

AIRCRAFT HANGAR DEVELOPMENT GUIDE

General Aviation at the Southwest Oregon Regional Airport

Coos County Airport District (CCAD)
KOTH • North Bend, Oregon

A practical guide to planning, designing, financing, approving,
constructing and operating a private general aviation hangar.



RUNWAY • TAXIWAY • APRON • HANGAR

PLANNING EDITION • AUGUST 2026

Prepared as a prospective developer guide for use with Coos County Airport District staff. This publication is a planning aid, not a lease, permit, engineering document, or substitute for FAA, state, local or airport requirements.

A Better Way to Build a Hangar

Start with the project — not the building.

A private aircraft hangar is a long-term investment in an airport environment. The building is only one part of the project. A successful development must work as an integrated system: aircraft access, lease terms, airspace, pavement, utilities, drainage, permitting, financing, construction and long-term operations all have to fit together.



The sequence is intentional: solve the site and requirements before committing to construction.

The five-stage process in this guide is designed to reduce surprises and prevent the most expensive mistake: committing to a building before the site, airport requirements and total project cost are understood.

THE CORE IDEA

Plan → Confirm → Design → Approve + Build → Operate. Each stage produces information needed by the next stage. Skipping ahead usually creates redesign, schedule pressure and change orders.

Why Build at KOTH?

General aviation is an important part of the airport's mission and regional economy.

Southwest Oregon Regional Airport serves the Coos Bay–North Bend area and the broader South Coast. CCAD's mission includes providing quality commercial and general aviation services, while developing airport property in ways that support long-term airport self-sufficiency.

General aviation supports more than aircraft storage. It supports pilots, aircraft owners, maintenance activity, FBO services, flight activity, emergency medical aviation and the businesses that depend on reliable airport access.

WHAT THE AIRPORT PROVIDES	WHAT THE DEVELOPER MUST PROVIDE
Airport property and aviation access	A viable project concept
Airport operational framework	Private project financing
Lease / development coordination	Design and engineering
Airfield infrastructure	Building and site improvements
Airport oversight and safety coordination	Long-term maintenance and compliance

CCAD's published leasing and development program includes general aviation and commercial hangar opportunities. Current airport planning documents also identify general aviation hangar development as a continuing need.

The Five-Step Development Roadmap

A simple framework for a complex project.

01 PLAN	Define aircraft, mission, hangar size, future needs, budget, financing and schedule.
02 CONFIRM	Confirm site availability, lease structure, airport requirements, ALP compatibility, access and utilities.
03 DESIGN	Develop the site, hangar, apron, utilities, drainage, fire/life-safety and preliminary cost plan.
04 APPROVE + BUILD	Complete FAA and airport coordination, environmental review, permits, financing, procurement and construction.
05 OPERATE	Maintain the facility, aircraft access, insurance, lease compliance and airport-required standards.

Project discipline matters. A good hangar project has a decision gate at the end of each step. Do not move into final design until the site and development path are sufficiently defined.

Step 1 — Define the Aircraft Mission

Design around the aircraft you expect to own, not only the one you own today.

Start by documenting the aircraft and how the hangar will actually be used. A storage-only hangar has different needs from a facility supporting aircraft construction, maintenance, business use or multiple aircraft.

Aircraft

Make/model, wingspan, length, tail height, maximum takeoff weight and landing gear configuration.

Door

Clear width and height, operating system, headroom, wind exposure and maintenance access.

Clearances

Wingtip, tail, propeller, personnel, equipment and vehicle movement.

Future aircraft

Allow for likely changes in aircraft size or mission.

Interior

Storage, workbench, tools, office, restroom, lounge and other uses—only where permitted.

Operations

How aircraft will enter, exit, be staged, fueled, serviced and secured.

Planning rule: a modest increase in building dimensions during initial construction can be much less expensive than trying to enlarge a hangar later.

