

Minimum Standards for Construction of Aircraft Hangars

ARTICLE 1. MINIMUM STANDARDS FOR CONSTRUCTION OF AIRCRAFT HANGARS

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Section 1. – Purpose

The purpose of these Design Standards is to insure development of consistent and high quality infrastructure and to protect and enhance the investment of all those locating on the airport. These standards provide a basis for directing and evaluating the planning and architectural design of improvements to each piece of land.

Section 2. – Goals

The following goals form the basis for these design standards:

BRANDING – To project the airport brand and aesthetic continuity within architectural and design standards.

ECONOMIC – To protect property values and enhance investment and the development of industry and jobs.

ENVIRONMENTAL – To conserve existing natural features and minimize adverse impact on the ecosystem.

FUNCTION – To encourage imaginative and innovative planning of facilities and sites and the flexibility to respond to changes in market demand.

SAFETY – To provide secure storage of aircraft, motor vehicles and equipment and to provide for a safe environment to allow for a productive workforce.

VISUAL – To promote variety, interest and high standard of architectural and landscape design.

Section 3. – General Provisions.

- (1) Buildings may not be constructed on airport property, unless approved by Airport Authority for conformance in each of the following areas:
 - (a) Current Airport Layout Plan (ALP).
 - (b) All applicable Building Restriction Lines (BRL) and height restrictions.
 - (c) Interference with any Airport or Federal Aviation Administration (FAA) radio or guidance equipment due to location of type of structure.
 - (d) Minimum structural standards as described in Section 5.

- (e) Access to the proposed building, including any required easements, roads or taxiways.
- (f) An approved ground lease with the Airport Authority, or an approved sublease with an existing authorized tenant of the Airport. Such lease to include all areas deemed necessary to the normal use of the building.
- (g) Minimum separation beyond the outermost perimeter of the structure shall be in accordance with the ALP. This provision may be waived, in whole or in part, by the Airport Authority to facilitate operations or access. Requests for waiver must be in writing, shall state the reason for the waiver, and shall state in detail the mitigating measures with respect to potential adverse impacts to the ALP that may arise from granting the requested waiver.
- (h) Proper filing of FAA Form 7460 with the FAA, with copies to the Airport Authority.

Section 4. – Application

These standards shall apply to all properties in the ALP and are in addition to any other jurisdictional requirements including but not limited to zoning ordinances and building codes of the City of Cleveland, Tennessee.

- (1) Copies of all structural plans, site plans, and material specifications developed by a licensed architect and/or engineer shall be provided to Airport Authority for review and approval and upon approval shall become the property of the Airport.
- (2) Airport Authority or designated agent shall make frequent inspections during construction of any approved building. No changes to, or variation from approved plans and specifications shall be permitted unless approved in writing by Airport Authority.
- (3) Construction of approved structure or material component thereof may not commence until the following documents or proofs thereof are submitted and approved by the Airport Authority:
 - (a) Contractor’s Comprehensive General Liability Insurance and Automobile Liability Insurance policies in the amount not less than defined by Airport Authority.
 - (b) Contractor’s Property Damage Liability Insurance shall be in an amount of not less than defined by Airport Authority.
 - (c) Property insurance upon the entire Work site.
 - (d) A Performance, Material and Labor Payment Bond that equals the value of the proposed project.
- (4) Erection of temporary buildings must be approved in writing by Airport Authority as to type; use, design and location on an individual basis for a specified term and that removal of temporary buildings will be done by the Lessee, at their expense, within fifteen days of the end of the approved term.
- (5) In the event of any failure on the part of any Lessee to comply with Airport requirements or any failure to complete a construction project according to the approved plans and specifications, or within a reasonable time as determined by Airport Authority, shall be cause for management to revoke any ground lease with the Lessee of the project and require that the structure be removed from airport property. In addition

to the forgoing remedies, Airport Authority shall retain all other remedies provided by the lease term or provided by law.

Section 5. – Minimum Develop Standards

- (1) General Requirements: This general section requires permits for the building, plumbing, mechanical, and electrical.
 - (a) All structures shall be designed and constructed in accordance with the Building, Plumbing, Mechanical and Electrical Codes as adopted by City of Cleveland, Tennessee.
 - (b) All plans must be approved by all required local or state building inspection offices and all permits must be obtained before construction begins.
 - (c) All electrical, plumbing, and mechanical or any other work that is governed by Federal, State or local licensing regulations will be performed only by individuals or companies so licensed.
 - (d) All construction shall be in compliance with all applicable zoning regulations, FAA regulations, height restrictions, and other regulations issued by any agency having jurisdiction over work or projects within the scope of these standards shall apply.
 - (e) Airport Authority must approve the schedule for all work and the approved schedule shall become binding upon the applicants unless modification of the schedule have been approved in writing by Airport Authority.

- (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 Airport Authority.
 - (b) Structural Strength and Materials: The Building Code currently adopted by City of Cleveland 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, motor vehicles, and flammable or hazardous materials shall comply with the Building Code and any Federal, State or Municipal Fire Codes and are subject to the approval of the City of Cleveland Building Division and the City Fire Department.

- (3) Framing: All framing shall be of metal.

