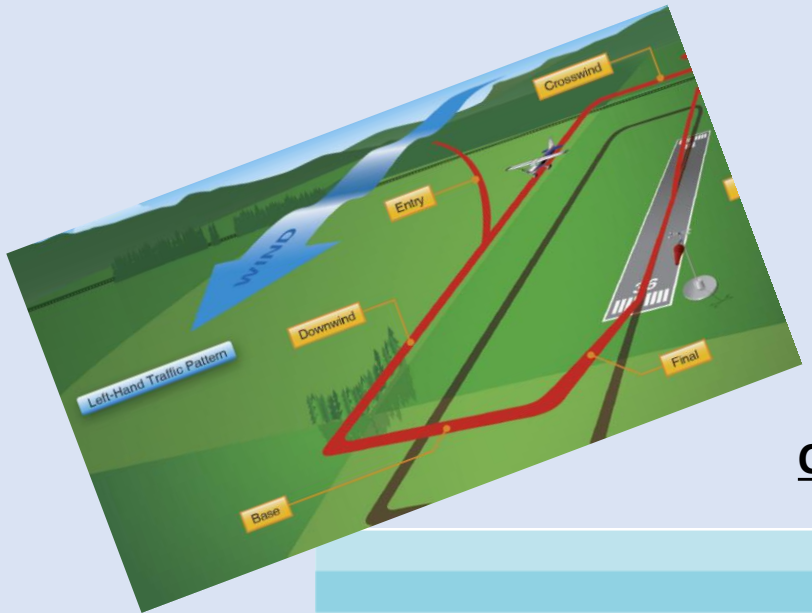
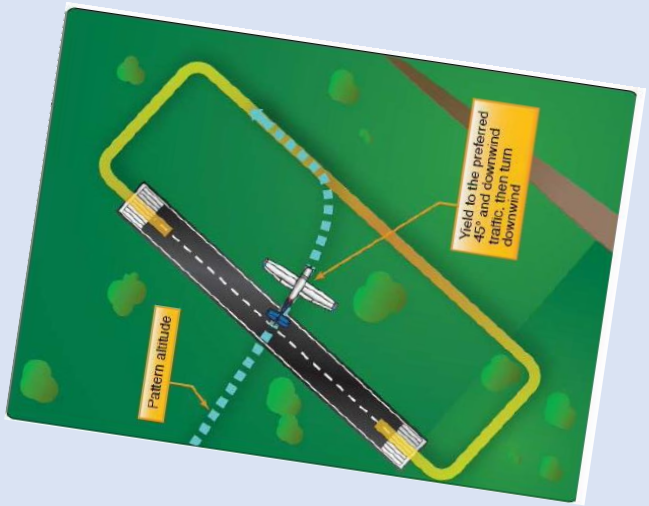
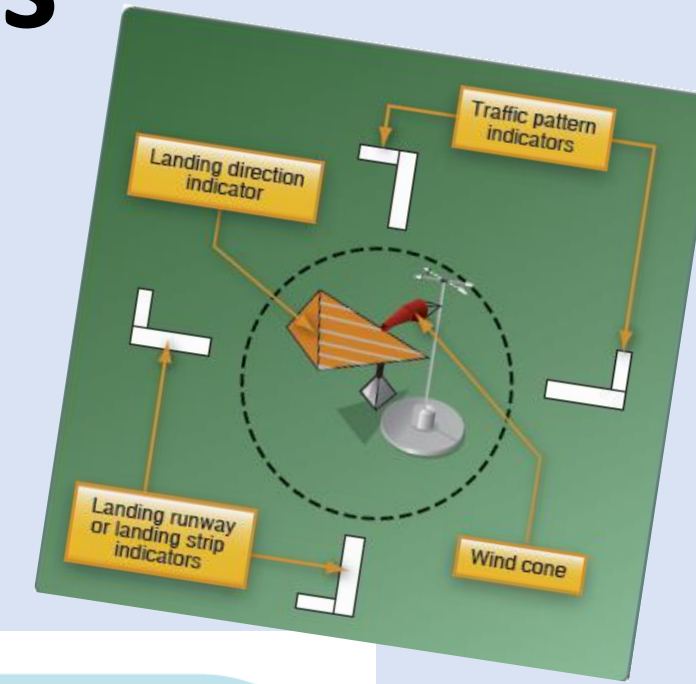
FAA Safety Team

Today's Presentation

Non-Towered Airport Operations and Communications







CFI SPECIAL EMPHASIS, ORLANDO FSDO FAASTeam

Federal Aviation Administration FAAST SAFETY TEAM

ORLANDO FSDO FAASTeam

Welcome!

Today's speaker is

Mark A. Ducorsky

ATP, MCFI, GOLD SEAL CFI/A/I/ME/G

DESIGNATED PILOT EXAMINER (Airplane single/multi & Glider)

and* FAA *WINGS*Pro *proudly serving for the Orlando FSDO

Credit for portions of this presentation go to the FAASTeam, FAA's ACS Group, various FAA publications and other contributors

Is everyone able to hear me okay?

Can everyone see this slide okay?

WHY DO WE EVEN HAVE TRAFFIC PATTERNS?

CAN WE STOP AND YIELD, LIKE A CAR, IF THERE IS A CONFLICT WITH OTHER AIRCRAFT?

THE SIMPLE ANSWER IS:

WE CANNOT STOP AND YIELD LIKE A CAR, UNLESS WE ARE ON THE GROUND!

AIRPORT TRAFFIC PATTERNS ENSURE THAT AIR TRAFFIC MOVES INTO AND OUT OF AN AIRPORT SAFELY.

LIKE MANY THINGS IN AVIATION, *THE DEVIL IS IN THE DETAILS!*

“Airport traffic patterns ensure that air traffic moves into and out of an airport safely. The direction and placement of the pattern, the altitude at which it is to be flown, and the procedures for entering and exiting the pattern may depend on local conditions. Information regarding the procedures for a specific airport can be found in the Chart Supplements. General information on airport operations and traffic patterns can also be found in the Aeronautical Information Manual” **(AIM).** **(FAA-H-8083-3C)**

"In the interest of promoting safety, the FAA, through its AIM, Chart Supplements, ACs, and other publications, provides radio frequency information, good operating practices, and procedures for pilots to use when operating at an airport without an operating control tower. **The FAA believes that observance of a standard traffic pattern and the use of CTAF procedures, as detailed in this AC, will improve the safety and efficiency of aeronautical operations at airports without operating control towers.** (AC-90 66C)

Some IMPORTANT Safety Considerations

According to the National Transportation Safety Board (**NTSB**), "***the most probable cause of mid-air collisions is the pilot failing to see and avoid other aircraft.***"

When near an airport, ***pilots should continue to scan for other aircraft and check blind spots caused by fixed aircraft structures, such as doorposts and wings***.

High-wing airplanes have restricted visibility above while low-wing airplanes have limited visibility below. **The worst-case scenario is a low-wing airplane flying above a high-wing airplane.**

Banking from time to time can uncover blind spots. The pilot should also occasionally look to the rear of the airplane to check for other aircraft. Figure 8-4 depicts the greatest threat area for mid-air collisions in the traffic pattern.

