ARTICLE XIV

AIRPORT TALL STRUCTURE ZONING "AZ - 1"

SECTION 1. STATEMENT OF INTENT. This Article regulates and restricts the height of structures and objects of natural growth in the vicinity of the Marshalltown Municipal Airport by creating the appropriate zones and establishing the boundaries thereof; defining certain terms used herein; and referring to the Marshalltown Municipal Airport height zoning map which is incorporated in and made a part of this Article.

It is hereby found that an airport hazard endangers the lives and property of users of Marshall County, and property or occupants of land in its vicinity. Accordingly it is declared:

(i) That the creation or establishment of an airport hazard is a public nuisance and an injury to the County served by Marshalltown Municipal Airport.

(ii) That it is necessary in the interest of the public health, public safety, and general welfare that creation of airport hazards be prevented; and

(iii) That this should be accomplished, to the extent legally possible, by proper exercise of the police power; and

(iv) That 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 the City of Marshalltown may raise and expend public funds, as an incident to the operation of airports, to acquire land or property interests therein.

SECTION 2. SHORT TITLE. This Article shall be known and may be cited as the "Marshall County Airport Height Zoning Ordinance."

SECTION 3. DEFINITIONS.

Subsection A. As used in this Ordinance unless the context otherwise requires:

(1) Airport. A facility designed and intended for the landing, departure, maintenance, servicing, storage and repair of aircraft, including but not limited to airplanes, helicopters, jets, ultra-lights. The Marshalltown Municipal Airport and any other airport which may be established in Marshall County.

(2) Airport Elevation. The highest point of an airport's usable landing area measured in feet above mean sea level.

(3) Airport Hazard. Any structure or tree or use of land which would exceed the federal obstruction standards as contained in 14 Code of Federal Regulations Sections 77.21, 77.23 and 77.25 as revised March 4, 1972, and which obstruct the air space required for the flight of aircraft and landing or take-off at an airport or is otherwise hazardous to such landing or taking off of aircraft.

(4) Airport 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. The width of the primary surface of a runway will be that width prescribed in Part 77 of the Federal Aviation Regulations (FAR) for the most precise approach existing or planned for either end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway center line.

(5) Airspace Height. For the purpose of determining the height limits in all zones set forth in this Ordinance and shown on the Zoning Map, the datum shall be the mean sea level elevation unless otherwise specified.

(6) Control Zone. Airspace extending upward from the surface of the earth which may include one or more airports and is normally a circular area of 5 statute miles in radius, with extensions where necessary to include instrument approach and departure paths.

(7) Decision Height. The height at which a decision must be made, during an ILS instrument approach, to either continue the approach or to execute a missed approach.

(8) Heliport. A designated land area, other than an airport, used primarily for the operation and basing of rotocraft.

(9) Heliport Primary Surface. The area of the primary surface coincides size and shape with the designated landing and take-off area of a heliport or helistop. This surface is a horizontal plane at the elevation of the established heliport or helistop elevation.

(10) Helistop. A designated landing area other than an airport, used for the operating of rotocraft where no basing facilities are provided.

(11) Instrument Runway. A runway having an existing instrument approach procedure utilizing air navigation facilities or area type navigation equipment, for which an instrument approach procedure has been approved or planned.

(12) Minimum Descent Altitude. The lowest altitude, expressed in feet above the mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure, where no electric glide slope is provided.

(13) Minimum Enroute Altitude. The altitude on effect between radio fixes which assures acceptable navigational signal coverage and meets obstruction clearance requirements between those fixes.

(14) Minimum Obstruction Clearance Altitude. The specified altitude in effect between radio fixes on VOR airways, off-airway routes or route segments which meet obstruction clearance requirements for the entire route segment and which assures acceptable navigational signal coverage only within 22 miles of a VOR.

(15) Runway. A defined area on an airport prepared for landing and take-off of aircraft along its length.

(16) Visual Runway. A runway intended solely for the operation of aircraft using visual approach procedures with no straight-in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, a military services approved military airport layout plan, or by any planning document submitted to the FAA by competent authority.

SECTION 4. AIRPORT ZONES AND AIRSPACE HEIGHT LIMITATIONS. In order to carry out the provisions of this Article there are hereby created and established certain zones which are depicted on the Marshalltown Municipal Airport Height Zoning Map. A structure located in more than one (1) zone of the following zones is considered to be only in the zone with the more restrictive height limitation. The various zones are hereby established and defined as follows:

Subsection A. Airport Height Zones:

(1) **Primary Surface.** A surface longitudinally centered on a runway extending 200' beyond the end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:

(a) **Utility Runway.** 500' width for utility runway 18/36 having a non-precision instrument approach.

(b) **Other than Utility Runway.** 500' width for other than utility runway 12/30 having a non-precision instrument approach with visibility minimums greater than ¾ statute mile.

(2) **Horizontal Zone.** The land lying under a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by:

(a) **Visual Runway.** Swinging arcs of 5,000 feet radii from the center of each end of the primary surface of runways 18 and 36, and connecting the adjacent arcs by lines tangent to those arcs.

