IFR Decision Making

Updated May2026

Instrument Flying: Good Decision Making

- Good Preparation
- Flight Planning – 2 hours of prep for 1 hour of flight
- Reactive (deal with events) versus Proactive (plan for events) Decisions
- Assessing Risk – Operational Risk Management
- Self-Assessment – Personal Minimums
- Hazardous Attitudes
  - Anti-Authority, Invulnerable, Macho, Impulsive, Resignation
- Crew Relationships
- Workload Management – Single versus Crew Piloting

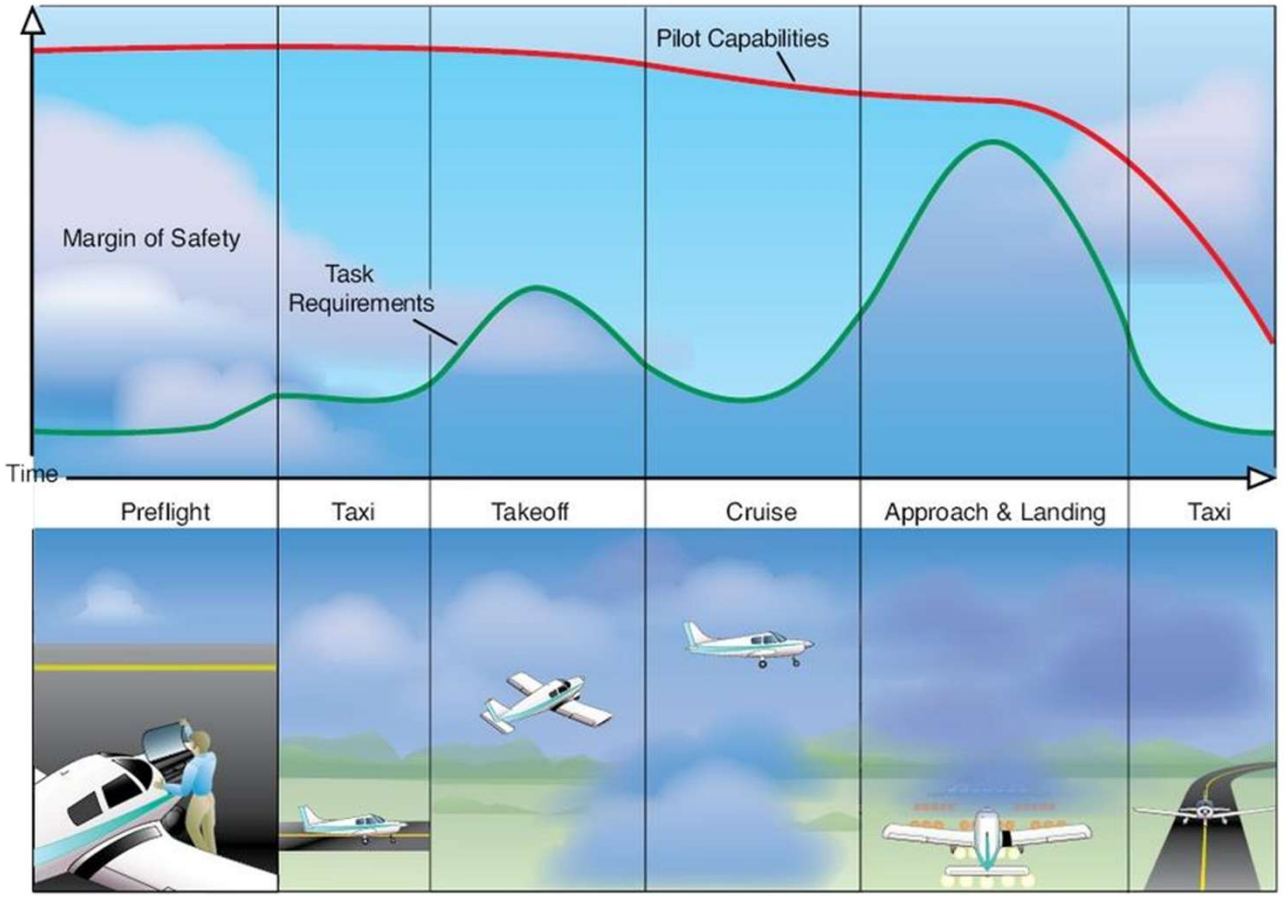
Hazardous Attitudes

Hazardous Attitude	Example	Antidote
	**Don't tell me.** *ATC says thunderstorms cells are reported ahead, and they're offering me vectors to divert, but i know what I'm doing.*	**Follow the rules. They are usually right.** *ATC is trying to help; they have equipment that I don't so maybe they have a better handle on the situation.*
	**It won't happen to me.** *I have weather radar and a lighting detector on board — I'll be safe.*	**It could happen to me.** *This equipment has important limitations to consider, and based on what ATC told me, I'll get into bad weather if I continue on this course.*