Next we will review some important facts regarding mid-air collisions and the traffic pattern……

- **Mid-air collisions generally occur during daylight hours—56 percent occur in the afternoon, 32 percent occur in the morning, and 2 percent occur at night, dusk, or dawn.**

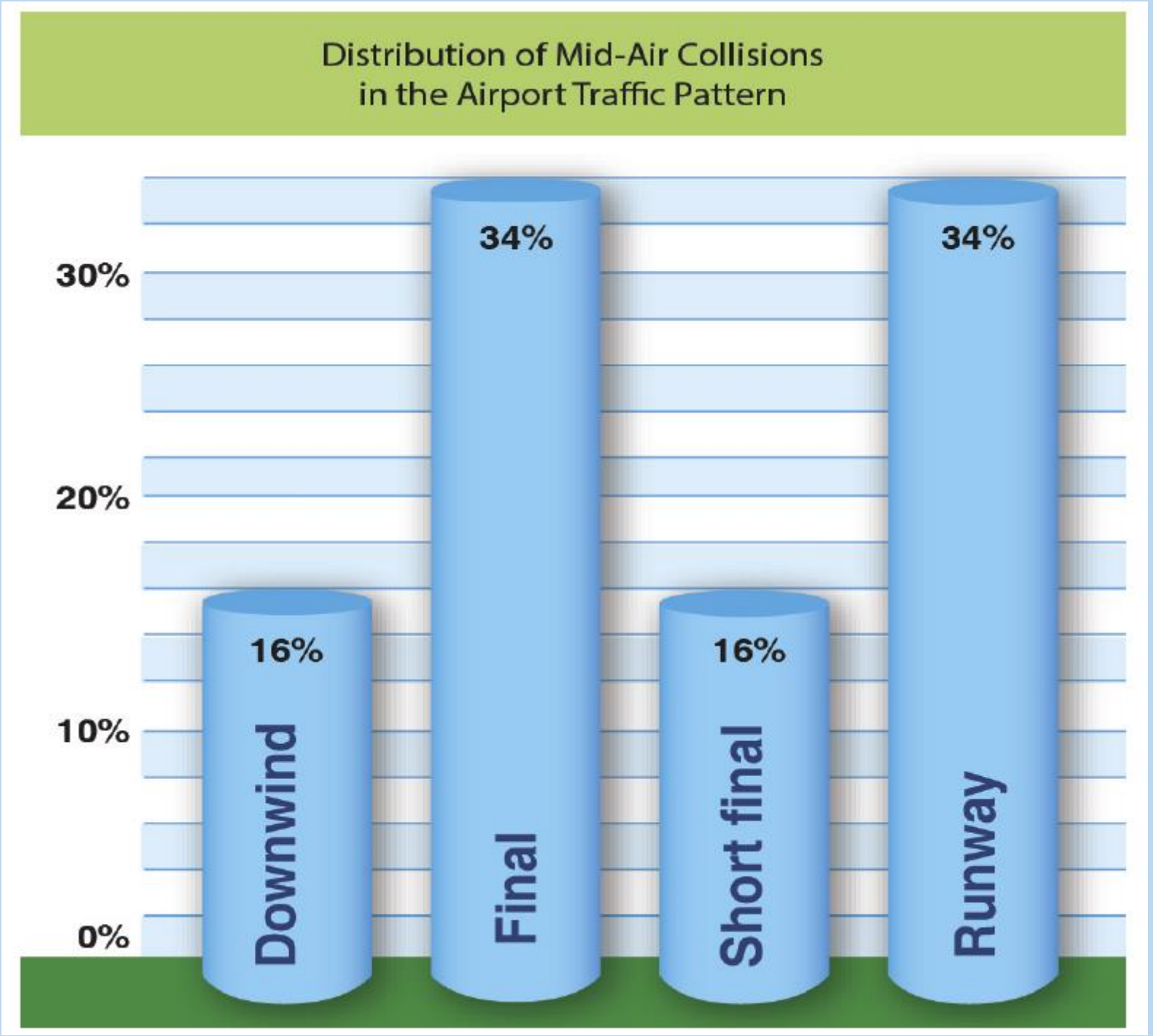
- ***Most mid-air collisions occur under good visibility.***

- ***A mid-air collision is most likely to occur between two aircraft going in the same direction.***

- **The majority of pilots involved in mid-air collisions are not on a flight plan.**

- ***Nearly all accidents occur at or near uncontrolled airports and at altitudes below 1,000 feet.***

- ***Pilots of all experience levels are involved in mid-air collisions.*** *(FAA 8083-3C)*


Distribution of Mid-Air Collisions
in the Airport Traffic Pattern
30%
20%
10%
0%
16%
Downwind
34%
Final
16%
Short final
34%
Runway

(FAA 8083-3C)

WHAT IS THE BEST TOOL, EVERY PILOT HAS IN THEIR TOOL CHEST, TO PREVENT A MID-AIR COLLISION ?

HERE’S A HINT….

- HOWEVER, OUR EYES ARE NOT PERFECT

LET’S LOOK AT TWO GREAT RESOURCES

U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: Pilots' Role in Collision Avoidance

Date: 10/20/22 **AC No:** 90-48E

Initiated by: AFS-800 **Change:**

1 **PURPOSE OF THIS ADVISORY CIRCULAR (AC).** This AC is issued to assist pilots with their regulatory obligation to see and avoid other aircraft. Specifically, this AC looks to alert pilots to human contributors to midair collisions and near midair collisions (NMAC), and recommend improvements to pilot education, operating practices, procedures, and improved scanning techniques to reduce midair conflicts. This

S. Department
Transportation
deral Aviation
ministration

Advisory Circular

bject: Pilots' Role in Collision Avoidance

Date: 10/20/22
Initiated by: AFS-800

AC No: 90-48E
Change:

1 **PURPOSE OF THIS ADVISORY CIRCULAR (AC).** This AC is issued to assist pilots with their regulatory obligation to see and avoid other aircraft. Specifically, this AC looks to alert pilots to human contributors to midair collisions and near midair collisions (NMAC), and recommend improvements to pilot education, operating practices, procedures, and improved scanning techniques to reduce midair conflicts. This

SCOTT AIR FORCE BASE
MIDAMERICA SAINT LOUIS AIRPORT
MASCOUTAH, ILLINOIS

SCOTT AFB
(375 AMW/126 ARW/932 AW)
Midair Collision Avoidance Pamphlet
(POC 375 AMW/SEF)

INTRODUCTION

Midair Collision Avoidance (MACA) is a subject that is deservedly gaining heightened awareness among both civilian and military aviation communities. With increasing numbers of aircraft taking flight and many airports approaching gridlock, knowledge of airfield operating procedures and characteristics becomes more vital for pilots and aircrews. This pamphlet contains information on locally based aircraft operations, traffic patterns, arrival, and departure routes at Scott/MidAmerica Airport (Scott/MAA). The goal of the 375th Air Mobility Wing Flight Safety Office (375 AMW/SEF) is to provide sufficient information to pilots and aircrew to enable recognition of potential midair collision hazards and help everyone enjoy a safe local flying environment.

"THE SEE AND AVOID CONCEPT HAS LONG BEEN THE FOUNDATION OF MIDAIR COLLISION PREVENTION."

