

IREDELL COUNTY PLANNING & DEVELOPMENT

PLANNING STAFF REPORT

Proposed Text Amendment – Airport Overlay



EXPLANATION OF THE REQUEST

Due to current and future expansions at the Statesville Regional Airport, a revision was needed to the Airport Overlay Ordinance. The following amendments are being presented for amendment to the Iredell County Land Development Code.

Existing text that is ~~bold and with strike through~~ is text to be removed. Text in red and underlined is new text to be added.

STAFF COMMENTS

The overlay was included in the Land Development Code in July 2011. Since the Approach zones extend into the County's Planning jurisdiction, the revision will need to be included in our code as well. The Statesville City Council approved the revision to the overlay within their jurisdiction on February 1, 2021. The Airport Commission also approved at their December meeting.

TEXT AMENDMENTS

Section 4.6 Airport Overlay Regulations

Section 4.6.1 Airport Zones

In order to carry out the purposes of air safety, there are hereby created and established certain zones, which include all of the land lying beneath the primary surface, approach surfaces, transitional surfaces, horizontal surfaces, and conical surfaces as they apply to Statesville Regional Airport. Such zones are shown on the Height Zoning Map (See Figure 4.2) ~~dated September 2007~~, prepared by Parrish and Partners, LLC and dated July 23rd, 2020, which is incorporated into the comprehensive zoning map. An area located in more than one (1) 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:

A. Primary Zone

The primary zone is the area beneath the primary surface. This zone extends 200 feet beyond each physical end of the runway, has a width of 1,000 feet, and is centered on the runway centerline. The primary surface and the primary zone are based on a planned ultimate runway length of eight thousand (8,000) feet.

B. Non-Precision Instrument with Visibility Minimums as Low As ¾ Mile Approach Zone

The inner edge of this approach zone coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly ~~at a slope of thirty-four (34) feet horizontally for every one (1) foot vertically~~ to a width of 4,000 feet at a horizontal distance ~~of~~ 10,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.

C. Precision Instrument Runway Approach Zone

The inner edge of this approach zone coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly ~~at a slope of fifty (50) feet horizontally for every one (1) foot vertically for a horizontal distance of 10,000 feet, then at a slope of forty (40) feet horizontally for every one (1) foot vertically~~ to a width of 16,000 feet ~~for~~ at a horizontal distance of 50,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.

C. Primary Approach Zones

~~The Primary Approach Zones begin at each runway end starting at the pavement edge at a width of 1,000 feet and extend to a width of 6,940 for a horizontal distance of 20,000 feet. This zone provides that no structure may be built within this zone that rises above a height as determined in the underlying zoning district as directed in Chapter 2 or to a maximum of fifty (50) feet above ground elevation, whichever is less. Any proposed structures that can produce a determination of no hazard from the FAA and with written consent from the Statesville Regional Airport Manager will be exempt from this section.~~

D. Primary Zone

~~The primary zone is the area beneath the primary surface. This zone extends 200 feet beyond each end of the runway, has a width of 1,000 feet, and is centered on the runway centerline.~~

E. Transitional Zones

The transitional zones are the areas beneath ~~the seven (7) foot horizontal to one (1) foot vertical~~ transitional surfaces.

F. Horizontal Zone

The horizontal zone is established by swinging arcs of 10,000 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. ~~This zone contains the Horizontal Surface, which is located 150 feet above the established airport elevation.~~

G. Conical Zone

The conical zone is established as the area that commences at the periphery of the horizontal zone and extends outward there from a horizontal distance of 4,000 feet. ~~This zone contains the Conical Surface, which contains a slope of twenty (20) feet horizontally for every one (1) foot vertically.~~

Section 4.6.2 Height Limitations

~~No structure or tree shall be erected, altered, allowed to grow or maintained in the airport zones to a height in excess of the height limit as determined by the aerial contours appearing on the Height Zoning Map or referred to in Section 4.6.1. Except for the City of Statesville, the property owner of a tree, determined to be an airport hazard, shall not be responsible for bringing such tree into conformance with this ordinance.~~

A. 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 Ordinance to a height in excess of the applicable height limit herein established for such zone, as depicted on the Statesville Regional Airport Height Zoning Map referred to in Section 6. Such applicable height limitations are hereby established for each of the zones in question as follows:

1. Primary Zone

The elevation of any point in the primary zone is the same as the elevation of the nearest point on the runway centerline.