	**I can do it.** *I'm tough. I can handle a little turbulence.*	**Taking chances is foolish.** *There's severe turbulence inside a thunderstorm cell—I could damage the airplane or lose control.*
	**Do it quickly.** *I better try that break in the clouds before it closes up.*	**Not so fast. Think first.** *Wait a minute – that hole isn't big enough for me to continue clear of the thunderstorms for another 50 miles to my destination.*
	**What's the use?** *There's nothing I can do now. I'm going to fly into a thunderstorm.*	**I am not helpless. I can make a difference.** *I can turn around and divert to another airport.*

Instrument Flying: Single Pilot IFR

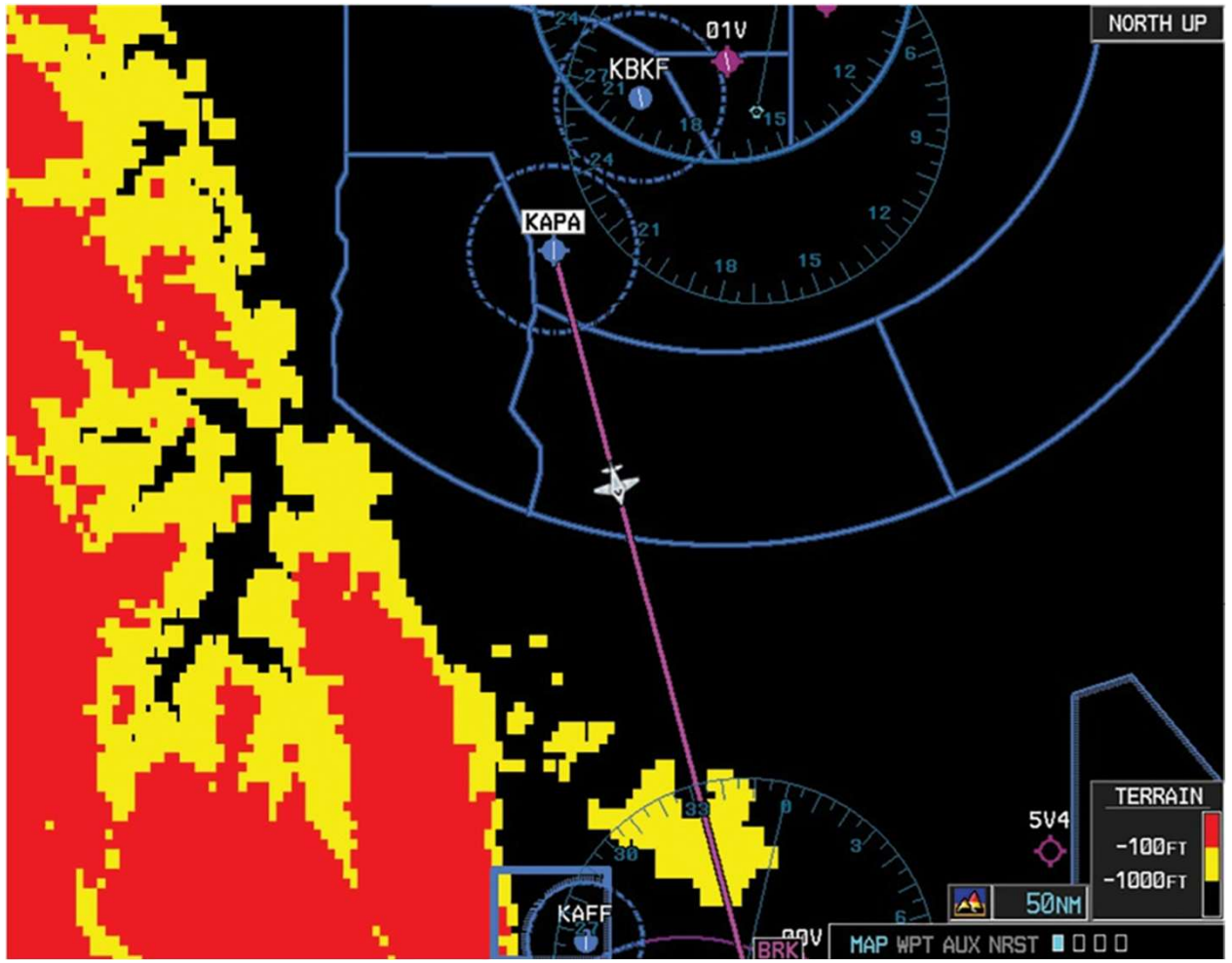
- Task Management
- Stay ahead of the flight:
  - The MOST important thing is the NEXT thing!
- Situational Awareness
- CFIT
- Automation Awareness and Capabilities
- Crew Coordination