(NTSB SAFETY ALERT SA-058, more on that later)

"However, the inherent limitations of this concept, including human limitations, environmental conditions, aircraft blind spots, and operational distractions, ***leave even the most diligent pilot vulnerable to the threat of a midair collision with an unseen aircraft."***"

(NTSB SAFETY ALERT SA-058, more on that later)

HUMAN LIMITATIONS AFFECTING SEE-AND-AVOID

Limitations of the Eye

As air traffic density and aircraft closing speeds increase, the risk of midair collision also increases, and with it, ***so does the importance of effective scanning.***

Other factors affecting vision:

- ATMOSPHERIC CONDITIONS
- GLARE
- LIGHTING (inside & outside the aircraft)
- WINDSHIELD DETERIORIZATION
- WINDSHIELD DISTORTION
- *WINDSHIELD CLEANLINESS*
- AIRCRAFT DESIGN
- CABIN TEMPERATURE/HUMIDITY
- OXYGEN SUPPLY (PARTICULARLY AT NIGHT)
- ACCELERATION FORCES

DETECTION OF OBJECTS WHILE AIRBORNE IS CONTINGENT UPON SIX (6) CONDITIONS

- **Image size—portion of the visual field filled by the object.**
- **Luminance—degree of brightness of the object.**
- **Contrast—difference between object and background brightness, color, and shape.**
- **Adaptation—degree to which the eyes adjust to surrounding illumination.**
- **Motion—velocity of the object, the observer, or both.**
- **Exposure time—length of the time the object is exposed to view.**

Note: *Please refer to the Scott Air Force Base Midair Collision Avoidance Pamphlet for more information.*

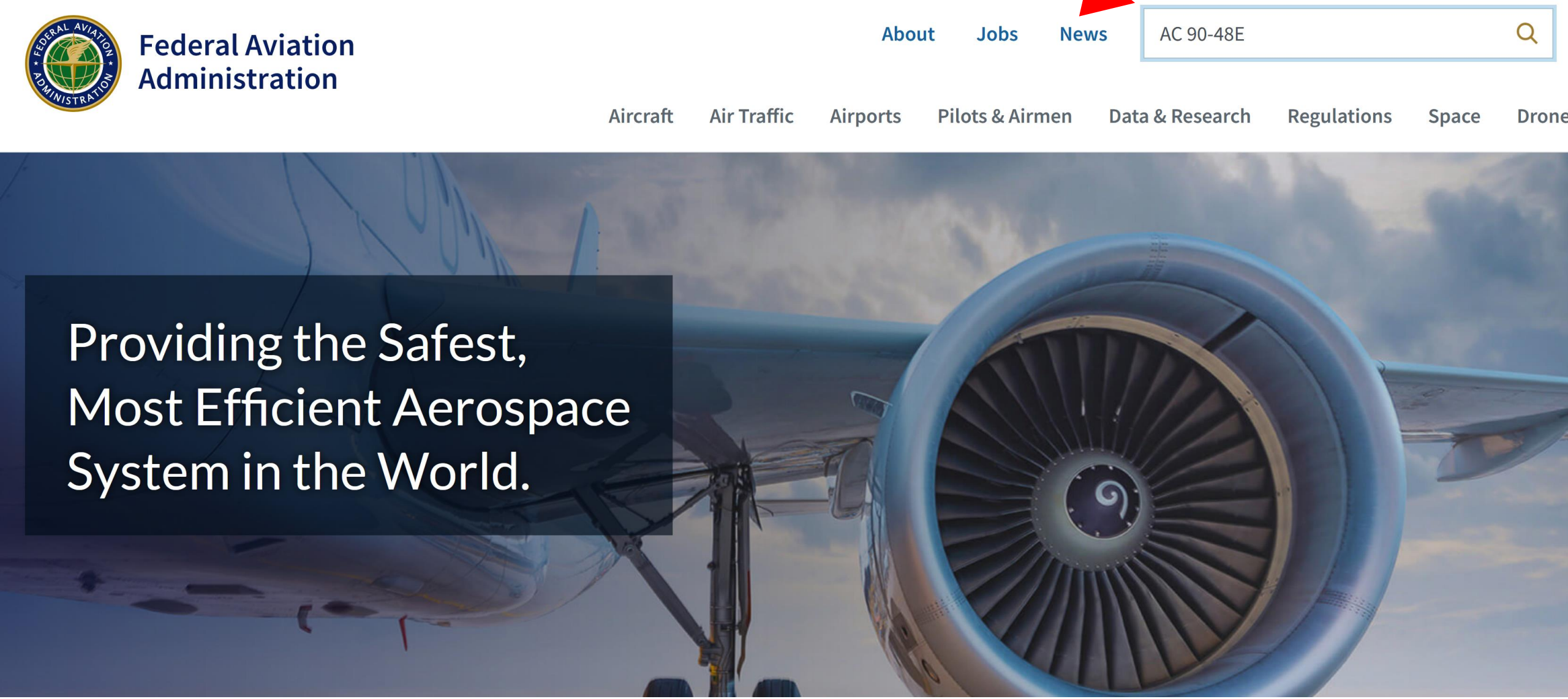
If faced with a mid-air, can I act ALMOST INSTANTANEOUSLY IF I SEE ANOTHER AIRCRAFT IN MY PATH……OR NOT?

(or will it take more time than you believe?)

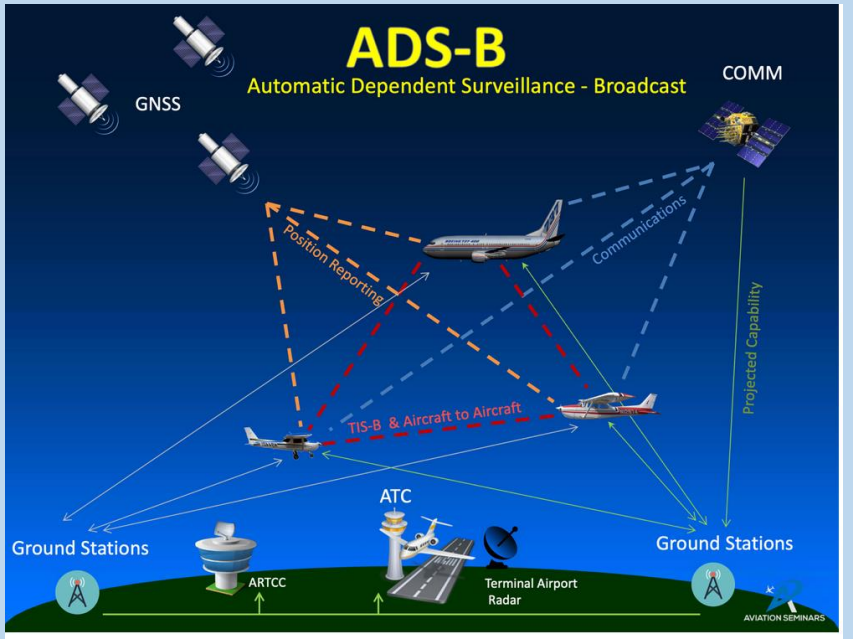
Event	Seconds
See Object	0.1
Recognize Aircraft	1.0
Become Aware of Collision Course	5.0
Decision to Turn Left or Right	4.0
Muscular Reaction	0.4
Aircraft Lag Time	2.0
TOTAL Time Before Aircraft Begins to Move	12.5

Note: This table uses data from Transportation Safety Board of Canada (TSB) Aviation Investigation Report A99P0168, which references U.S. Naval Aviation Safety Center released data concerning typical recognition and reaction times (in seconds) for pilots confronted with a potential midair collision. (AC 90-48E)

For more information on see and avoid go to FAA.GOV and search for AC 90-48E



TECHNOLOGY *MAY* & *CAN* BE BENEFICIAL



COURTESY SPORTY'S

ADS-B IN IS AN INCREDIBLE TECHNOLOGY WHICH CAN BE A GREAT ADVISORY SOURCE.

HOWEVER, IT IS ONLY AS GOOD AS THE OPERATOR AND *IT IS NOT ACCEPTABLE AS THE SOLE SOURCE FOR THE SEE AND AVOID CONCEPT*.

IF ADS-B IS DEPENDED UPON AS THE SOLE SOURCE OF SEE AND AVOID, THAT COULD BE A CRITICAL ERROR IN ADM AND BE DEADLY.