2. Non-Precision Instrument Runway with Visibility Minimums as Low As 3/4 Mile 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 ten thousand (10,000) feet along the extended runway centerline.

3. 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 ten thousand (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 forty thousand (40,000) feet along the extended runway centerline.

4. 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 one hundred and fifty (150) feet above the airport elevation which is nine hundred sixty-seven and eight tenth (967.8) feet above mean sea level. In addition to the foregoing, there are established height limits sloping seven (7) feet outward for each 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. Where the precision instrument runway approach zone projects beyond the conical zone, there are established height limits sloping seven (7) feet outward for each foot upward beginning at the sides of and at the

same elevation as the approach surface, and extending a horizontal distance of five thousand (5,000) feet measured at ninety (90) degree angles to the extended runway centerline.

5. Horizontal Zone

Established at one hundred and fifty (150) feet above the airport elevation or at an elevation of one thousand one hundred seventeen and eight tenth (1,117.8) feet above mean sea level.

6. Conical Zone

Slopes twenty (20) feet outward for each foot upward beginning at the periphery of the horizontal zone and at one hundred and fifty (150) feet above the airport elevation and extending to a height of three hundred and fifty (350) feet above the airport elevation.

B. The following limitations shall also hereby apply:

- 1. Structures and/or trees that exceed the height limitations established for each zone in this article are hereby determined to be obstructions. Except for the City of Statesville, the property owner of a tree determined to be an obstruction shall not be responsible for bringing such tree into conformance with this article.**
- 2. In addition to the height limitations defined herein, any structure or tree that would either cause a minimum obstruction clearance altitude, a minimum descent altitude, or a decision height for Statesville Regional Airport to be raised, takeoff minimums to be raised, or a non-standard climb gradient to be increased, is hereby determined to be an obstruction.**
- 3. Notwithstanding any other provision of this article, any structure or tree that exceeds the following height limitations within the jurisdictional limits of the City of Statesville shall be considered an obstruction:**
 - a. A height of five hundred (500) feet above ground level at the site of the structure.**
 - b. A height that is two hundred (200) feet above ground level, or the established airport elevation, whichever is higher, within three (3) nautical miles of the established airport reference point.**

Section 4.6.3 Use Restrictions

Notwithstanding any other provisions of this Ordinance, no use may be made of land or water within any zone established by this Ordinance in such a manner as to create interference with the operation of airborne aircraft. The following special requirements shall apply to each permitted use:

- A. All lights, lasers or illumination used in conjunction with streets, parking, signs, or use of land, and structures, shall be arranged and operated in such a manner so that it is not misleading or dangerous to aircraft operating from the Airport or in the vicinity thereof. Particularly, it shall not be made difficult for pilots to distinguish between airport lights and others.
- B. No operations or use of land of any type shall produce smoke, glare or other visual hazards which impair the visibility in the vicinity of the airport, create bird strike hazards, or otherwise endanger or interfere with the landing, takeoff or maneuvering of aircraft intending to use the Airport.
- C. No operations or use of land of any type shall produce electronic interference with navigation signals or radio communication between the Airport and aircraft.

Section 4.6.4 Nonconforming Uses

- A. Regulations Not Retroactive
The regulations prescribed by this Ordinance shall not be construed to require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations as of the effective date of this Ordinance, or otherwise interfere with the continuance of nonconforming use of any structure or tree not conforming to the regulations as of December 3, 2003. Nothing contained herein shall require any change in the construction, alteration, or intended use of any structure, the construction or alteration of which was begun prior to the effective date of this Ordinance and is diligently prosecuted.
- 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 Airport Manager 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 owner of such nonconforming structure or tree in accordance with FAA Advisory Circular AC 70/7460-1L or subsequent revisions.