Hangar Types

Choose the configuration that fits the aircraft, site and long-term

TYPE	BEST FIT	PLANNING NOTES
T-Hangar	Smaller GA aircraft	Efficient land use; shared structure; limited flexibility.
Box Hangar	Single aircraft / larger GA	Flexible interior; easy aircraft movement; adaptable.
Executive / Corporate	Turboprop, jet, multiple aircraft	More apron, door height, support space and infrastructure.
Maintenance / Specialty	Approved aeronautical activity	Additional fire, ventilation, electrical, environmental and operational considerations.

Door selection is a design decision, not a finish selection. Bi-fold, hydraulic, sliding and vertical-lift doors have different structural, electrical, maintenance and site implications.

Step 2 — Find a Feasible Site

A hangar site must work from the airside, landside, engineering and regulatory

The 2013 OTH Master Plan identified future general aviation development in the Main General Aviation Area and South General Aviation Area. It identified approximately 57,000 square feet of additional hangar space in the Main GA area as demand warranted and also identified hangar development in the South GA area.

Those concepts are useful planning context—but they are not a substitute for today's approved Airport Layout Plan or CCAD's current site availability. The airport is currently updating its long-range Master Plan, which should be completed in 2027.

GA HANGAR DOOR SIZE & AIRCRAFT MANEUVERABILITY

The right door size makes all the difference.

More clearance = easier, safer, damage-free operations.

1. DOOR CLEARANCE

GOOD CLEARANCE SMOOTH & EASY

Door Height $\geq 1.25 \times$ Aircraft Height

Door Width $\geq 1.5 \times$ Wingspan

Plenty of room for wings, tail and safe in-and-out movement.

TIGHT CLEARANCE CAUTION REQUIRED

Door Height = Aircraft Height

Door Width = Wingspan

Limited clearance requires careful alignment and slower maneuvering.

INADEQUATE CLEARANCE RISK OF DAMAGE

Door Width < Wingspan

High risk of wing, tail or prop strike. Difficult and potentially unsafe.

2. MANEUVERING SPACE MATTERS

AMPLE APRON SPACE EASY TURNING & ALIGNMENT

Plenty of room to turn, align and enter smoothly.

LIMITED APRON SPACE REQUIRES CAREFUL PLANNING

Tighter turns and back-ups may be needed.

INSUFFICIENT APRON SPACE DIFFICULT & RISKY MANEUVERS

Hard to turn or align. Increases risk of wing or tail strike on hangar or obstacles.

KEY INSIGHT

Door dimensions directly impact how easily and safely you can maneuver your aircraft.

GENERAL GUIDELINES

Door Width
 $\geq 1.5 \times$ Aircraft Wingspan (minimum)

Door Height
 $\geq 1.25 \times$ Aircraft Height (minimum)

BENEFITS OF PROPER CLEARANCE

- ✓ Easier taxi in and out
- ✓ Reduced risk of damage
- ✓ Faster, more confident operations
- ✓ Better for large or multiple aircraft
- ✓ Increased long-term satisfaction and property value

PLAN FOR TODAY & TOMORROW

Design for the largest aircraft you own now — and the one you may own in the future.

☆ Right Size Today. Protect Your Investment Tomorrow. | Good clearance is more than convenience—it's safety, efficiency, and peace of mind.

The schematic above illustrates the relationships that should be considered. It is conceptual only and is not a site plan or representation of current available property.

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KOTH Planning Context

Use current airport planning documents before committing to a site.

CURRENT PLANNING ITEM	WHAT IT MEANS FOR A DEVELOPER
2013 Master Plan	Provides historical planning context and identified GA hangar development opportunities.
2026 Master Plan Update	CCAD is updating the long-range plan; facility requirements and alternatives are being developed.
Airport Layout Plan	Controls the planned arrangement of airfield and airport development; proposed projects must be coordinated with CCAD.
Existing Conditions Inventory	Documents current facilities, including T-hangars, box hangars and commercial hangar space.
CCAD Leasing & Development	Provides current information about airport property and development opportunities.

As of August 2026, CCAD reports that the Master Plan update has completed existing conditions and aviation forecast work, with facility requirements, environmental review and AGIS work underway or under review.

Site Selection Checklist

Ask these questions before spending money on final design.

