Chapter 02: FBO Services

03. Hangar and Ramp Space Allocation

Manage hangar and ramp space reservations to optimize facility utilization while providing clients with appropriate aircraft storage and parking solutions.

Purpose

This process establishes procedures for efficient hangar and ramp space allocation to maximize facility utilization, ensure appropriate general aviation aircraft accommodation, and provide clients with reliable space reservations while maintaining operational flexibility and safety standards. Our facility accommodates typical Part 91 operations with aircraft ranging from single-engine trainers (Cessna 172, Piper Cherokee) to turboprop business aircraft (King Air, Pilatus PC-12, TBM series).

Roles and Responsibilities

Client Service Representative:

- Manage client communications and service requests
- Process documentation and billing
- Obtain client authorizations and approvals
- Coordinate scheduling and aircraft availability
- Maintain professional client relationships

Process Steps

Space Assessment and Reservation Phase

- **Assess space availability** - Review current hangar and ramp occupancy, confirm dimensions, and assess aircraft compatibility
- **Analyze client requirements** - Determine aircraft specifications, storage duration, and special needs (power, heating, security)
- **Coordinate space assignment** - Assign appropriate space based on aircraft size, client preferences, and operational efficiency
- **Complete reservation documentation** - Process reservation forms with aircraft information, duration, and service requirements

Aircraft Positioning Phase

- **Operate hangar doors safely** - Use proper procedures and verify door systems are functioning correctly
- **Guide aircraft positioning** - Use marshalling techniques to ensure adequate clearance from obstacles and proper placement
- **Optimize space utilization** - Monitor usage and coordinate repositioning to accommodate additional aircraft when needed
- **Activate facility systems** - Turn on required lighting, heating, ventilation, and electrical power as needed

Ongoing Management Phase

- **Implement security protocols** - Establish access control and facility monitoring for client aircraft protection
- **Monitor space utilization** - Track usage and coordinate with clients regarding changes to reservation requirements
- **Coordinate departure logistics** - Plan aircraft departure timing and prepare for hangar door operation and removal
- **Inspect and reset space** - Check vacated space for damage or cleanliness issues and prepare for next assignment

Administrative Phase

- **Complete billing documentation** - Record space utilization for billing and update reservation system with usage information
- **Coordinate facility maintenance** - Arrange required maintenance or cleaning before reassigning space to new clients
- **Generate utilization reports** - Analyze efficiency metrics for operational improvement and capacity planning
- **Update operational records** - Maintain current space allocation records and client preference information

Process Mapping

Flowchart showing space availability assessment, reservation processing, aircraft positioning, and facility management with decision points for space optimization and maintenance coordination.

Tools and Resources

- Hangar door control systems and safety equipment
- Space reservation management software and documentation forms
- Aircraft marshalling equipment and communication devices
- Facility systems controls for lighting, heating, and electrical power
- Space measurement tools and aircraft specification references
- Security access control systems and monitoring equipment

Success Metrics

- **Completion Time:** Space assignments processed within 30 minutes of client request.
- **Quality Standard:** 95% space utilization efficiency with zero aircraft damage incidents.
- **Safety Standard:** 100% compliance with hangar door safety procedures and aircraft clearance requirements.
- **Client Satisfaction:** 92% client satisfaction with space allocation and facility condition.

Common Issues and Solutions

- **Issue:** Multiple aircraft requests for limited hangar space during weather events
- **Solution:** Implement priority system based on client agreements and coordinate temporary outdoor tie-down with weather protection

Issue: Hangar door malfunction during aircraft movement operations

Solution: Activate backup door systems, coordinate with maintenance for immediate repair, and implement manual door operation procedures if safe

Issue: Aircraft size exceeds available space dimensions

Solution: Coordinate alternative space arrangements, provide outdoor parking with enhanced services, or refer to partner facilities

Safety Considerations

- ⚠ **WARNING**: Ensure minimum 10-foot clearance on all sides of aircraft when positioning in hangars
- ⚡ **CAUTION**: Verify hangar door operation is clear of personnel and equipment before activating door controls

- ℹ️ **NOTE**: Monitor weather conditions and prioritize hangar space allocation during adverse weather forecasts
- ✅ **BEST PRACTICE**: Conduct daily hangar inspections and maintain current aircraft positioning diagrams

Regulatory References

- 14 CFR Part 139 - Airport Operating Requirements
- OSHA 29 CFR 1910.176 - Materials Handling and Storage
- NFPA 409 - Standard on Aircraft Hangars
- Local zoning and building code requirements
- Company facility management and safety procedures