Section 4.6.5 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 in accordance with the provisions of this article has 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 10, §4.

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 eighty (80) 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 four thousand two hundred (4,200) feet from each end of the runway, no permit shall be required for any tree or structure less than eighty (80) 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 eighty (80) 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.
4. When compliance with the aerial contour height limits as depicted on the Statesville Regional Airport Height Zoning Map cannot be clearly established without further information, the Planning Director may require that the permit include, but not be limited to, the ground elevation and coordinates of the area in question with certification by a registered land surveyor or professional engineer.
5. Each applicant for a permit shall include as an attachment to the application an airspace determination issued by the FAA pursuant to the requirements of 14 CFR Part 77, and a copy of FAA Form 7460.

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

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.

C. Nonconforming Uses Abandoned or Destroyed

Whenever the Planning Director 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 tree, or use their property not in accordance with the regulations prescribed in this ordinance, may apply to the Board of Adjustment for a variance from such regulations. Such variances may be allowed where it is duly found that a literal application or enforcement of the regulations would result in practical difficulty or undue hardship and the relief granted would not be contrary to the public interest but will do substantial justice and be in accordance with the intent of this ordinance.

E. Obstruction Marking and Lighting

Any permit or variance granted may, if such action is deemed advisable to effectuate the purpose of this Ordinance 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 in accordance with FAA Advisory Circular AC 70/7460-1L or subsequent revisions.

Section 4.6.6 Conflicting Regulations

Where there exists a conflict between any of the regulations or limitations prescribed in this Ordinance and any other regulations applicable to the same area, whether the conflict be with respect to the height of structures or trees, and the use of land, or any other matter, the more stringent limitation or requirement shall govern and prevail.

Section 12.2.3 Airport Overlay Requirements

Before the Board of Adjustment considers a variance request or hears an appeal from any order, requirement, decision or determination made under the provisions of this article, the Statesville Regional Airport Commission shall be given an opportunity to make recommendations with respect to the variance or appeal.