NTSB

SAFETY ALERT

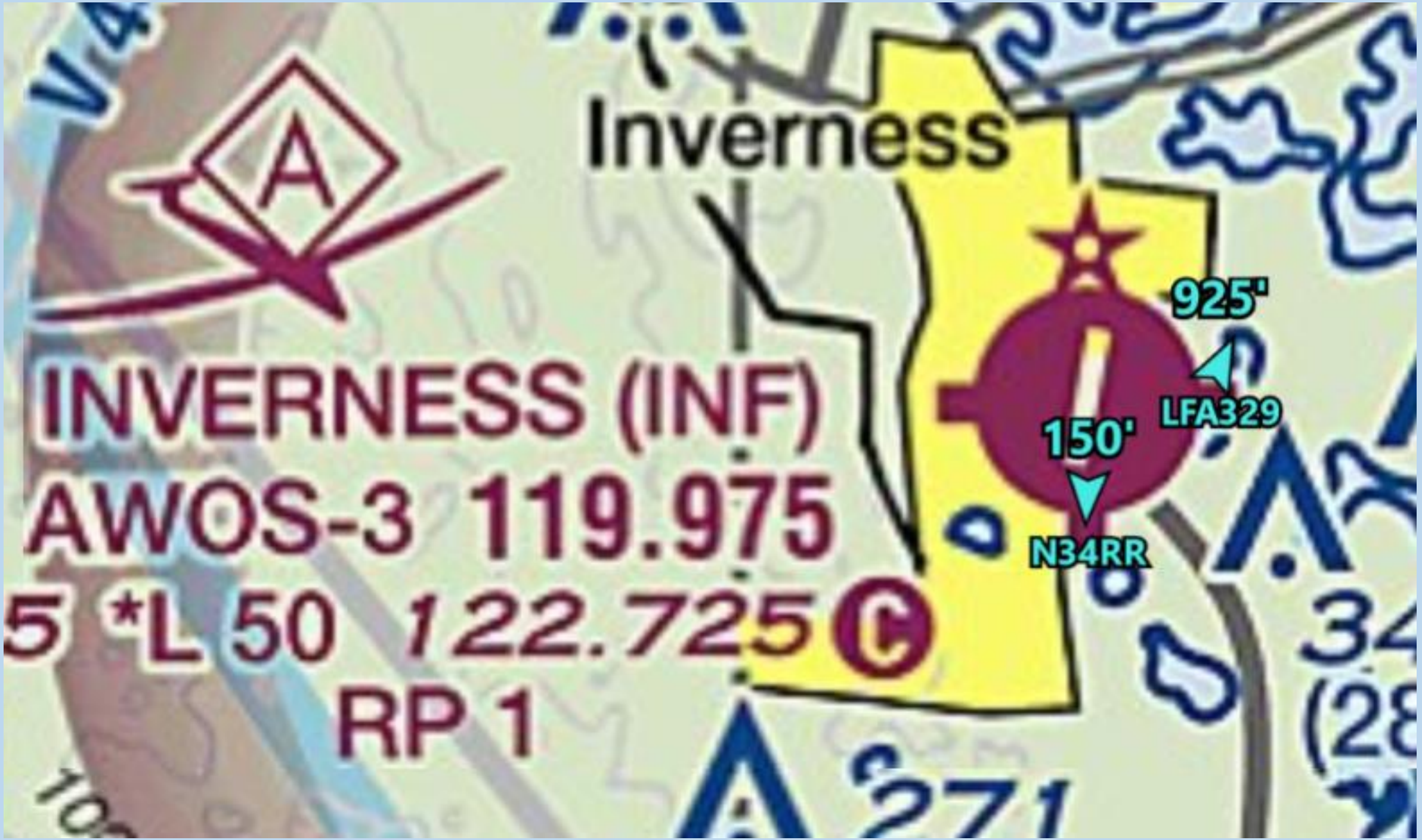
National Transportation Safety Board

★ Prevent Midair Collisions: Don't Depend on Vision Alone ★

Augment your reality to help separate safely

The problem

- The "see-and-avoid" concept has long been the foundation of midair collision prevention. However, the inherent limitations of this concept, including human limitations, environmental conditions, aircraft blind spots, and operational distractions, leave even the most diligent pilot vulnerable to the threat of a midair collision with an unseen aircraft.


Inverness
INVERNESS (INF)
AWOS-3 119.975
5 *L 50 122.725
RP 1
925'
LFA329
150'
N34RR
271

EXAMPLE OF PORTABLE ADS-B RECEIVERS

Stratux ADS-B Dual Band Receiver Aviation Weather and Traffic - Internal WAAS GPS, AHRS, Battery Pack, Suction...

4.5 out of 5 stars 823

$389.99

Or $130.00/mo (3 mo) at 0% APR

rime Same-Day

delivery **Today 5 PM - 10 PM**

before Christmas

Stratux ADS-B Dual Band Receiver Aviation Weather and Traffic - External WAAS GPS, AHRS, Battery Pack, Suction...

4.5 out of 5 stars 147

$399.99

Or $133.33/mo (3 mo) at 0% APR

✓prime

FREE delivery **Sun, Dec 11**

Arrives before Christmas

SUMMING UP WHAT HAVE WE DISCUSSED SO FAR:

WHY WE HAVE TRAFFIC PATTERNS

SEE-AND-AVOID CONCEPTS

SEE-AND-AVOID LIMITATIONS

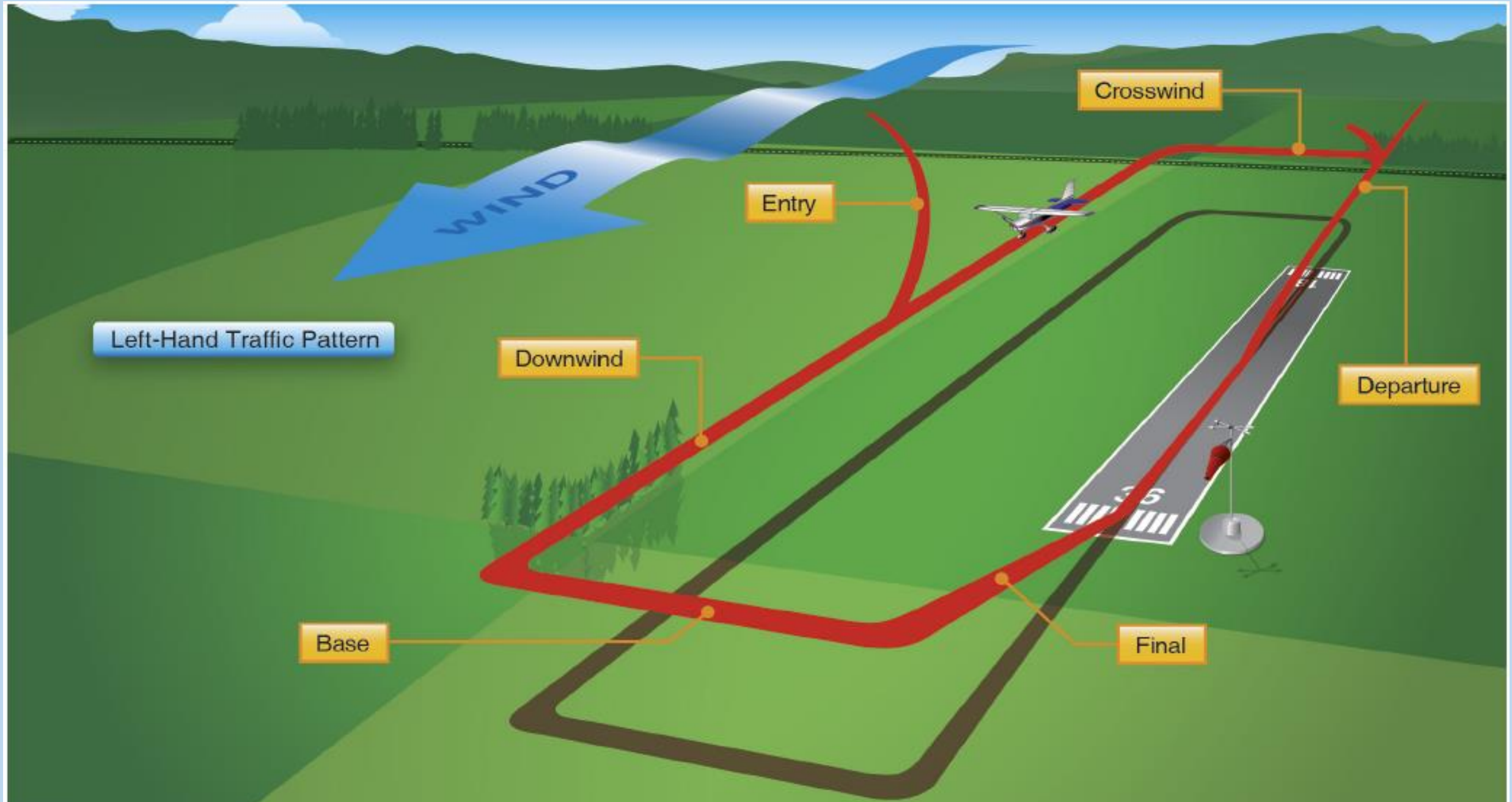
LIMITING FACTORS RELATED TO VISION

NEXTGEN TECHNOLOGY OPPORTUNITIES INCLUDING ADS-B

WHAT IS THE Traffic Pattern?

