

Short Field Landing



What is a Short Field Landing?

- Clears obstacles
- Minimal float
- Pre-set touchdown point
- Stop in minimal distance



When do we execute a Short Field Landing?

- Short runway
- Obstructions
- No Go-Arounds
- In the following conditions:
 - Hot or Humid
 - High Elevation
 - High Density Altitude
- Tailwind
- LAHSO



How do we execute a Short Field Landing?

1. Normal landing prep, calculations
2. Select touchdown point
3. Wider-than-normal pattern
4. Fly published speed or $1.3 V_{so}$
5. Touchdown within 200ft. beyond touchdown point
 - a. Obstacles? Steep angle
 - b. Short runway? Shallow
6. AFH: hold pitch for aerodynamic braking
7. Retract flaps, maximum braking to full stop

Some Common Errors

- Failure to review performance charts
- Failure to establish/maintain stabilized approach
- Overly steep approach + high sink rate
- Removal of hand from throttle
- Too slow, unable to flare properly - hard landing
- Premature reducing power to idle - hard landing
- Too fast - floating
- Inadequate braking
- Failure to recognize/abort poor approach

Important ACS

- Maintain stabilized approach
- 1.3 V_{so} , +10/-5 knots*
- Touchdown at recommended airspeed
- Touchdown within 200ft.** beyond selected point
 - No side drift, minimum float, on centerline
- Execute Go-Around if unsafe/outside tolerances

* Commercial ACS +/-5 knots

** Commercial ACS 100ft.

Private Pilot ACS

Task	F. Short-Field Approach and Landing (ASEL, AMEL)
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with a short-field approach and landing with emphasis on proper use and coordination of flight controls.
Knowledge	The applicant demonstrates understanding of:
PA.IV.F.K1	A stabilized approach, to include energy management concepts.
PA.IV.F.K2	Effects of atmospheric conditions, including wind, on approach and landing performance.
PA.IV.F.K3	Wind correction techniques on approach and landing.
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.IV.F.R1	Selection of runway based on pilot capability, aircraft performance and limitations, available distance, and wind.
PA.IV.F.R2	Effects of:
PA.IV.F.R2a	a. Crosswind
PA.IV.F.R2b	b. Wind shear
PA.IV.F.R2c	c. Tailwind
PA.IV.F.R2d	d. Wake turbulence
PA.IV.F.R2e	e. Runway surface/condition
PA.IV.F.R3	Abnormal operations, to include planning for:
PA.IV.F.R3a	a. Rejected landing and go-around
PA.IV.F.R3b	b. Land and hold short operations (LAHSO)
PA.IV.F.R4	Collision hazards, to include aircraft, terrain, obstacles and wires.
PA.IV.F.R5	Low altitude maneuvering/stall/spin.
PA.IV.F.R6	Distractions, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
PA.IV.F.S1	Complete the appropriate checklist.
PA.IV.F.S2	Make radio calls as appropriate.
PA.IV.F.S3	Ensure the aircraft is aligned with the correct/assigned runway.
PA.IV.F.S4	Scan the landing runway and adjoining area for traffic and obstructions.
PA.IV.F.S5	Consider the wind conditions, landing surface, and select a suitable touchdown point.
PA.IV.F.S6	Establish the recommended approach and landing configuration and airspeed, and adjust pitch attitude and power as required to maintain a stabilized approach.
PA.IV.F.S7	Maintain manufacturer's published airspeed, or in its absence, not more than 1.3 V _{SO} , +10/-5 knots, with wind gust factor applied.
PA.IV.F.S8	Maintain crosswind correction and directional control throughout the approach and landing sequence.
PA.IV.F.S9	Make smooth, timely, and correct control inputs during the round out and touchdown.
PA.IV.F.S10	Touch down at the recommended airspeed.
PA.IV.F.S11	Touch down within 200 feet beyond the specified point, threshold markings or runway numbers, with no side drift, minimum float, and with the airplane's longitudinal axis aligned with and over runway centerline.
PA.IV.F.S12	Use manufacturer's recommended procedures for aircraft configuration and braking.
PA.IV.F.S13	Execute a safe and timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing.
PA.IV.F.S14	Utilize runway incursion avoidance procedures.