- Is the property currently available for lease?
- Is the proposed use compatible with the airport's current planning framework?
- Can the aircraft reach the hangar safely and efficiently?
- Is sufficient apron/taxilane area available?
- Can the site support the proposed building height and footprint?
- Are utilities available—or what will extension cost?
- How will stormwater be handled?
- Are there wetlands, environmental constraints or unusual site conditions?
- Can emergency and maintenance vehicles reach the site?
- How will construction vehicles access the site without disrupting aircraft operations?
- Will the project conflict with future airport improvements?
- Can the project be financed over the proposed lease term?

Potential Hangar Sites



Airport Layout Plan + Airspace

Two early coordination items can prevent major redesign.

Airport Layout Plan (ALP)

The ALP is the airport's development framework. A proposed hangar should be compatible with the current approved planning documents and should be coordinated with CCAD before final design.

FAA airspace review

FAA guidance states that airport construction—including tenant-financed buildings and T-hangars—must be coordinated with the FAA before construction. The FAA evaluates the proposed height, location and characteristics for airspace and navigational-aid impacts.

PLAN AHEAD

FAA aeronautical studies commonly require at least 60 days. Build review time into the project schedule and do not treat FAA coordination as a last-minute permit.

Depending on the project, FAA Form 7460-1 and supporting information may be required. Coordinate the filing path with CCAD and the appropriate FAA office.

Aircraft Access + Apron Design

A hangar is only as useful as the route to it.

The airside portion of the project should be designed around aircraft movement—not simply around the building footprint. Consider taxiway/taxilane geometry, turning radius, wingtip clearance, tail clearance, pavement strength, staging, hangar-door clearance and shared apron use.

DESIGN ELEMENT	KEY QUESTION
Taxilane / taxiway	Can the aircraft reach the hangar without awkward or unsafe maneuvers?
Apron	Is there enough space to stage and maneuver the aircraft?
Pavement	Is the pavement appropriate for the aircraft loads?
Door opening	Does the aircraft enter squarely with adequate clearance?
Shared use	Will the development unnecessarily consume common aircraft parking or circulation?
Vehicle access	Can vehicles reach the hangar without interfering with aircraft operations?

Lease Structure

The land agreement is part of the project—not paperwork after the project.

A privately financed airport hangar generally depends on a formal agreement with the CCAD. The lease or development agreement should be understood before substantial design or construction funds are committed.

- Premises and legal description
- Lease term and renewal options
- Ground rent and escalation
- Construction obligations and deadlines
- Ownership of the building and improvements
- Assignment / transfer rights
- Insurance requirements
- Maintenance and repair responsibilities
- Utilities and airport fees
- Permitted aeronautical uses
- Default and termination provisions
- End-of-term / reversion / removal requirements

FAA Grant Assurance 38 addresses long-term lease arrangements for certain privately financed airport hangars and requires compliance with applicable airport and federal conditions.

LEASE TERM

A privately financed hangar normally requires a lease term long enough to justify the developer's investment. While lease terms are negotiable, CCAD policy generally provides for an initial 20-year lease term, with two additional five-year renewal options.

The lease term should be evaluated against:

- Construction cost;
- Financing term;
- Depreciation;
- Expected useful life;
- Rent;
- Maintenance;
- Return on investment;

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- Potential resale or transfer;
 - End-of-term obligations.

The longer the development investment, the more important the lease terms become.

HANGAR OWNERSHIP

The lease should clearly identify:

- Who owns the building during the lease;
- Who owns improvements;
- What happens at lease expiration;
- That the building reverts to the CCAD after the expiration of the initial lease and any options;
- Whether the lessee may remove the building;
- Whether the lease may be assigned;
- What happens if the aircraft is sold;
- What happens if the tenant defaults.

These issues should be resolved before construction.

Aeronautical Use of Hangars

Design the facility around aviation use and confirm any secondary use with CCAD.

Because OTH is a federally obligated airport, FAA hangar-use policy matters. FAA guidance states that dedicated aviation facilities on federally obligated airports are generally reserved for aeronautical purposes. The primary purpose of a hangar is aircraft storage.