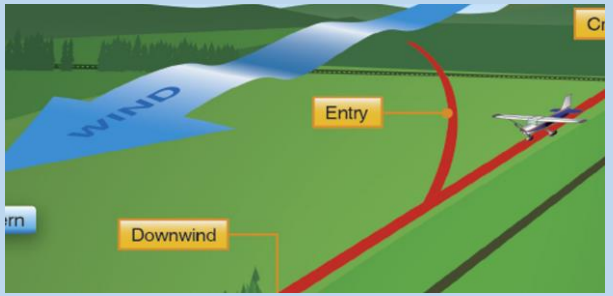
“**Traffic Pattern.** The ***traffic flow*** that is prescribed for aircraft landing at, taxiing on, or taking off from an airport.” **AC 90-66C**

(AIRPLANE FLYING HANDBOOK 8083-3C)



Does the FAA REGULATE Traffic Pattern ENTRY?

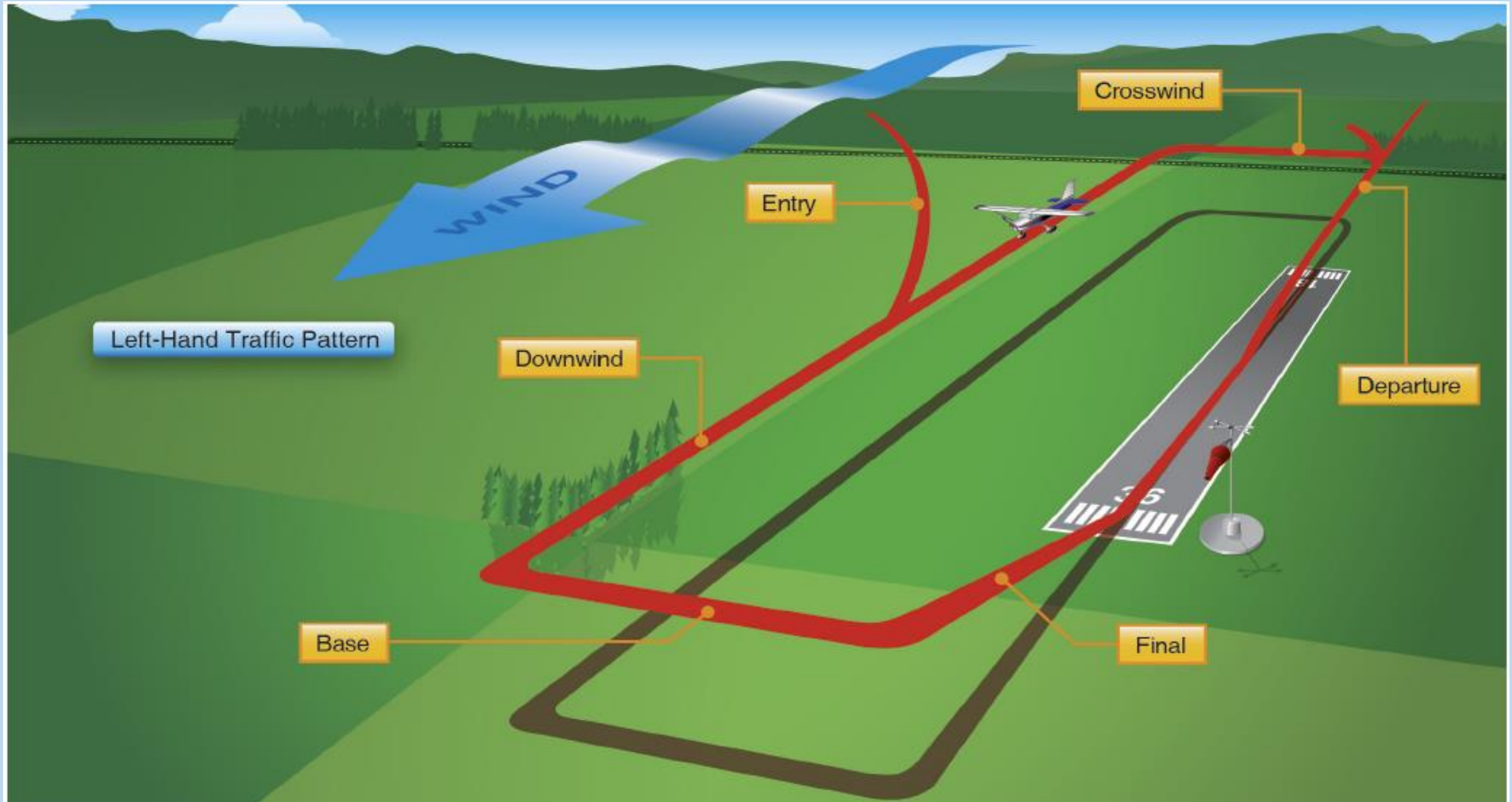
***NO*, THE FAA ONLY REGULATES TRAFFIC PATTERN *FLOW*.** (AC 90-66C 8.2.1)



THAT FIRST TURN TO THE RIGHT IS NOT "REGULATED" AS YOU ARE NOT IN THE TRAFFIC PATTERN (*AS YOU ARE NOT IN THE "FLOW" YET)*

YOUR PATTERN ENTRY AND PATTERN SHOULD POSITION YOU SUCH THAT YOU ARE COMPLIANT WITH REGULATION.

(AIRPLANE FLYING HANDBOOK 8083-3C)



When entering the traffic pattern at an airport without an operating control tower, ***inbound pilots are expected to observe other aircraft already in the pattern and to conform to the traffic pattern in use.**** The pilot should enter the traffic pattern at a point well clear of any other observed aircraft. If there are no other aircraft observed, the pilot should check traffic indicators and wind indicators on the ground to determine which runway and traffic pattern direction to use. Many airports have L-shaped traffic pattern indicators displayed with a segmented circle adjacent to the runway. The short member of the L shows the direction in which traffic pattern turns are made when using the runway parallel to the long member. The pilot should check the indicators from a distance or altitude well above the traffic pattern in case any other aircraft are in the traffic pattern. (FAA-8083-3C)

Traffic Flow. It is recommended that pilots use visual indicators, such as the segmented circle, wind direction indicator, landing direction indicator, and traffic pattern indicators that provide traffic pattern information**. ***If other traffic is present in the pattern, arriving or departing aircraft should use the same runway as these aircraft***. Transient aircraft may not know local ground references, so pilots should use standard pattern phraseology, including distances from the airport. (AC 90-66C)

Consequently, *departing* pilots are expected to observe *other aircraft already in the pattern and to conform to the traffic pattern in use.