Margin of Safety



The margin of safety is the narrowest during the approach and landing phase of flight.

Terrain Awareness and CFIT Avoidance



Moving map terrain displays provide a valuable resource for maintaining positional awareness in relation to surrounding terrain. (Terrain Awareness and Warning Systems (TAWS)

Situational Awareness

Situational awareness (SA) is having an accurate understanding of 'what is going on' relating to the situation and in aviation is a pilot's ability to understand their surroundings, anticipate potential hazards, and make informed decisions. How it works:

1. **Perception**: Notice what's happening around you
2. **Comprehension**: Understand what you're seeing
3. **Projection**: Predict what might happen next
4. **Decision-making**: Use your observations to make informed choices

Situational awareness includes:

- Understanding weather conditions
- Being aware of traffic
- Knowing the aircraft's position
- Being aware of terrain
- Being aware of potential hazards
- Monitoring passenger condition
- Monitoring cabin status

Instrument Flying: DECIDE

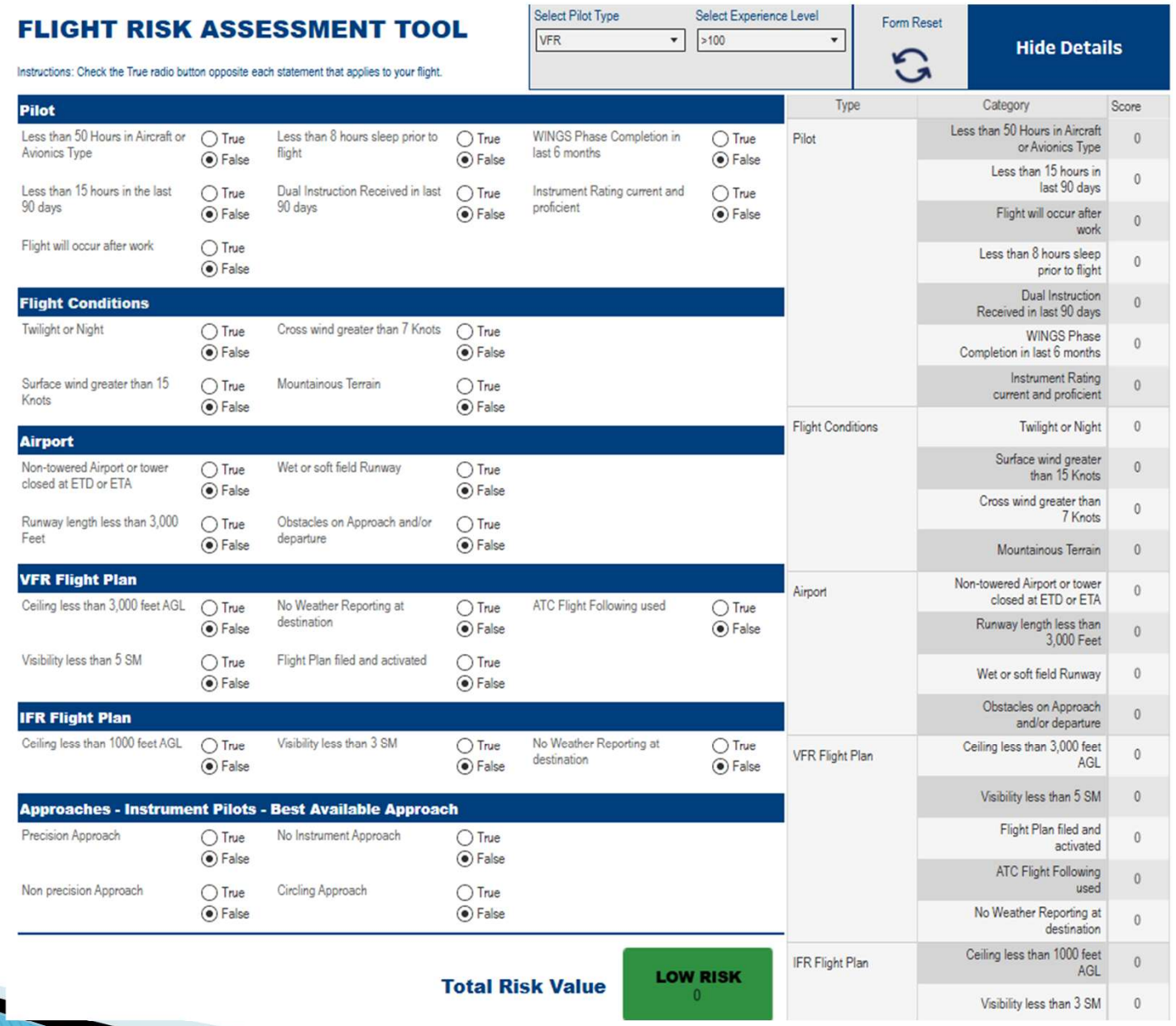
DECIDE model is the acronym of 6 particular activities needed in the decision-making process:

