

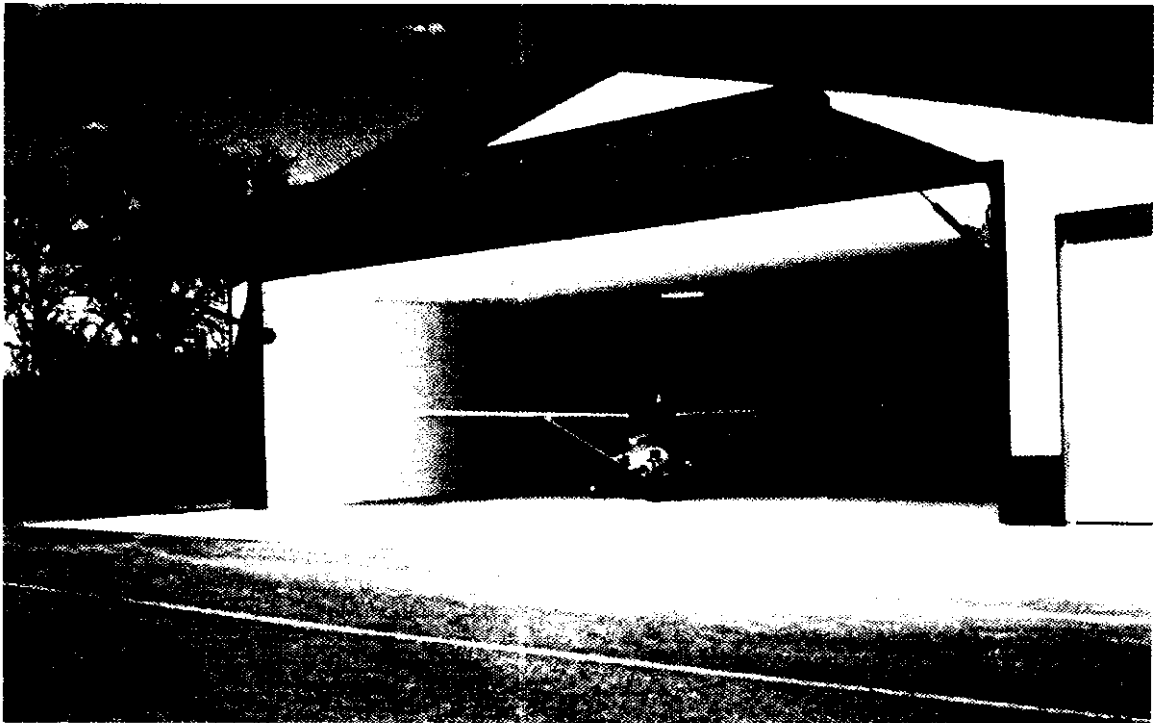
# **MINIMUM STANDARDS FOR AIRCRAFT HANGAR CONSTRUCTION**

**RIDGELAND – CLAUDE DEAN AIRPORT**

**May 10, 2019**

**RIDGELAND, SOUTH CAROLINA**





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### **SECTION 1.1 PURPOSES**

The purposes of these Construction Standards are to:

- ✓ Insure design and construction of consistent, high quality infrastructure
- ✓ Protect and enhance airport investment

### **SECTION 1.2 OBJECTIVES**

*BRANDING* – to project aesthetic continuity

*ECONOMIC* – to protect property values and encourage investment

*ENVIRONMENTAL* – to minimize adverse impact upon the ecosystem

*SAFETY* – to provide secure storage of aircraft and safe working environment

*VISUAL* – to promote architectural and landscape design

### **SECTION 1.3 GENERAL PROVISIONS**

Permanent structures may not be constructed on airport property, unless first approved for conformance to:

- A. Current Airport Layout Plan (ALP);
- B. Airport Building Restriction Lines (BRL) and height restrictions;
- C. Non-interference with Airport or Federal Aviation Administration (FAA) radio/guidance equipment;
- D. Minimum Standards for Aeronautical Services;
- E. Minimum Standards for Aircraft Hangar Construction;
- F. Access to the proposed building, including any required easements, roads or private taxi lanes;
- G. Ground lease approved by the County Administrator, or an approved sub-lease with an existing authorized tenant of the Airport.
- H. Proper filing of FAA Form 7460-1 (Notice of Proposed Construction or Alteration) with the FAA; along with copies to the Airport Manager.