(b) **Instrument Runway.** Swinging arcs of 10,000 feet radii from the center of each end of the primary surface of runways 12 and 30, and connecting the adjacent arcs by lines tangent to those arcs.

(**Note:** The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000 foot arc is encompassed by tangents connecting the two adjacent 10,000 foot arcs, the 5,000 foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.)

No structure shall exceed 150 feet above the established airport elevation in the horizontal zone, as depicted on the Marshalltown Municipal Airport Height Zoning Map.

(3) **Conical Zone.** The land lying under a surface extending outward and upward from the periphery of the horizontal surface at a slope of twenty (20) to one (1) for a horizontal distance of 4,000 feet. No structure shall penetrate the conical surface in the conical zone, as depicted on the Marshalltown Municipal Airport Height Zoning Map.

(4) **Approach Zone.** The land lying under a surface longitudinally centered on the extended runway center line and extending outward and upward from each end of the primary surface.

(**Note:** An approach surface is applied to each end of each runway based upon the type of approach available or planed for that runway end.)

(a) The inner edge of the Approach Surface is:

(i) Utility Runway and Non-precision Instrument Runway: 500 feet wide for runways 18 and 36.

(ii) 500 feet wide for runways 12 and 30.

(b) The other edge of the approach zone is:

(i) Utility Runway with a Non-precision Instrument Approach: 2,000 feet for runways 18 and 36.

(ii) Non-precision Instrument Runway other than Utility: 3,500 feet for runways 12 and 30.

(c) The approach zone extends for a horizontal distance of:

(i) All Utility and Visual Runways: 5,000 feet at a slope of twenty (20) to one (1) for runways 18 and 36.

(ii) Non-precision Instrument Runways other than Utility: 10,000 feet at a slope of thirty-four (34) to one (1) for runways 12 and 30.

No structure shall exceed the approach surface to any runway, as depicted on the Marshalltown Municipal Airport Height Zoning Map.

(d) No gathering of 50 or more people may take place within the first 1000' of the approach zone.

(5) **Transitional Zone.** The land lying under those surfaces extending outward and upward at right angles to the runway center line and the runway center line extended at a slope of seven (7) to one (1) from the sides of the primary surface and from the sides of the Approach Surfaces.

No structure shall exceed the Transitional Surface as depicted on the Marshalltown Municipal Airport Height Zoning Map.

(6) No structure shall be erected in Marshall County that raises the published Minimum Descent Altitude or Decision Height for an instrument approach to any runway, nor shall any structure be erected that causes the Minimum Obstruction Clearance Altitude or Minimum Enroute Altitude to be increased on any Federal Airway in Marshall County. Any person or organization intending to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

(a) Any construction or alteration exceeding 200 feet above ground level.

(b) Any construction or alteration within 20,000 feet of the airport which exceeds a 100: 1 surface from any point on the runway.

(c) When requested by the FAA.

Contact the Marshalltown Municipal Airport Manager for all FAA related rules, regulations, notices, applications or forms.

SECTION 5. USE RESTRICTIONS. Notwithstanding any other provision of Section 4, no use may be made of land or water within Marshall 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:

Subsection A. All lights or illumination used in conjunction with street, parking, signs or use of land and structures shall be arranged and operated in such a manner that it is not misleading or dangerous to aircraft operating from Marshalltown Municipal Airport or in the vicinity thereof.

Subsection B. No operations from any use shall produce smoke, glare or other visual hazards within three (3) statute miles of any usable runway of Marshalltown Municipal Airport.

Subsection C. No operations from any use in Marshall County shall produce electronic interference with navigation signals or radio communication between the airport and aircraft.

SECTION 6. LIGHTING.

Subsection A. Notwithstanding the provisions of Section 5, the owner of any structure over 200 feet above ground level must install, on the structure, lighting in accordance with Federal Aviation Administration (FAA), Advisory Circular 70-7460-1D and amendments. Additionally, any structure, constructed after the effective date of this Section and exceeding 949 feet above ground level, must install on that structure, high intensity white obstruction lights in accordance with Chapter 6 of FAA advisory Circular 7460-1D and amendments.

Subsection B. Any permit or variance granted may be so conditioned as to require the owner of the structure or growth in question to permit

Marshalltown, at the city's expense, to install, operate and maintain thereto such markers or lights as may be necessary to indicate to pilots the presence of an airspace hazard.

SECTION 7. VARIANCES. Any person desiring to erect or increase the height of any structure, or to permit the growth of any tree, or otherwise use his/her property in violation of this Article, may apply to the Board of Adjustment for variance from such regulations. No application for variance to the requirements of this Article may be considered by the Board of Adjustment unless a copy of the application has been submitted to the Marshalltown Municipal Airport Manager or Aeronautics Director for his/her opinion as to the aeronautical effects of such a variance. If the Marshalltown Municipal Airport Manager or Aeronautics Director does not respond to the Board of Adjustment within fifteen (15) days from receipt of the copy of the application, the Board may make its decision to grant or deny the variance. A variance under this Article shall carry a hearing fee of $200.00.