**** And chart supplement (fka AFD), sectional, etc.**

REMEMBER: ***91.103 Preflight action: Each pilot in command shall, before beginning a flight, become familiar with all available information concerning that flight.***

*Consequently, departing pilots are expected to observe ***other aircraft already in the pattern and to conform to the traffic pattern in use.***

** And chart supplement (f/k/a AFD), sectional, etc. REMEMBER: *91.103 Preflight action:Each pilot in command shall, before beginning a flight, become familiar* ***with all available information concerning that flight.***

NOTE: "RP 1"

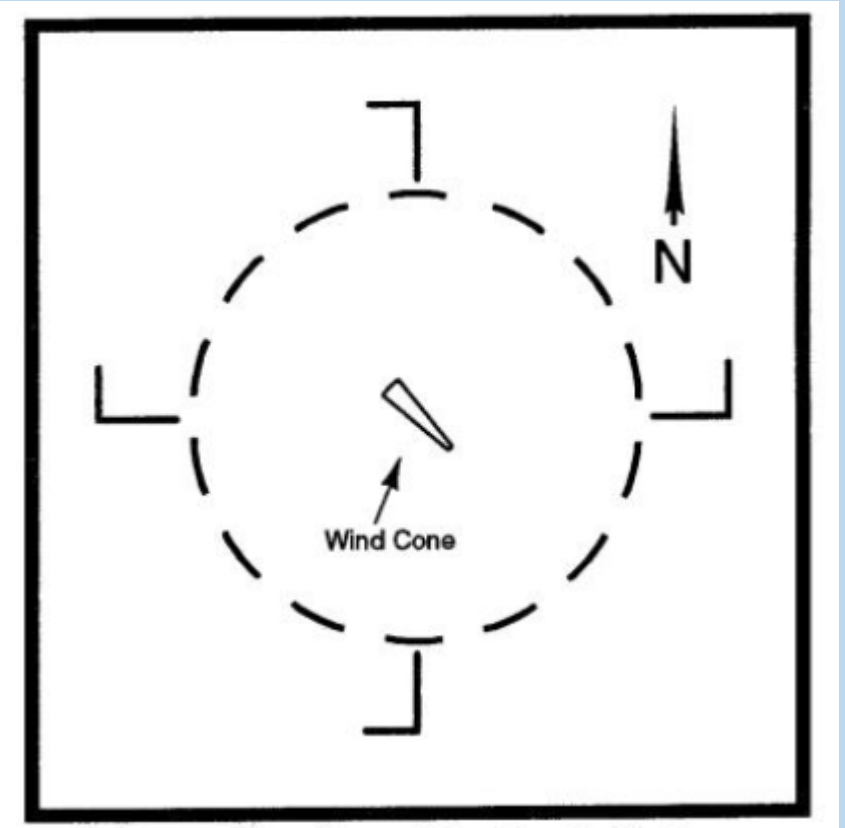
Straight-In Landings:

The FAA discourages VFR straight-in approaches to landings due to increased risk of a midair collision.

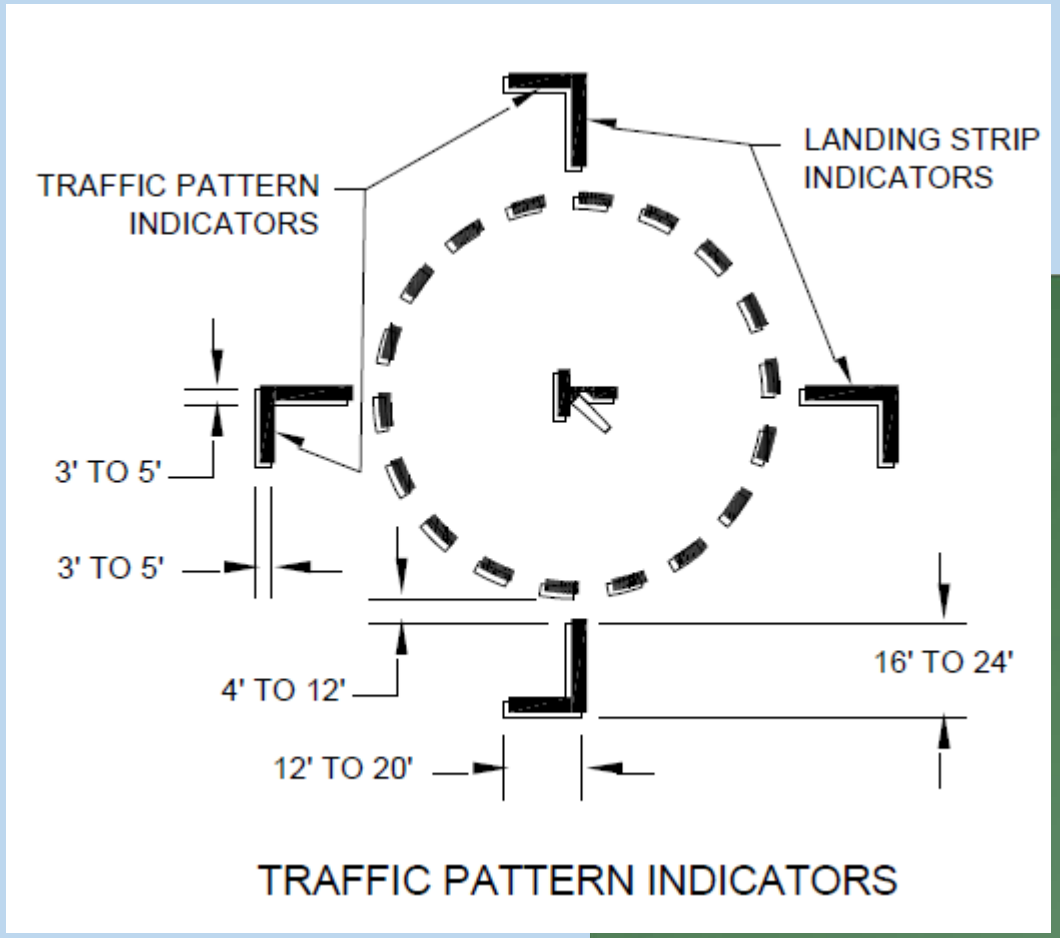
However, if a pilot chooses to execute a straight-in approach for landing without entering the airport traffic pattern, the pilot should self-announce their position on the designated CTAF between 8 and approximately 10 miles from the airport, and coordinate their straight-in approach and landing with other airport traffic. ***Pilots choosing to execute a straight-in approach do not have a particular priority over other aircraft in the traffic pattern and must comply with the provisions of § 91.113(g)***. **Note: Section 91.113(b) requires all pilots to see and avoid. (AC 90-66C)**

Straight-In Landings (cont.). *The FAA encourages pilots to use the standard traffic pattern when arriving or departing a non-towered airport* or a part-time-towered airport when the control tower is not operating, *particularly when other traffic is observed or when operating from an unfamiliar airport.* However, there are occasions where a pilot can choose to execute a straight-in approach for landing when not intending to enter the traffic pattern, such as a visual approach executed as part of the termination of an instrument approach. **Pilots should clearly communicate on the CTAF and coordinate maneuvering for and execution of the landing with other traffic so as not to disrupt the flow of other aircraft. Therefore, pilots operating in the traffic pattern should be alert at all times to aircraft executing straight-in landings, particularly when flying a base leg prior to turning final.**