## **SECTION 1.4 GENERAL APPROVAL PROCESS**

The following information is a guide for constructing a new hangar or substantial alteration of an existing hangar or other building type at the Ridgeland – Claude Dean Airport

- 1) Meet with the Airport Manager to discuss proposed development or for general inquiry.
- 2) If the hangar(s) will be used for the provision of aeronautical services; excluding private hangar and corporate hangars used to store the owners aircraft exclusively, the applicant must submit a Business Plan to the Airport Manager for approval by the County Administrator.
- 3) Submit a FAA Form 7460 – 1 (Notice of Proposed Construction or Alteration) to the FAA Atlanta District Office for approval; along with a copy to the Airport Manager.
- 4) New hangars or alterations to existing hangars require a building permit from the Jasper County Building Official and approval from the Jasper County Fire Marshal.
- 5) Submit a copy of the approved FAA Form 7460-1 (Notice of Proposed Construction or Alteration) and approved building permits from the Jasper County Building Official and approval letter from the Jasper County Fire Marshal to Airport Manager for ground lease preparation.
- 6) Upon approval of the ground lease by the County Administrator, the applicant will receive a Notice to Proceed with construction.

The construction Notice to Proceed shall be based upon the applicant's understanding that he/she shall be required to adhere to the **"Minimum Standards for Aeronautical Services"**.

The construction Notice to Proceed shall be based upon the applicant's understanding that he/she shall be required to adhere to the **"Minimum Standards for Aircraft Hangar Construction"**.

**SECTION 1.5                      SPECIFIC APPROVAL PROCESS**

These standards shall apply to all properties depicted in the Airport Layout Plan (ALP) and are in addition to any other jurisdictional requirements including but not limited to zoning, building codes and land development regulations of Jasper County, South Carolina.

- 1) Copies of all structural plans, site plans, and material specifications developed by a State of South Carolina licensed architect and/or engineer shall be provided to the Jasper County Building Official for review and approval, and upon such approval shall become property of the Airport;
- 2) The Jasper County Building Official and Jasper County Fire Marshal or designated agent shall make frequent inspections during construction of any approved building.

No changes to, or variations from approved plans and specifications shall be permitted, unless prior written approval by the County Administrator, Jasper County Building Official and Jasper County Fire Marshal;

- 3) Construction of an approved structure or material component thereof shall not begin until the following documents or proofs have been submitted and approved by the County Administrator:
  - a) Contractor's Comprehensive General Liability Insurance in an amount not less than defined in Minimum Standards for Aeronautical Services;
  - b) Contractor's Workers Compensation Insurance not less than defined by applicable State of South Carolina statute.
  - c) Contractor's Comprehensive Property Damage Insurance not less than defined in Minimum Standards for Aeronautical Services;
  - d) Performance, Material and Labor Payment Bond that equals the value of the proposed project.
- 4) Erection or siting temporary buildings must be approved, in writing, by the County Administrator, Jasper County Building Official, and Jasper County Fire Marshal for type, use, design and location on an individual basis for a specified term and that removal of temporary buildings will be done at the Lessee's expense, within twenty-one (21) calendar days of the end of the approved term.
- 5) Failure by the Lessee to comply with Airport requirements or failure to complete a construction project according to the approved plans and specifications shall be cause for the County Administrator to revoke any ground lease with the Lessee of the project and require that any and all applicable structures be removed from Airport property.

In addition to the forgoing remedies, the Jasper County Council shall retain all other remedies provided by the lease term or provided by law.

**CHAPTER II**  
**MINIMUM CONSTRUCTION STANDARDS**

**SECTION 2.1                      MINIMUM CONSTRUCTION STANDARDS**

**1) General Requirements**

- A. This general section requires permits for building, plumbing, mechanical, HVAC, fire and electrical.
- B. All structures shall be designed and constructed in accordance with the building, plumbing, mechanical, HVAC and electrical codes as adopted by Jasper County, South Carolina.
- C. All plans must be approved by all required local or state building inspection offices and all permits must be obtained prior to construction.
- D. All electrical, plumbing, mechanical, HVAC, fire and electrical or any other work that are governed by Federal, State or local licensing regulations will be performed only by individuals or companies so licensed.
- E. All construction shall be in compliance with all applicable zoning regulations, FAA regulations, and other regulations issued by agencies having jurisdiction over work within the scope of these standards.
- F. The Jasper County Building Official and the Airport Manager must approve the schedule for all work and the approved schedule shall become binding upon the applicants unless a schedule revision has received written approval by the Jasper County Building Official and Airport Manager.

**2) Special Requirements**

The following are emphasized to promote safety, insurability of structures on airport properties and to maintain the value of all airport properties.