Figure 4.2 Height Zoning Map

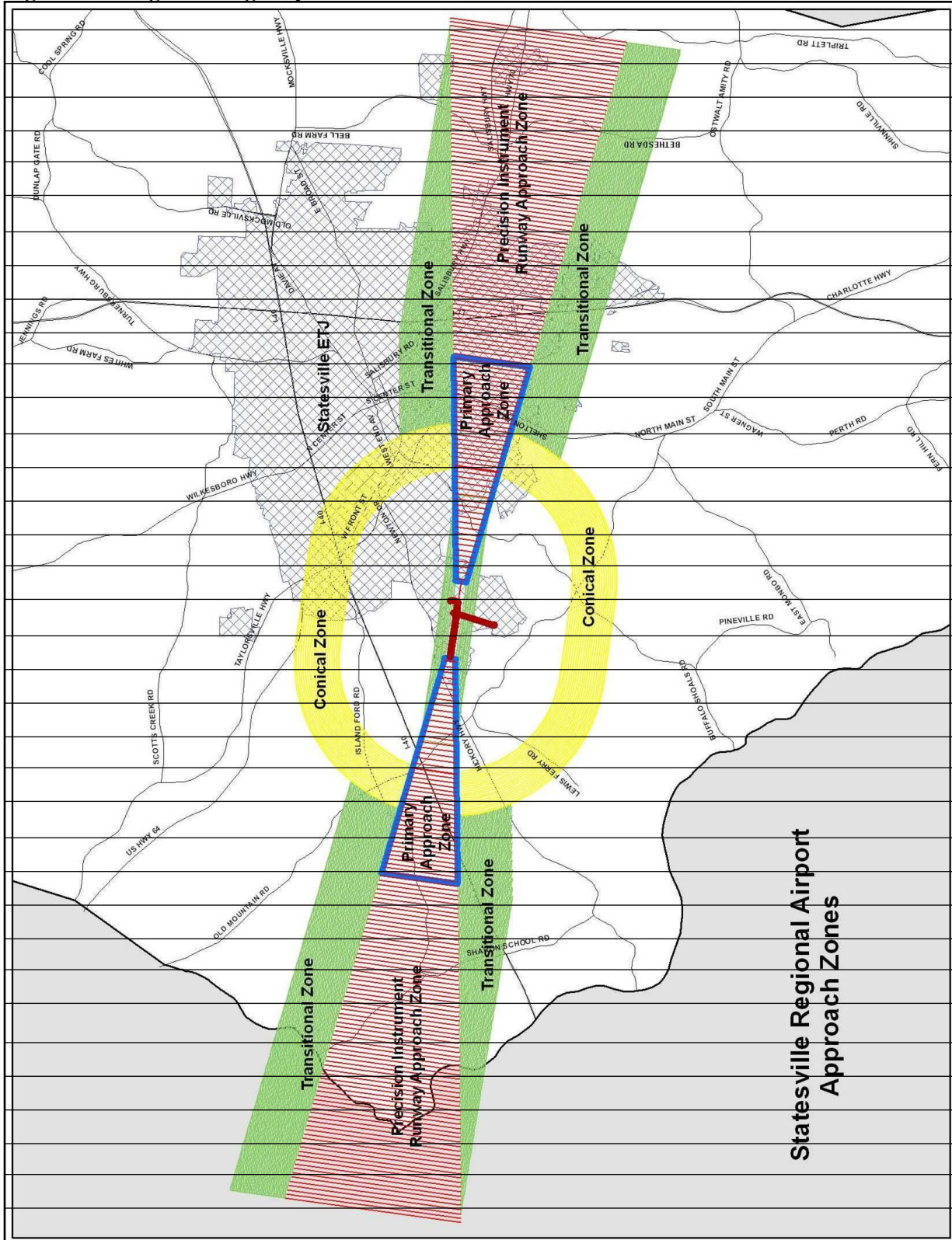
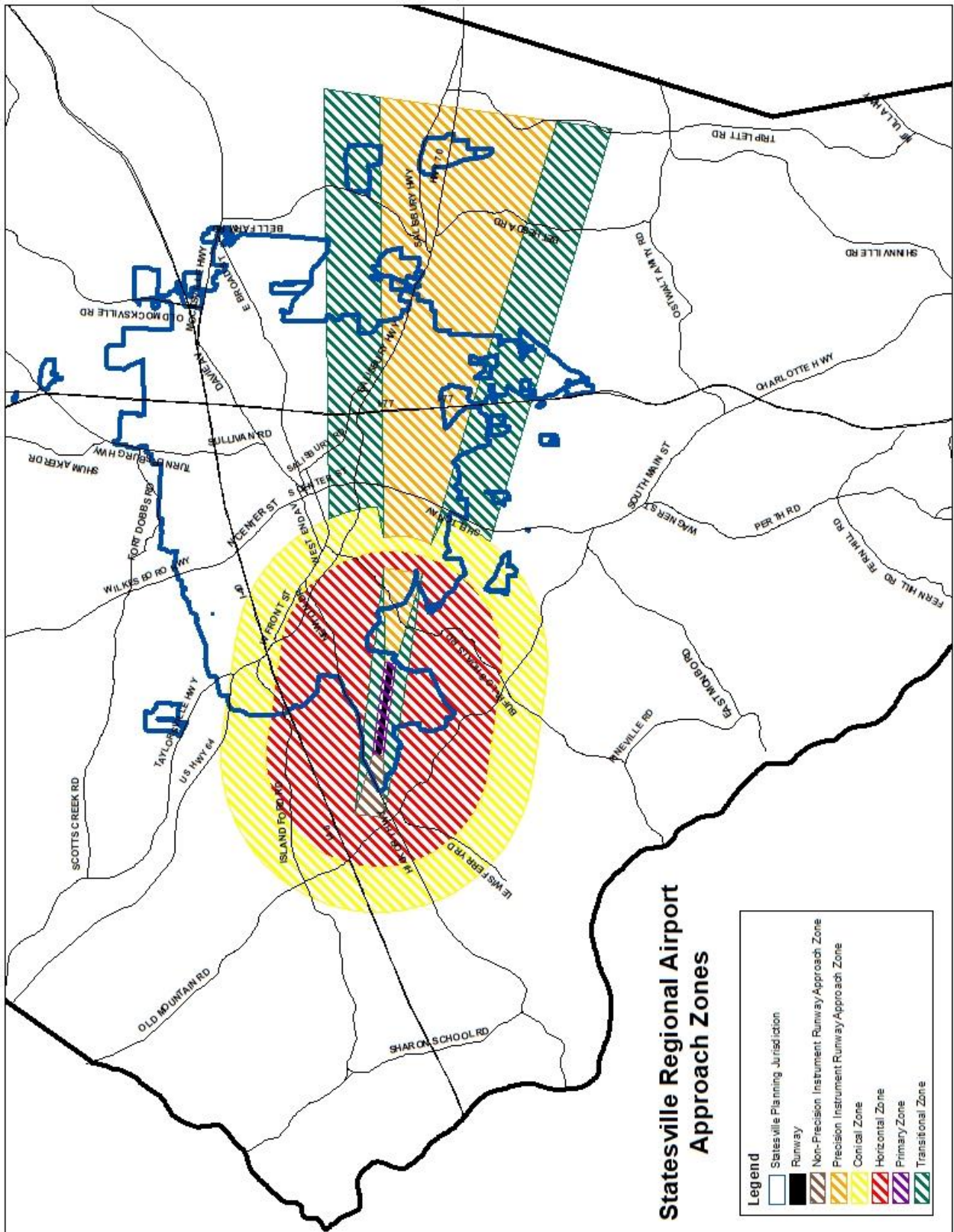