Examples of aeronautical uses recognized by FAA policy

- Storage of active aircraft
- Aircraft maintenance, repair or refurbishment
- Amateur-built or kit-built aircraft construction
- Aircraft handling equipment, tools and materials related to servicing aircraft
- Ancillary or incidental items that do not interfere with the hangar's primary aeronautical purpose
- Painting, volatile materials, large-scale storage, commercial activities or other uses may trigger additional safety, fire, environmental, insurance or airport requirements. Do not assume that a use is permitted simply because it occurs inside a hangar.

Building Design for the South Coast

Durability and moisture control are long-term investment decisions.

The Southern Oregon Coast makes for a demanding building environment. The design team should account for rainfall, wind, moisture, corrosion, condensation, drainage and seismic conditions.

ELEMENT	DESIGN PRIORITY
ROOF	Positive drainage, durable membrane/metal system, protected penetrations and accessible maintenance points.
WALLS	Durable exterior finish, corrosion-resistant fasteners and moisture-managed wall assemblies.
SLAB	Aircraft wheel loads, subgrade, reinforcement, joints, drainage and chemical exposure.
DOOR	Wind, structure, headroom, emergency operation, power and maintenance.
LIGHTING	High-output, energy-efficient interior and exterior lighting with appropriate controls.
VENTILATION	Designed for the actual use of the building, especially where maintenance or chemicals are involved.
INSULATION	Comfort, condensation control and energy performance should be considered together.

Utilities + Drainage

The hidden infrastructure can drive the budget.

Before finalizing the building footprint, identify utility capacity and extension costs. A site with a low lease cost can become expensive if power, water, sewer, communications, fire protection or stormwater infrastructure is far away.

Electrical

Confirm service size, transformer capacity, hangar-door power, lighting, outlets, avionics/workbench loads and future expansion.

Water / sewer

Confirm availability, connection point, capacity, backflow requirements and whether a restroom is planned.

Stormwater

Develop a grading and drainage concept early. Coordinate impervious area, roof drainage, pavement and local requirements.

Communications

Plan internet, phone, security cameras, access control and other low-voltage systems.

Fire protection

Determine required fire/life-safety systems based on building size and use.

Tip: Put utility assumptions and allowances into the preliminary budget before selecting the final building size.

Fire, Life Safety + Environmental

Airport hangars have aviation-specific risks.

Fire / life safety

Coordinate occupancy, exits, extinguishers, alarms, emergency access, electrical systems, heating and any required suppression systems with the applicable authorities.

Hazardous materials

Identify fuel, oil, hydraulic fluid, solvents, batteries, paint and compressed gases during planning. Storage and use may affect ventilation, fire protection, waste handling, insurance and environmental compliance.

Aircraft maintenance

Maintenance uses can require additional electrical, ventilation, fire, spill-control and waste-management provisions.

Construction safety

Protect aircraft operations from cranes, temporary obstructions, construction vehicles, dust, debris and foreign object damage.

Emergency access

Preserve access for airport operations, fire response, maintenance and other authorized emergency vehicles.

Oregon Building Requirements

Design to the current adopted code—not yesterday's code.

The North Bend Building Official administers North Bend's building regulations together with the Oregon State Building Code. The City handles building and mechanical permits, plan review, inspections, and applicable Public Works permits.

Derek Windham, PLS, EIT

Building Official — City of North Bend

Phone: 541-756-8505

Address: City Hall, 835 California Avenue, North Bend, OR 97459

Office hours: Monday–Friday, 8:00 a.m.–5:00 p.m.

Responsibilities: Building-code questions, construction requirements, plan review, code compliance, permits and inspections

Oregon's Building Codes Division identifies the 2025 Oregon Structural Specialty Code (OSSC) as the current commercial-structure code, with construction provisions mandatory April 1, 2026. The OSSC is based on the 2024 International Building Code, International Fire Code and International Existing Building Code.

The project team should confirm the applicable code edition, amendments and local jurisdictional requirements at the time of permit application.