- (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) All exterior materials and colors must be submitted to Airport Authority for approval before construction starts. A standard color will be identified and registered with Airport Authority.
 - (c) No wood or wood composite siding or roofing shall be allowed. Exceptions to the rule may be granted by Airport Authority based on aesthetics or airport operational requirements. Requests for exceptions must be made in writing at time of initial plan review.
 - (d) The minimum gauge steel used for roofing shall be twenty-eight (28) and shall be factory finished in a color approved by Airport Authority and warranted by manufacturer as to color fastness for a minimum of twenty (20) years.
 - (e) Concrete: where CMU, poured in place or preformed concrete walls are used, the exterior shall be sealed and stained in a color approved by Airport Authority.
 - (f) All signage on hangars and leased property must have prior approval from the Airport Authority.
- (5) Floor and Ramp Construction: All Floors and ramps must be constructed of concrete having a minimum of five (5) inch thickness or as approved and shall include reinforcement of a type approved by Airport Authority. Copies of the design and test results bearing the seal of a registered architect or engineer shall be submitted to Airport Authority. A stiff broom finish is required on exterior ramps.
- (6) Doors: Bi-fold doors are recommended because of their ease of operation. Approved swing out, overhead or sliding doors may be used. All pedestrian doors must be of pre-finished metal construction.
- (7) Drainage: The gradient of the finished floor of any proposed structure and the surrounding surfaces shall provide for positive flow of water into the existing airport storm sewer system. In areas where no storm sewer exists, Airport Authority may require the installation of inlet and pipe designed for anticipated maximum flow and loading to be installed and attached to the existing storm sewer system. An approved system of oil/water separators may be required to prevent contamination of surface or ground water resources.
- (8) Oil/water Separators: Aviation repair and paint facilities, dealerships, fuel stations, equipment degreasing areas, and other facilities generating wastewater with oil and grease content are required to pre-treat these waters before discharging to the sanitary sewer system. Pre-treatment requires that an oil/water separator be installed and maintained on site.
- (a) Oil/water separators shall be commercially manufactured and sized for the intended discharge rates for the facility where it is installed.

- (9) Landscaping: The Cleveland Regional Jetport strives to achieve a pleasing aesthetic quality in the colors, design, uniformity, and structure of any new hangars developed on the Airport. As such, proposed hangar development must be approved by the Authority for conformity to aesthetic quality standards. The Authority can reject distasteful designs and color schemes at their discretion. The Airport Authority may require landscaping due to the location of the structure. All plans for landscaping shall be approved by Airport Authority. Trees are not encouraged to be planted as they contribute to the attraction of birds.
- (10) Utilities: Connection to electric, gas, sanitary sewer and telephone 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 given to Airport Authority.
- (a) No trenching or excavation shall commence until all pipes and lines in the area have been located. Utility companies shall be contacted for locations. The Lessee shall be responsible for any damage to existing utilities or communication lines.
- (11) Access: Airport Authority may require the Lessee to construct paved roadways, taxiways and controlled access gates to provide access to the structure. Plans for any roadway or taxiway so required shall be submitted to Airport Authority for approval. Sidewalks and walkways connecting doorways to parking areas are required at each conventional hangar.
- (12) Clean up and Reclamation: A covered dumpster or other appropriate covered receptacle shall be on site prior to construction and shall be used for all waste materials.
- (a) 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 supplied by Airport Authority.
- (b) All areas around the hangar, apron, and ramp must be back-filled in a manner that will allow mowing over the edges of ramps and adjacent buildings.
- (13) Hangar Size:
- (a) T-Hangar Building Dimensions:
All-metal 10-unit T-hangar dimensions include building and bi-fold doors, which shall be a completely integrated system to the following dimensions:

Hangar Feature	Minimum	Recommended
Clear door width-minimum	41'-6"	47'-8"
Overall building length	231'-0"	264'-0"
Overall building width	51'-0"	58'-0"
Stall Depth	33'-0"	38'-0"
Clear door height (open position)-	12'-0"	14'-0"

minimum		
Clear tail width – minimum	21'-0"	23'-8"

All T-hangars will have, at a minimum, paved interior floors and paved taxi lanes to their units with sufficient width and clearance of other buildings as recommended by FAA planning guidelines. Automobile parking inside T-hangars is permitted when the occupying aircraft are 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 shown on the Airport Layout Plan and approved by Airport Authority. All hangars must conform with applicable City of Cleveland TN construction and Fire Code requirements. Conventional hangars must have common design elements which include:

1. Steel Construction for all columns, braces, rafters, and rods.
2. Metal siding and roofing.
3. Bi-fold doors recommended.
4. Clear-span interior construction and concrete floors.
5. Hangar apron shall be equal to the width of the hangar door, may be asphalt, and must connect to the existing taxi lanes.
6. Paved automobile parking spaces shall be provided, based upon the size and expected occupancy of the proposed hangar. Rules of thumb include one parking space for each employee and one space for each 250 square feet of office space.

(14) Additional restrictions or requirements may be imposed by Airport Authority when, in their judgment, such restrictions or requirements are necessary to insure safety, airport operations, aesthetics, or property value.

Section 6. – Notice to Proceed.

(1) When satisfied that all provisions of this directive have been, or will be fulfilled, Airport Authority’s designee will issue a letter notifying the Lessee to proceed with the approved work. All materials will be shared with the appropriate City departments.

(2) 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.