Figure 4.2 Height Zoning Map



**Statesville Regional Airport
Approach Zones**

Legend	
	Statesville Planning Jurisdiction
	Runway
	Non-Precision Instrument Runway Approach Zone
	Precision Instrument Runway Approach Zone
	Conical Zone
	Horizontal Zone
	Primary Zone
	Transitional Zone

Section 24.3 Acronyms

- FAA: Federal Aviation Administration

Section 24.4 Definitions

Airport Elevation. ~~The established airport elevation above mean sea level, which is 965 feet at Statesville Municipal Airport.~~ **The highest point of an airport's usable landing area measured in feet above mean sea level, which is nine hundred sixty-seven and eight tenth (967.8) feet above mean sea level at Statesville Regional Airport.**

Airport Hazard. ~~Any structure or tree which obstructs the aerial approaches of a publicly owned airport or is otherwise hazardous to its use for landing or taking off.~~ *Replaced by Hazard to Air Navigation and Obstruction*

Airport Reference Point. **The center point of an airport, located at the geometric center of all usable runways. The Airport Reference Point (ARP) is computed as a weighted average of the end of runway coordinates.**

Approach Surface. A surface longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface and at the same slope as the approach zone height limitation slope set forth in Section 4.6.1. In plan, the perimeter of the approach surface coincides with the perimeter of the approach zone. **This surface is based upon the civil airport imaginary surfaces defined in 14 CFR Part 77, Subpart C, §77.19.**

Airport Overlay Zones (Primary, Approach, Transitional, Horizontal, and Conical). **A mapped zone that imposes a set of requirements in addition to those of the underlying zoning district. These zones are set forth in Section 6 of this Ordinance.**

Conical Surface. A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet. ~~This surface is based upon the civil airport imaginary surfaces defined in 14 CFR Part 77, Subpart C, §77.19.~~

Decision Height. **The height at which a decision must be made during either a precision instrument approach or an instrument approach with vertical guidance to either continue the approach or to execute a missed approach.**

