable. If all are good with the concept, as submitted, the Airport Zoning Administrator shall issue a building permit.
  - b. If the proposed development can be modified where all parties can be in agreement the Airport Zoning Administrator shall issue a permit with the needed modifications.
  - c. If one of the reviewing individuals does not support the activity and it cannot be modified to preserve the airspace the Hardin County Board of Adjustment shall make the final permit determination. All reviewing individuals shall be invited to the meeting and present information as needed.

## **Section 9. AIRPORT OVERLAY ZONING PERMITS**

It shall be the duty of the applicant to provide the Airport Zoning Administrator with sufficient information to evaluate the proposed action. This information shall include but not be limited to the following:

- Contact information
- Structure information
- Site information
- Drawing information
- Certification
- Identify current and potential compatibility concerns

The Airport Zoning Administrator shall evaluate the proposal based upon information provided by the applicant. The Airport Zoning Administrator shall approve the permit if after evaluation, the proposed project is found to be adequately compatible. Should the proposed project be found to be incompatible after review, the Airport Zoning Administrator shall deny the permit. Should the permit be denied, the applicant shall have the right to request a variance or an appeal as prescribed in this Ordinance.

## **Section 10. HAZARDOUS MARKINGS AND LIGHTING**

Lighting and marking requirements will be determined through an FAA 7460-1 airspace analysis. The owner of any structure, object, natural vegetation, or terrain is hereby required to install, operate, and maintain such markers, lights, and other aids to navigation necessary to indicate to the aircraft operators in the vicinity of an airport the presence of an airport hazard. Hazardous markers and lights shall be installed, operated, and maintained by the owners of those properties.

## **Section 11. VARIANCES.**

1. Any person desiring to erect or increase the height of any structure covered under this article, or to permit the growth of any tree covered under this article, or otherwise use his/her property in violation of any section of this ordinance, may apply to the Board of Adjustment for variance from such regulations. No application for variance to the requirements of this ordinance may be considered by the Board of Adjustment unless a copy of the application has been submitted to the Planning & Zoning Commission for its opinion as to the aeronautical effects of such variance. If the Planning & Zoning Commission does not respond to the Board of Adjustment within 15 days from receipt of the copy of the application, the Board may take its decision to grant or deny the variance.

**Exhibit A-Airport Land Use & Height Overlay Zoning  
Map**



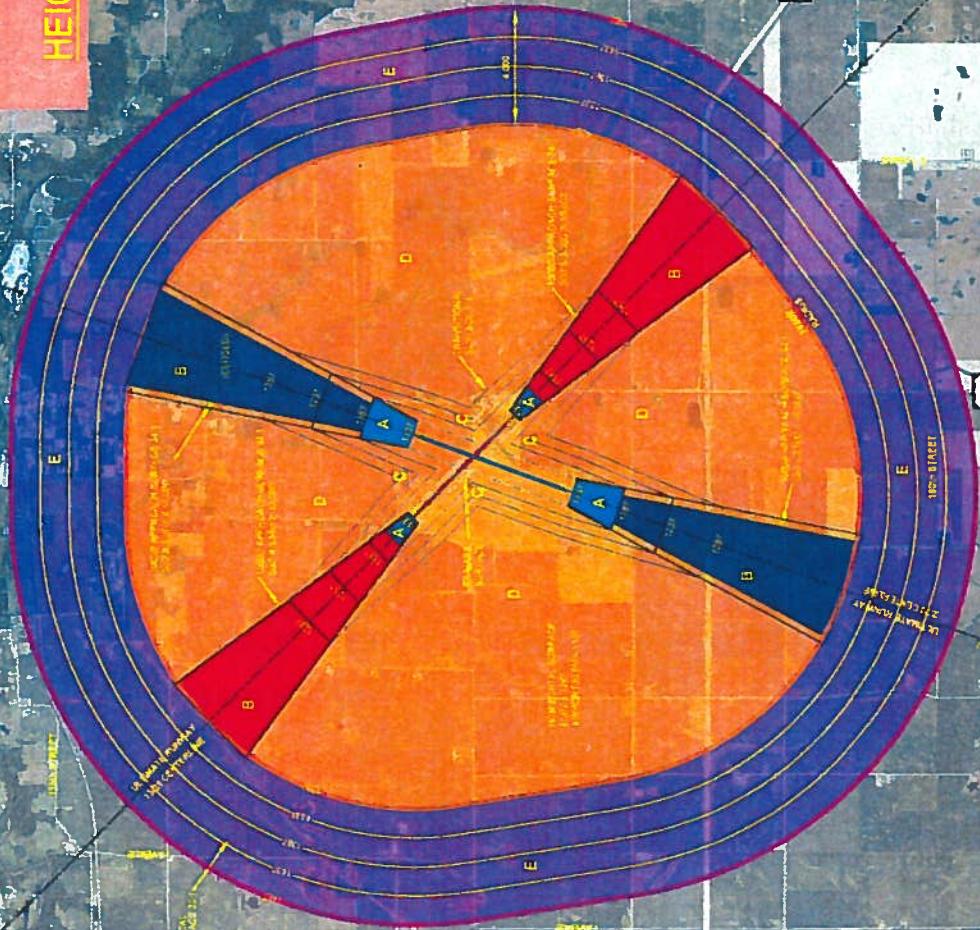
**IOWA FALLS MUNICIPAL AIRPORT  
AIRPORT LAND USE &  
HEIGHT OVERLAY ZONING MAP**



- LEGEND**
- ZONE A. RUNWAY PROTECTION ZONE
  - ZONE B. ULTIMATE APPROACH SURFACE
  - ZONE C. TRANSITIONAL SURFACE
  - ZONE D. HORIZONTAL SURFACE
  - ZONE E. CONICAL SURFACE



**EXHIBIT A**





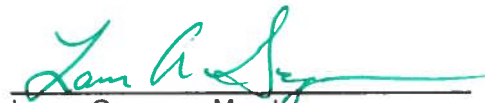
EFFECTIVE DATE. This Ordinance shall be in full force and effect from and after its passage and publication as provided by law.

Passed by the Hardin County Board of Supervisors on the 4<sup>th</sup> day of April, 2012.

HARDIN COUNTY BOARD OF SUPERVISORS



Brian Lauterbach, Chair



Lance Granzow, Member



Jim Johnson, Member

ATTEST:



Renee McClellan  
Hardin County Auditor