- (1) D = Detect the problem,
- (2) E = Estimate the need to counter,
- (3) C = Choose a course of action,
- (4) I = Identify solutions,
- (5) D = Do necessary actions, and
- (6) E = Evaluate and monitor the solution and feedback when necessary.

Risk Assessment

- Risks are a hazard + impact
- Identify hazards:
  - PAVE: Pilot, Aircraft, enVironment, External pressures
  - Pilot, IMSAFE: Illness, medication, stress, alcohol, fatigue, eating/emotion
- Impacts of hazards:
  - CARE: Consequences, Alternatives, Reality, External pressures
- Risk management, TEAM: Transfer, Eliminate, Accept, Mitigate

Flight-Risk Assessment Tool (FRAT)



FLIGHT RISK ASSESSMENT TOOL

Select Pilot Type: VFR | Select Experience Level: >100 | Form Reset | Hide Details

Instructions: Check the True radio button opposite each statement that applies to your flight.

Pilot

Less than 50 Hours in Aircraft or Avionics Type	○ True ◉ False	Less than 8 hours sleep prior to flight	○ True ◉ False	WINGS Phase Completion in last 6 months	○ True ◉ False
Less than 15 hours in the last 90 days	○ True ◉ False	Dual Instruction Received in last 90 days	○ True ◉ False	Instrument Rating current and proficient	○ True ◉ False
Flight will occur after work	○ True ◉ False				

Flight Conditions

Twilight or Night	○ True ◉ False	Cross wind greater than 7 Knots	○ True ◉ False
Surface wind greater than 15 Knots	○ True ◉ False	Mountainous Terrain	○ True ◉ False

Airport

Non-towered Airport or tower closed at ETD or ETA	○ True ◉ False	Wet or soft field Runway	○ True ◉ False
Runway length less than 3,000 Feet	○ True ◉ False	Obstacles on Approach and/or departure	○ True ◉ False

VFR Flight Plan

Ceiling less than 3,000 feet AGL	○ True ◉ False	No Weather Reporting at destination	○ True ◉ False	ATC Flight Following used	○ True ◉ False
Visibility less than 5 SM	○ True ◉ False	Flight Plan filed and activated	○ True ◉ False		

IFR Flight Plan

Ceiling less than 1000 feet AGL	○ True ◉ False	Visibility less than 3 SM	○ True ◉ False	No Weather Reporting at destination	○ True ◉ False

Approaches - Instrument Pilots - Best Available Approach

Precision Approach	○ True ◉ False	No Instrument Approach	○ True ◉ False
Non precision Approach	○ True ◉ False	Circling Approach	○ True ◉ False