UNDERSTANDING THE SEGMENTED CIRCLE



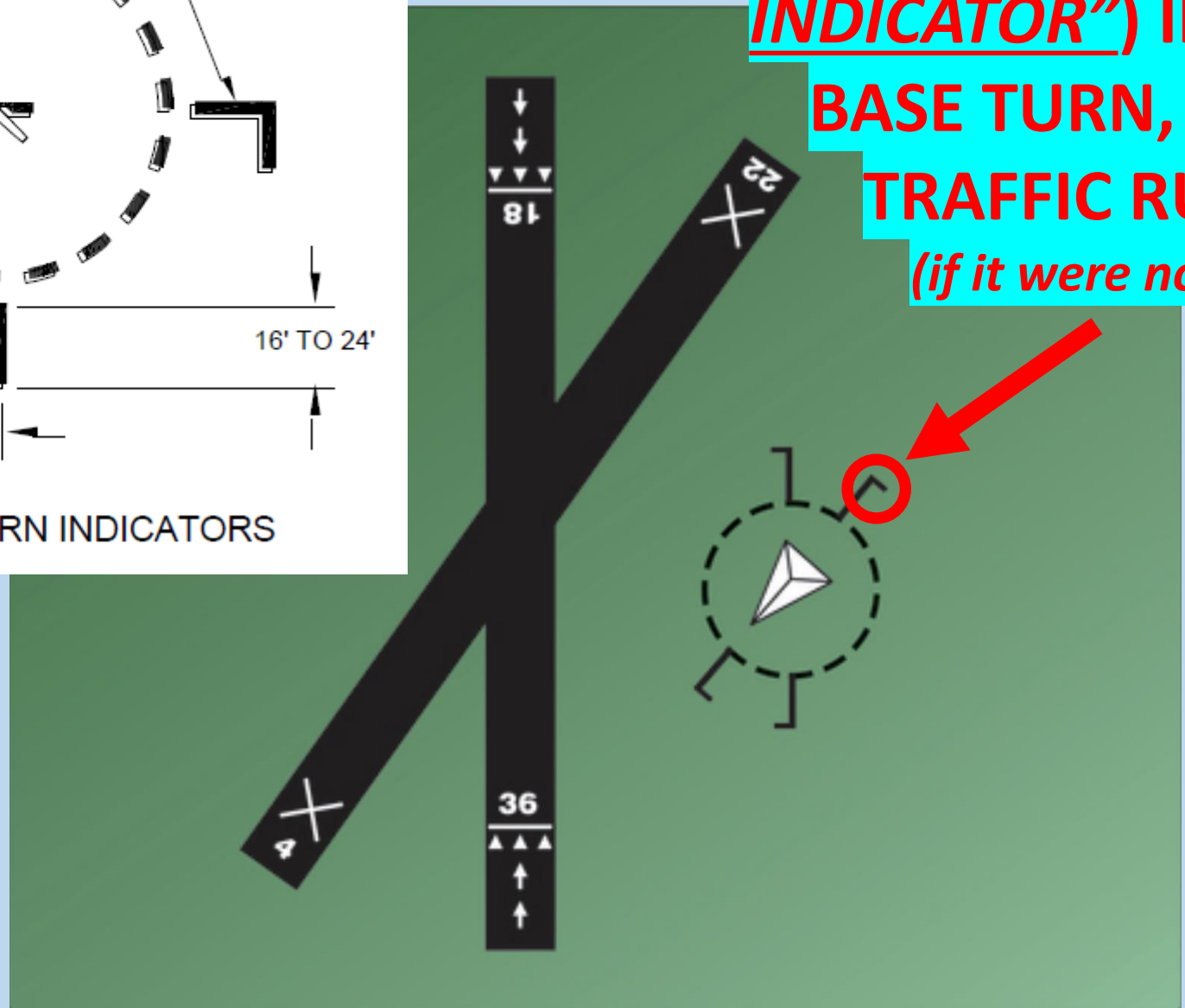
THE “BARB” (AKA “short member”) INDICATES THE POSITION OF THE BASE LEG FOR THAT RUNWAY.

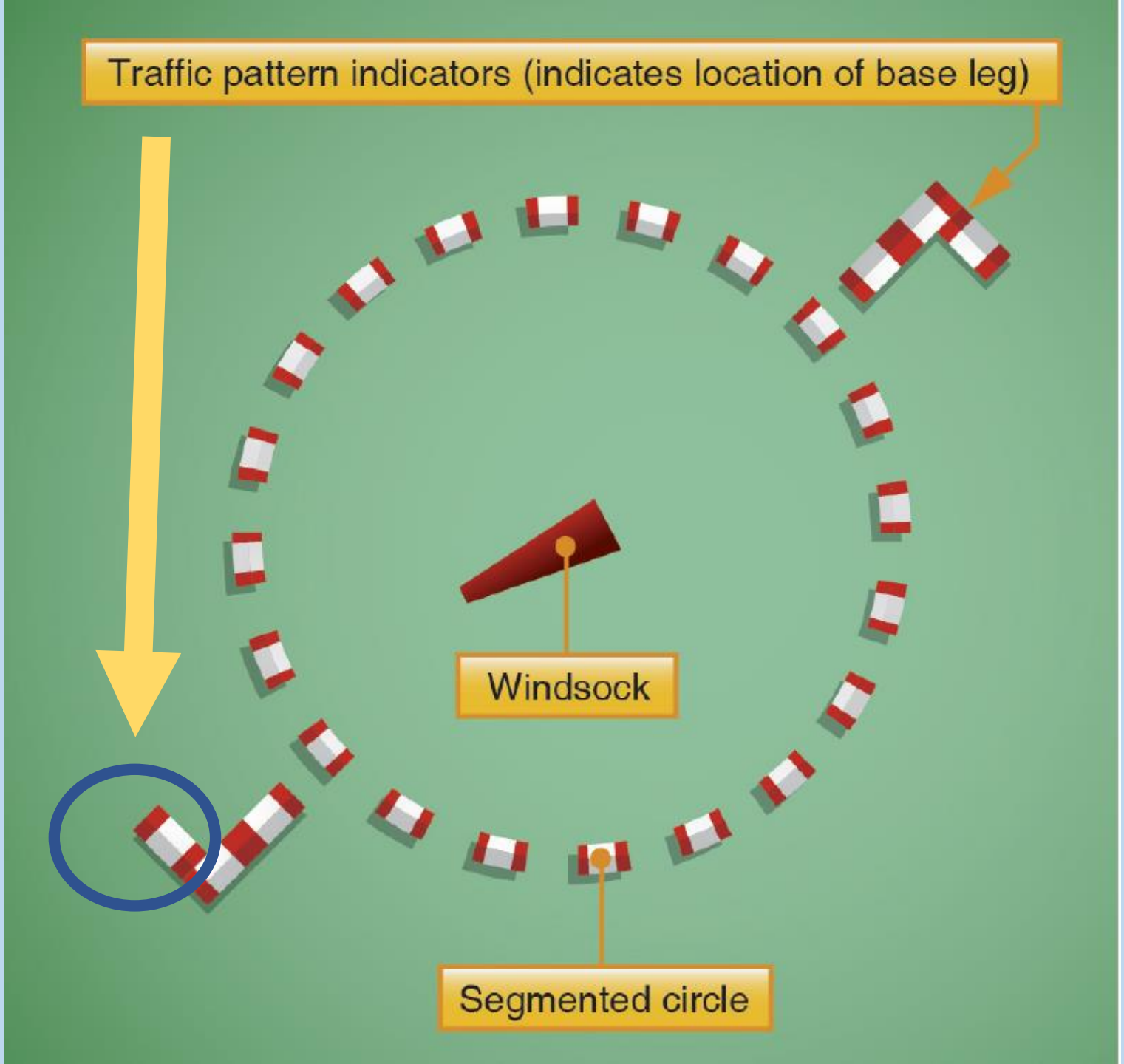


TRAFFIC PATTERN INDICATORS

THIS SMALL BARB (*THE "TRAFFIC PATTERN INDICATOR"*) INDICATES THE BASE TURN, HENCE LEFT TRAFFIC RUNWAY 22

(if it were not closed…!)