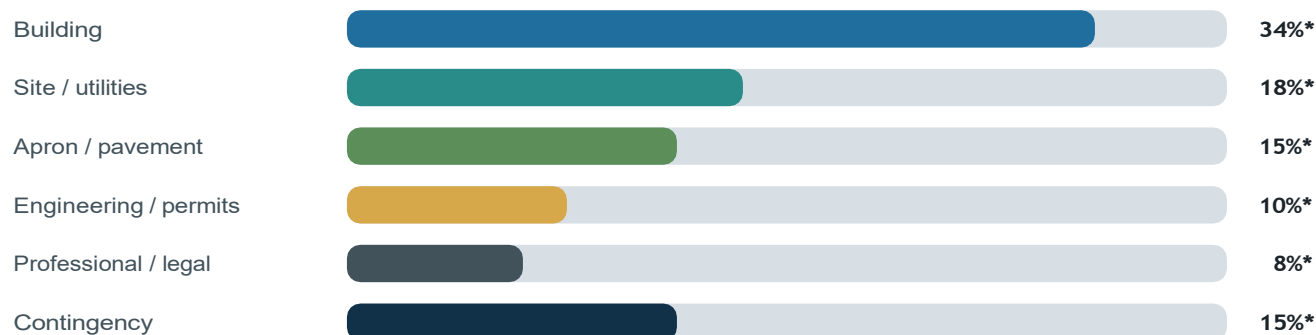
CURRENT CODE REFERENCE	2025 Oregon Structural Specialty Code (OSSC) Construction provisions mandatory April 1, 2026.
VERIFY BEFORE DESIGN	Occupancy • construction type • fire protection • egress • accessibility • structural loads • mechanical • electrical • plumbing • local amendments

This guide does not replace the work of a licensed design professional or the permitting authority.

Build the Right Project Budget

The building price is not the project price.

A useful preliminary budget captures every major cost category before the developer commits to the project.



**Illustrative planning allocation only – not a cost estimate or quote.*

CATEGORY	INCLUDE
Airport / lease	Ground rent, deposits, legal review, lease costs
Engineering / design	Civil, structural, architecture, survey, geotechnical
Site work	Clearing, grading, fill, foundations and utilities
Building	Structure, roof, walls, doors, insulation, finishes
Apron / pavement	Aircraft pavement, taxilane or apron improvements
Systems	Electrical, HVAC, ventilation, fire/life safety, communications
Permits / approvals	Building, fire, environmental, airport and FAA coordination
Financing	Loan fees, interest during construction and lender requirements
Contingency	Allowance for unknown site and construction conditions

Financing a Leasehold Hangar

Make sure the financing structure fits the airport lease.

A lender evaluating an airport hangar may look at the project differently from conventional fee-simple real estate. The lease term, assignment rights, building ownership, end-of-term provisions, collateral and insurance requirements should be reviewed before the financing is finalized.

- Does the lease term cover the expected financing period?
- Can the lease be assigned to a lender or successor?
- Who owns the building during the lease?
- What happens to the building at lease expiration?
- Can the building be sold or assigned with airport approval?
- What insurance does CCAD require?
- How will rent escalation affect long-term cash flow?
- Is there sufficient contingency and operating reserve?

Budget for the full life cycle. Include rent, utilities, insurance, door maintenance, roof maintenance, pavement, security, taxes where applicable, airport fees and future capital repairs.

Design + Procurement

Select the project delivery method that fits your risk tolerance.

METHOD	HOW IT WORKS	GOOD FIT WHEN...
Design–Bid–Build	Engineer/architect completes documents; contractors bid; one is selected.	Competitive pricing and defined scope are priorities.
Design–Build	One entity provides design and construction.	Speed, single-point responsibility and early contractor input are important.
Negotiated	Developer selects a qualified contractor and negotiates scope/price.	The project is specialized or schedule-driven.

Contractor selection: evaluate airport experience, hangar experience, references, insurance, schedule, subcontractors, safety record and change-order history—not just the lowest initial price.

Construction at an Active Airport

Protect aircraft operations while the project is being built.

Construction access

Establish routes for workers, deliveries and equipment that do not conflict with aircraft operations.