Total Risk Value — **LOW RISK** 0

Type	Category	Score
Pilot	Less than 50 Hours in Aircraft or Avionics Type	0
	Less than 15 hours in last 90 days	0
	Flight will occur after work	0
	Less than 8 hours sleep prior to flight	0
	Dual Instruction Received in last 90 days	0
	WINGS Phase Completion in last 6 months	0
	Instrument Rating current and proficient	0
Flight Conditions	Twilight or Night	0
	Surface wind greater than 15 Knots	0
	Cross wind greater than 7 Knots	0
	Mountainous Terrain	0
Airport	Non-towered Airport or tower closed at ETD or ETA	0
	Runway length less than 3,000 Feet	0
	Wet or soft field Runway	0
	Obstacles on Approach and/or departure	0
VFR Flight Plan	Ceiling less than 3,000 feet AGL	0
	Visibility less than 5 SM	0
	Flight Plan filed and activated	0
	ATC Flight Following used	0
	No Weather Reporting at destination	0
IFR Flight Plan	Ceiling less than 1000 feet AGL	0
	Visibility less than 3 SM	0

Instrument Flying:

Operational Risk Management and Assessment Matrix
Used for VFR and IFR ORM

CAP AVIATION
OPERATIONAL RISK MANAGEMENT WORKSHEET

Pilot Name: _____ Date: _____ Mission #: _____ A/C #: _____ Sortie: ____

HAZARD	LOW RISK	PTS.	MODERATE RISK	PTS.	HIGH RISK *	PTS.	VALUE
			HUMAN				
Experience / Training	≥ 1,000 hours PIC ≥ 50 hours mission time	0	≥ 250 < 1,000 hours PIC ≥ 25 < 50 hours mission time	10	< 250 hours PIC < 25 hours mission time	20	
Pilot Currency	≥ 10 hours within last 30 days	0	≥ 5 < 10 hours within last 30 days	10	< 5 hours within last 30 days	20	
Health / Crew Rest	Good health and proper crew rest	0	Fair health with adequate crew rest	10	Poor health or signs of fatigue	No Go	
			MACHINE				
Maintenance Factors	Fully Functional	0	Partially Non-Functional	15	Fully Non-Functional	No Go	
Performance Factors	≤ 5,000' Density Altitude	0	> 5,000' ≤ 8000' Density Altitude	10	> 8,000' Density Altitude	20	
A/A & A/G Comms	Good comms and/or high bird available	0	Some blind spots or faulty comms and no high bird	10	Poor comms and no high bird	15	
			MISSION				
Operations Tempo	1 - 2 total mission aircraft	0	3 - 4 total mission aircraft	10	> 4 total mission aircraft	20	
Search Complexity	Simple tasks, no new technology	0	Complex tasks, no new technology	10	Complex tasks, new technology	20	
			ENVIRONMENT				
Weather (current & forecast)	Icing: none Turbulence: none X-Winds: ≤ 5 kts.	0 0 0	Icing: none Turbulence: lite.-mod. X-Winds: > 5 ≤ 10 kts.	0 10 5	Icing: ≥ light Turbulence: severe. X-Winds: > 10 kts.	No Go No Go 50	
VFR Flight ceiling/vis	≥ 3000 agl And ≥ 5 sm	0	≥ 1,000 agl < 3,000 agl And / or ≥ 3 < 5 sm	25	< 1,000 agl and / or < 3 sm visibility	No Go	
IFR Flight ceiling/vis	≥ 500 agl < 1,000 agl and/or ≥ 1 sm < 3 sm visibility	25	< 500 agl and/or < 1 sm visibility	50	Below departure airport approach minimums	No Go	
Terrain	Low, flat	0	Foothills / featureless	15	Mountainous	30	
Night Ops			VFR	25	IFR	75	
Airfield	Familiar	0	Unfamiliar	25			
			ADDITIONAL FACTORS				
CAPF 5 & 91	No forced landings or simulated engine cuts	0	Forced landings and/or simulated engine cuts	50			
Overwater			Within gliding distance of land	50	Outside gliding distance of land	100	
Extended Overwater			With immersion suit Water temp < 60° F	75	Without immersion suit Water temp < 60° F	No Go	
TOTAL CALCULATED RISK ASSESSMENT:							