- A. **Footings and Foundations:** Soil tests shall be performed at the location of any proposed structure and the design of the footing and foundation based on the results. Copies of the design and test results bearing the seal of a registered architect or engineer shall be submitted to the Jasper County Building Official.
- B. **Structural Strength and Materials:** The Building Code currently adopted by Jasper County shall apply as to allowable materials and structural strength for the structural class or types as determined by use, seismic zone, wind and/or snow loads.
- C. **Fire Rating:** The fire ratings of structures used for the storage of aircraft, and flammable or hazardous materials shall comply with the Building Code and any Federal, State or local fire codes and are subject to the approval of Jasper County Fire Marshal.

**3) Framing**

All framing shall be metal composition and meet building code specifications.

**4) Exterior**

- A. All exterior surfaces must be pre-finished aluminum, steel, Concrete Masonry Unit (CMU) or concrete construction. No painted wood or other material may be used. No galvanized metal shall be used on any exterior surface.
- B. The minimum gauge steel used for roofing shall be twenty-six (26) and shall be factory finished in a color approved by the Airport Commission and warranted by the manufacturer as to color fastness for twenty (20) year minimum.
- C. No wood or wood composite siding or composite roofing shall be allowed.
- D. No flat roofs shall be allowed.

**5) Aesthetics**

The Ridgeland - Claude Dean Airport strives to achieve a pleasing aesthetic quality in the colors, design, uniformity, and structure of any new hangars developed on the Airport.

All exterior material compositions and color charts must be submitted to the Airport Manager for approval before construction. The Airport Manager can reject distasteful designs and color schemes at his/her discretion. Standard colors for wall panel, roof and wainscot or trim will be identified and registered with the Airport Manager.

- A. Wall Panel Colors acceptable shall include earth-tone tertiary colors:  
Beige, Tan, Salmon, Ivory, Light Stone, Sand Gold, Ash Gray, Light Blue, Copper Penny and Sage Green
- B. Wall Panel Colors not acceptable shall include primary and secondary colors:  
Pink, Black, Brown, Yellow, Blue, Green, Purple, Gray, Maroon, Snow White, Navy Blue and Charcoal
- C. Roof color, wall panel color and wainscot or trim color shall be solid color with no patterns.
- D. Where concrete masonry unit (CMU), poured in place or preformed concrete walls are used, the exterior shall be sealed and stained in an above approved color.
- E. All signage on hangars and leased property must have prior approval from the Airport Manager.



**6) Floor and Ramp Construction**

- A. All hangar floors must be constructed of concrete having a minimum of five (5) inch thickness or as approved and shall include Fibermesh reinforcement of a type approved by the Jasper County Building Official.
- B. Ramps/Aprons shall be concrete construction having a minimum eight (8) inch thickness p-209 compacted road base and minimum five and a half (5 ½ ) inch, 4,000 psi concrete with Fibermesh reinforcement of a type approved by the Jasper County Building Official.
- C. Ramps/Aprons shall be constructed as wide as the hangar width.
- D. Copies of the design and test results bearing the seal of a South Carolina registered architect or engineer shall be submitted to the Jasper County Building Official. A stiff broom finish shall be required on exterior ramps.

**7) Doors**

Bi-fold, hydraulic and sliding doors that do not block access to adjacent hangars may be used. Sliding doors shall not extend past the building corners when in the open position and shall not have outrigger column supports. Stack door shall not be used. All pedestrian doors must be pre-finished metal construction.

**8) Drainage**

The gradient of the finished floor of any proposed structure and the surrounding surfaces shall provide for positive flow of water into the airport stormwater system. In areas where no stormwater system exists, the Jasper County Building Official may require the installation of inlet and pipe designed for anticipated maximum flow and loading to be installed and attached to the existing stormwater system. An approved system of oil/water separators may be required to prevent contamination of surface or groundwater resources.

**9) Surface Erosion**

A rain gutter, eavesthrough or surface water channel shall be installed on or adjacent to all buildings as a component of the building rainwater discharge system to prevent surface erosion.

**10) Landscaping**

The Airport Manager may require landscaping; dependent upon structure location. All plans for landscaping shall be subject to approval by the Airport Manager. Trees shall not be planted; as they tend to attract birds.