Work-zone control

Use approved fencing, barricades, signage and access control.

Cranes / equipment

Coordinate temporary obstructions and any required FAA review.

FOD control

Keep gravel, fasteners, packaging, tools and construction debris away from aircraft movement areas.

Dust / debris

Control dust and loose materials that could affect aircraft or airport systems.

Communications

Establish who has authority to stop work if an airport safety issue develops.

Aircraft continuity

Determine in advance whether the owner's aircraft must relocate during construction.

Airport construction is not ordinary commercial construction. The work must be planned around a live aviation environment and coordinated with airport operations.

A Practical Project Schedule

Use a schedule that reflects approvals, design and procurement—not just construction.

PHASE	TYPICAL OUTPUT
1. Concept	Aircraft requirements, preliminary site, use, budget and financing concept
2. Airport / lease	Site confirmation, lease terms, development conditions
3. Survey + geotech	Existing conditions, boundaries, soils and site constraints
4. Preliminary design	Site plan, hangar concept, apron, utilities and cost estimate
5. FAA / environmental	Airspace coordination and environmental review as applicable
6. Final design / permits	Construction documents, code review and permits
7. Financing / procurement	Loan closing, bids, contract and construction schedule
8. Construction	Site work, utilities, building, apron and systems
9. Closeout	Inspections, occupancy, airport acceptance and warranties

FAA guidance notes that airspace studies commonly require at least 60 days. Treat that as a planning allowance—not a guaranteed turnaround time.

Developer's Master Checklist

Print this page and use it as the project gate sheet.

PLAN	Identify aircraft • Define hangar use • Determine future needs • Establish budget • Identify financing • Set target schedule
SITE	Confirm available property • Review ALP • Evaluate access • Evaluate apron • Confirm utilities • Evaluate drainage • Check environmental constraints
DESIGN	Survey • Geotech • Civil • Structural • Building • Door • Electrical • Fire/life safety • Security • Preliminary cost estimate
APPROVALS	CCAD • Lease • FAA airspace • Environmental • Building • Fire • Utilities • Other permits
BUILD	Select contractor • Execute contract • Establish airport construction access • Manage FOD • Track budget • Track schedule • Manage changes
CLOSEOUT	Inspections • Occupancy • Airport acceptance • Insurance • Warranties • Door testing • Utilities • As-built documents
OPERATE	Aircraft storage/use • Maintenance • Lease compliance • Insurance • Door/roof maintenance • Pavement • Security • Airport fees

Start the Conversation

Your first project meeting should be with the airport.

COOS COUNTY AIRPORT DISTRICT

Southwest Oregon Regional Airport (OTH / KOTH) 1100 Airport Lane
North Bend, Oregon 97459

Phone: (541) 756-8531
Email: info@flyoth.gov

LEASING + DEVELOPMENT

For current information on airport property, hangar opportunities, leases and development coordination, contact Airport Administration.

OFFICIAL REFERENCE SOURCES

- Coos County Airport District — Master Plan Update: <https://www.cooscountyairportdistrict.com/coos-county-airport-district-master-plan>
- CCAD — Leasing and Development: <https://www.cooscountyairportdistrict.com/leasing-and-development>
- CCAD — Airport Rates & Fees: <https://www.cooscountyairportdistrict.com/airport-rates-fees>
- CCAD — 2013 Airport Layout Plan / Master Plan: official CCAD Master Plan archive
- FAA — Hangar Use Policy & FAQs: https://www.faa.gov/airports/airport_compliance/hangar_use
- FAA — Obstruction Evaluation / Airport Airspace Analysis:
https://www.faa.gov/airports/northwest_mountain/engineering/airspace_analysis
- Oregon Building Codes Division — Adopted Codes: <https://www.oregon.gov/bcd/codes-stand/Pages/adopted-codes.aspx>

IMPORTANT: This guide is a planning publication and should be reviewed and customized by CCAD before official distribution. Requirements, rates, site availability, airport planning documents, codes and FAA policies can change. The current CCAD lease, airport rules, approved ALP, applicable permits and FAA requirements govern the actual project.

Prepared for planning use • August 2026