OVERALL RISK ASSESSMENT		Initials	Date / Time
Low Risk = 0 — 75 †	FRO		/
Moderate Risk = 76 — 150 †	Squadron DO / DOS / CC or AOBD		/
High Risk = > 151 †	Wing DO / DOS /CC or IC		/
No Go	Mission can be rejected by any direct participant at any level		/

Notes: * Implement suitable controls for any item in the high range. † Approvals are granted in ascending order of command *and only with PIC concurrence*. **All approvals are optional, based upon local procedures and established Wing policies.**

Instrument Flying: Personal IFR Minimums

AOPA AIR SAFETY INSTITUTE

IFR PILOT PERSONAL MINIMUMS CONTRACT

PILOT

MIN. HOURS (LAST 30/90 DAYS) _____/_____

MIN. HOURS IN TYPE (LAST 30/90 DAYS) _____/_____

MIN. LANDINGS (LAST 30/90 DAYS) _____/_____

NIGHT HOURS (LAST 30/90 DAYS) _____/_____

MIN. HOURS ACTUAL OR SIM. IFR (LAST 30/90 DAYS) _____/_____

☐ VFR INTO IMC TRAINING COMPLETED WITHIN LAST 12 MONTHS

☐ MIN. RECURRENT TRAINING COMPLETED (circle one) PAST 6 / 12 / 24 MONTHS

☐ COMPLETED IPC WITHIN LAST 12 MONTHS

ASI recommends recurrent training every 12 months with a CFI who's familiar with the aircraft make, model, and equipment.

AT A MINIMUM, MY OVERALL WELLNESS SHOULD BE

ADEQUATE ☐ OK ☐ WELL ☐ VERY WELL ☐

ASI recommends considering sleep, medications, alcohol, stress, and other factors that could affect the safety of flight.

WEATHER

MAX. WIND VELOCITY AND GUST _____

MAX. CROSSWIND _____

MIN. CEILING DAY _____ NIGHT _____

MIN. VISIBILITY DAY _____ NIGHT _____

MY EN ROUTE MINIMUMS

CEILING DAY _____ NIGHT _____

VISIBILITY DAY _____ NIGHT _____

MY PRECISION APPROACH MINIMUMS

CEILING DAY _____ NIGHT _____

VISIBILITY DAY _____ NIGHT _____

MY NON-PRECISION APPROACH MINIMUMS

CEILING DAY _____ NIGHT _____

VISIBILITY DAY _____ NIGHT _____

FLIGHTS INTO DEPICTED RADAR RETURNS (CHECK YOUR COMFORT LEVEL)

RAIN ☐☐☐☐☐☐☐☐☐☐ LIGHT MODERATE HEAVY

SNOW ☐☐☐☐☐☐☐☐☐☐ LIGHT MODERATE HEAVY

MIXED ☐☐☐☐☐☐☐☐☐☐ LIGHT MODERATE HEAVY

AIRPORT

RUNWAY MIN. LENGTH _____

RUNWAY MIN. WIDTH _____

Aircraft performance degrades when density altitude is above 1,000 feet. As a result, ASI recommends adding 50 percent to the POH takeoff or landing distance over a 50-foot obstacle.

AIRCRAFT

MIN. FUEL RESERVES (hours : minutes)

DAY _____ : _____ NIGHT _____ : _____

ASI recommends landing with at least one hour of fuel remaining.

NIGHT FLIGHT IN A SINGLE-ENGINE AIRCRAFT Y / N

IF YES, LIST LIMITATIONS (e.g., no mountainous terrain, no over-water flights, will reach cruise altitude before sunset)

_____

_____

I WILL

☐ Only fly when I am proficient with the aircraft limitations, performance, normal and emergency procedures, systems, and avionics.

☐ Use precautions when transitioning to different aircraft/avionics/systems.

☐ Consider the risks of flying over mountainous terrain.

☐ Fly with current GPS database, charts (or EFB), and a backup (as required).

☐ Not use my aircraft's deicing and anti-icing equipment for prolonged flights in icing conditions, but rather to escape icing conditions.

☐ Fly with adequate de-icing fluid (if applicable).

☐ Always get a recorded FAA weather briefing for flights away from home base.

☐ Fly with a qualified pilot or CFI (or postpone the flight) if my personal minimums are not met.

Pilot signature _____

CFI/witness _____

Last updated _____/_____/_____