*Reference: FAA Advisory Circular (AC) 150/5200-33C Hazardous Wildlife Attractants on or Near Airports*

**11) Utilities**

- A. Connection to electric, gas, water, sanitary sewer, telephone and wireless shall be the responsibility of the Lessee. All new electric, cable TV, internet and telephone lines shall be placed underground. Upon completion of construction, a plot plan showing the exact location of all Lessee installed utilities shall be provided to the Jasper County Planning & Building Department and the Town of Ridgeland Water & Sewer Department.
- B. No trenching or excavation shall begin until all pipes and lines in the area have been located. Utility companies shall be contacted for line locates by the Lessee. The Lessee shall be responsible for any damage to existing utilities or communication lines.
- C. Aviation repair and paint facilities, dealerships, fuel farms, equipment degreasing areas, and other facilities generating wastewater with oil and grease content shall be required to pre-treat these waters before discharging to the Town of Ridgeland sanitary sewer system. Pre-treatment requires an oil/water separator be installed and maintained on site.
- D. Oil/water separators shall be commercially manufactured and sized for the intended discharge rates for the facility where installed.

*Reference: FAA Advisory Circular (AC) 150/5320-15A Management of Airport Industrial Waste*

**12) Access**

The Lessee will be required to construct paved access road, parking lot ramp/apron, and taxi lane to provide access to the structure. Plans for all structures shall be submitted to the Jasper County Building Official, and Jasper County Fire Marshal for approval. Sidewalks and walkways connecting doorways to parking areas are required at each conventional hangar.

**13) Clean Up and Reclamation**

A covered dumpster or other appropriate covered receptacle shall be on site prior to construction and shall remain on site to be used for all waste materials until construction is complete.

All areas disturbed during hangar construction, including utility trenches, must be cleaned up, compacted and covered with topsoil and compacted again. The entire area shall then be covered with sod or re-seeded by the Lessee with a grass mixture.

All areas around the hangar, apron, and ramp must be back-filled in a manner allowing the mowing over the edges of ramps and adjacent buildings.

**14) Hangar Size**

**A. T-hangar Building Dimensions (Full Nested)**

All-metal 12 unit T-hangar dimensions include building and hangar doors, which shall be a completely integrated system to the following dimensions:

<b>Hangar Feature</b>	<b>Minimum</b>	<b>Maximum</b>
Clear door width - minimum (ft)	42	48
Overall building length (ft)	273	312
Overall building width	50	58
Stall Depth (ft)	32	38
Clear door height (open position) minimum (ft)	12	14' - 0"
Clear tail width - minimum (ft)	21	24

All T-hangars will have, at a minimum, paved concrete interior floors and paved asphaltic concrete or concrete aprons and taxi lanes to their units with sufficient width and clearance from other buildings as recommended by FAA planning guidelines. Automobile parking inside T-hangars is permitted when the occupying aircraft is in use.

**B. Conventional Hangar Building Dimensions**

Minimum conventional hangar size shall be 50 feet by 40 feet. Larger hangar sizes may be constructed and are encouraged, but all hangars must first be as depicted on the Airport Layout Plan and approved by the Airport Manager, Jasper County Building Official and Jasper County Fire Marshal. All hangars must conform to applicable Jasper County construction and fire code requirements.

Conventional hangars must have common design elements which include:

- i. Steel construction for all columns, braces, rafters and rods.
- ii. Metal siding and roofing.
- iii. Bi-fold, hydraulic or sliding doors.
- iv. Clear-span interior construction and concrete floors.

Hangar apron shall be equal to the width of the hangar floor, may be asphaltic concrete or concrete, and must connect to the existing taxi ways or constructed taxi lanes.

Paved asphaltic concrete or concrete automobile parking spaces shall be provided, based upon the size and expected occupancy of the proposed hangar. (Rule of thumb includes one parking space for each employee and one space for each 250 square feet of office space).

Automobile parking inside conventional hangars is permitted when the occupying aircraft are in use.

Additional restrictions or requirements may be imposed by Jasper County Council when, in their judgement, such restrictions or requirements are necessary to insure safety, airport operations, aesthetics, or property value.

## **SECTION 2.2 NOTICE TO PROCEED**

When satisfied that all provisions of this directive have been, or will be fulfilled, the County Administrator will issue a letter notifying the Lessee to proceed with the approved construction. All materials will be shared with the appropriate Town of Ridgeland/Jasper County departments.

Any loss incurred due to work performed, material purchased, or subleases signed by the Lessee prior to receipt of Notice to Proceed shall be the Lessee's responsibility.

## **SECTION 2.3 CLOSEOUT**

The hangar construction project shall be deemed complete after:

- 1) Final building inspections completed and approved by the Jasper County Building Official and Jasper County Fire Marshal;
- 2) All other permits obtained and fees paid;
- 3) Certificate of Occupancy issued by Jasper County;
- 4) Lessee files FAA Form 7460 - 2 Notice of Actual Construction or Alteration;
- 5) Lessee submits to Airport Manager a copy of the approved FAA Form 7460 - 2 Notice of Actual Construction or Alteration.