Hazard to Air Navigation. **An obstruction determined to have a substantial adverse effect on the safe and efficient utilization of the navigable airspace as determined by the FAA per 14 CFR Part 77, Subpart D.**

Height. The vertical distance from the ground elevation to the highest point of a structure or tree, including any appurtenance thereon. **For the purpose of determining the height limits in all zones set forth in this Ordinance and shown on the Statesville Regional Airport Height Zoning Map, the reference shall be mean sea level elevation unless otherwise specified.**

Horizontal Surface. A horizontal plane one hundred and fifty (150) feet above the established airport elevation, the perimeter of which in plan coincides with the perimeter

of the horizontal zone. This surface is based upon the civil airport imaginary surfaces defined in 14 CFR Part 77, Subpart C, §77.19.

Larger Than Utility Runway. A runway that is constructed for and intended to be used by propeller driven aircraft of greater than twelve thousand five hundred (12,500) pounds maximum gross weight and jet powered aircraft.

Minimum Descent Altitude (MDA). The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circling-to-land maneuvering in execution of an instrument approach procedure where no vertical guidance is provided.

Minimum En-Route Altitude (MEA). The lowest altitude, expressed in feet above mean sea level, in effect between fixes on VOR airways or en-route segments that meets obstacle clearance requirements and ensures acceptable navigational signal coverage for the entire route segment.

Minimum Obstruction Clearance Altitude (MOCA). The lowest published altitude, expressed in feet above mean sea level, in effect between fixes on VOR airways or

Non-Precision Instrument Runway. A runway having an existing instrument approach procedure utilizing air navigation facilities with one horizontal guidance, or are type navigation equipment, for which a straight-in non-precision instrument approach procedure has been approved or planned, or a runway having an existing or planned approach with vertical guidance using Area Navigation (RNAV) equipment supported by a Satellite-Based Augmentation System (SBAS) for the Global Positioning System (GPS).

Obstacle. Any structure, growth, or other object, including a mobile object, that has been identified as having a potential to be an obstruction.

Obstruction. Any structure, growth, or other object, including a mobile object, which exceeds a limiting height set forth in Section 7 of this Ordinance.

Precision Instrument Runway. A runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS) or a Precision Approach Radar (PAR) or a Ground-Based Augmentation System (GBAS) for the Global Positioning System (GPS). It also means a runway for which a precision approach system is planned and is so indicated on an approved airport layout plan or any other planning document.

Primary Surface. A surface longitudinally centered on a runway. When the runway has a specifically prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. The width of the primary surface is ~~1,000 feet wide and centered on the runway centerline~~ set forth in Section 4.6.1 of this Ordinance. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. This surface is based upon the civil airport imaginary surfaces defined in 14 CFR Part 77, Subpart C, §77.19.

Transitional Surfaces. Surfaces that extended outward at ninety (90) degree angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces to where they intersect the horizontal and conical surfaces. Transitional surfaces for those portions of the precision approach surfaces, which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the

edge of the approach surface and at ninety (90) degree angles to the extended runway centerline. **This surface is based upon the civil airport imaginary surfaces defined in 14 CFR Part 77, Subpart C, §77.19.**

Utility Runway. A runway that is constructed for and intended to be used by propeller driven aircraft of twelve thousand five hundred (12,500) pounds maximum gross weight and less.

Visual Runway. A runway intended solely for the operation of aircraft using visual approach procedures.

ACTION NEEDED:

TO APPROVE: Motion to recommend approval the zoning text amendments and to make a finding that the approval is consistent with the adopted 2030 Horizon Plan and that said approval is reasonable and in the public interest and furthers the goals of the 2030 Horizon Plan because it aims to make necessary updates to address the growth at the Statesville Regional Airport.

TO DENY: Motion to deny the zoning text amendments and to make a finding that the denial is inconsistent with the adopted 2030 Horizon Plan, said denial is reasonable and in the public interest and does not further the goals of the 2030 Horizon Plan because....