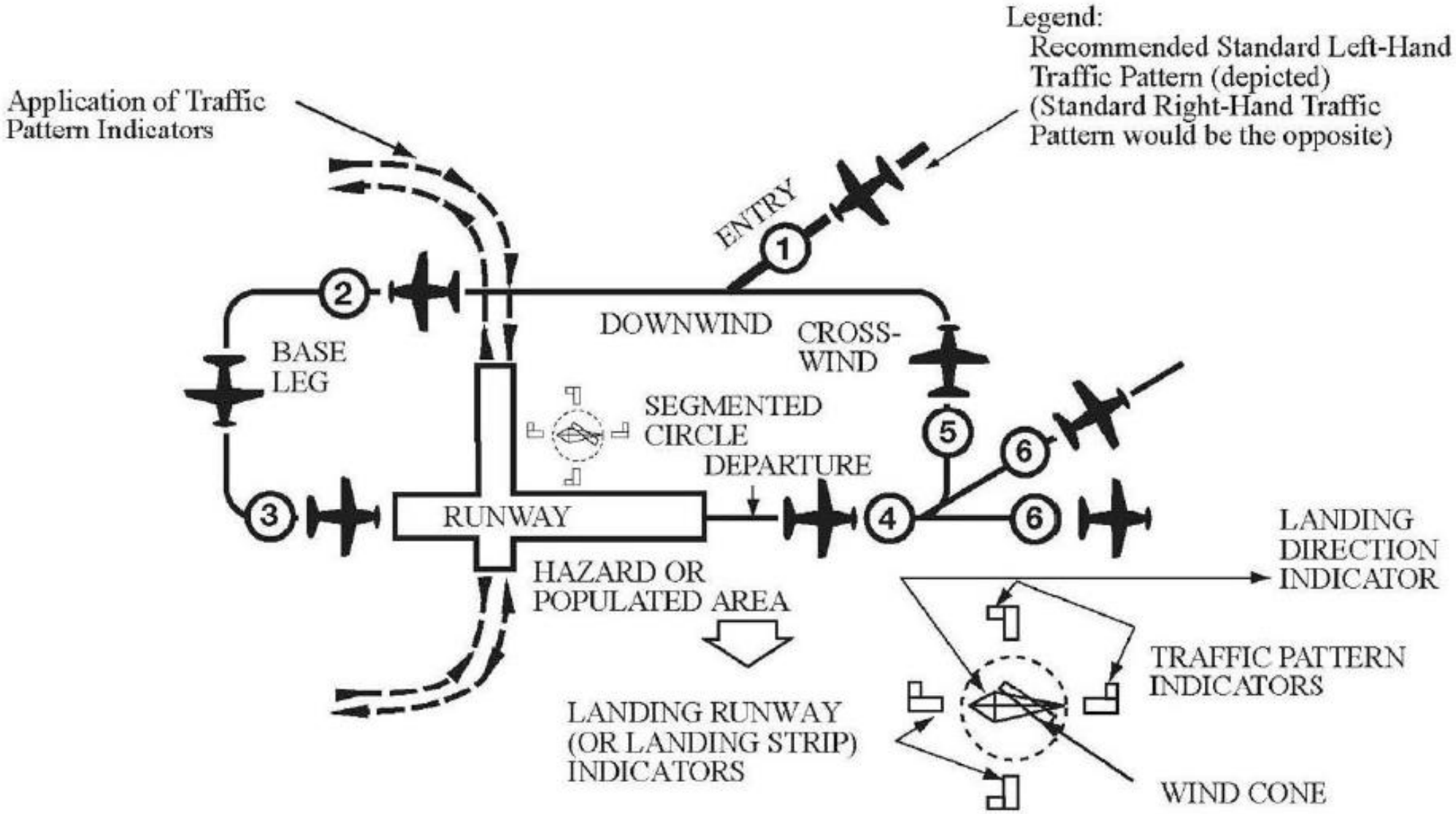


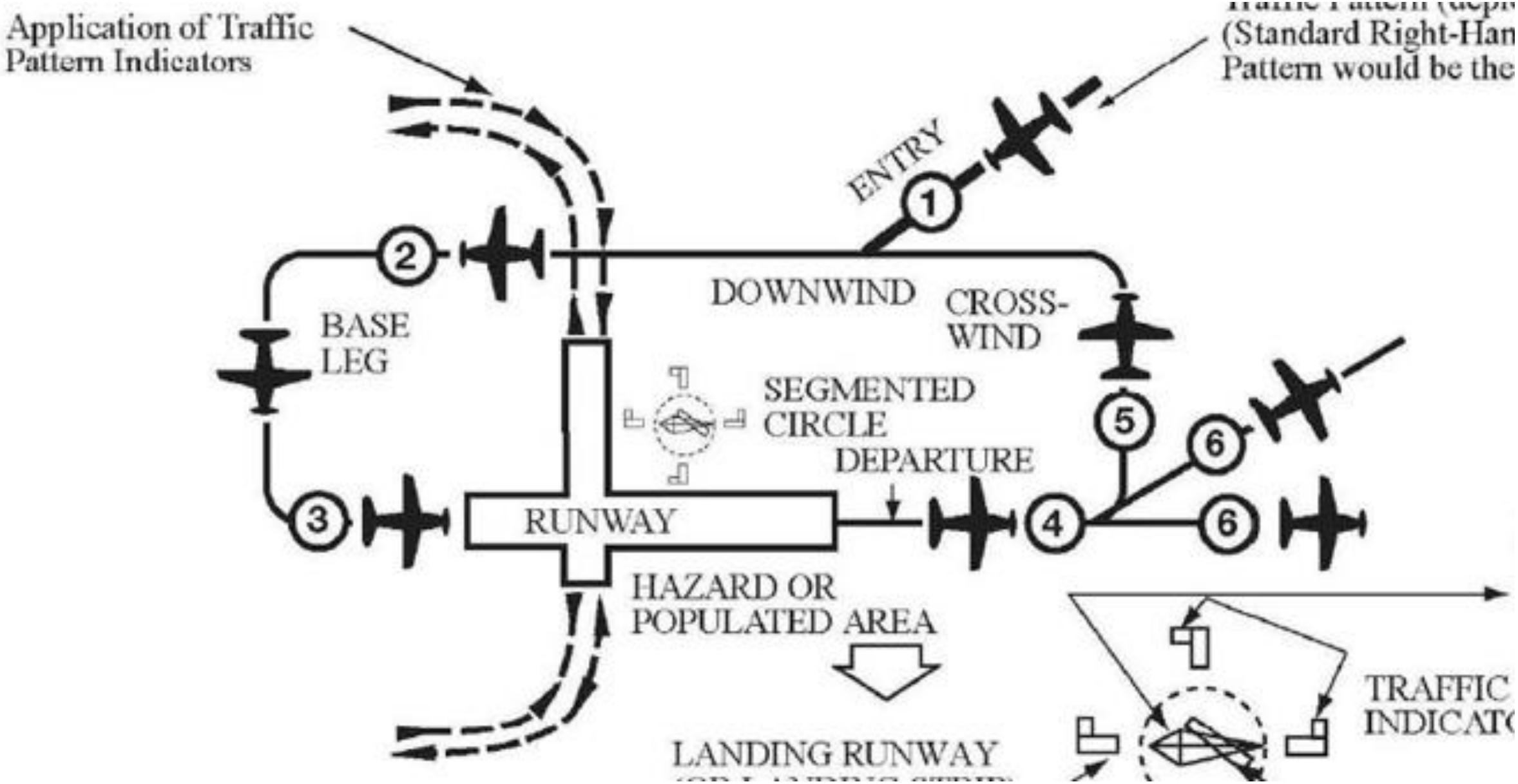

Traffic pattern indicators (indicates location of base leg)
Windsock
Segmented circle

PATTERN ENTRY & ARRIVAL PROCEDURES

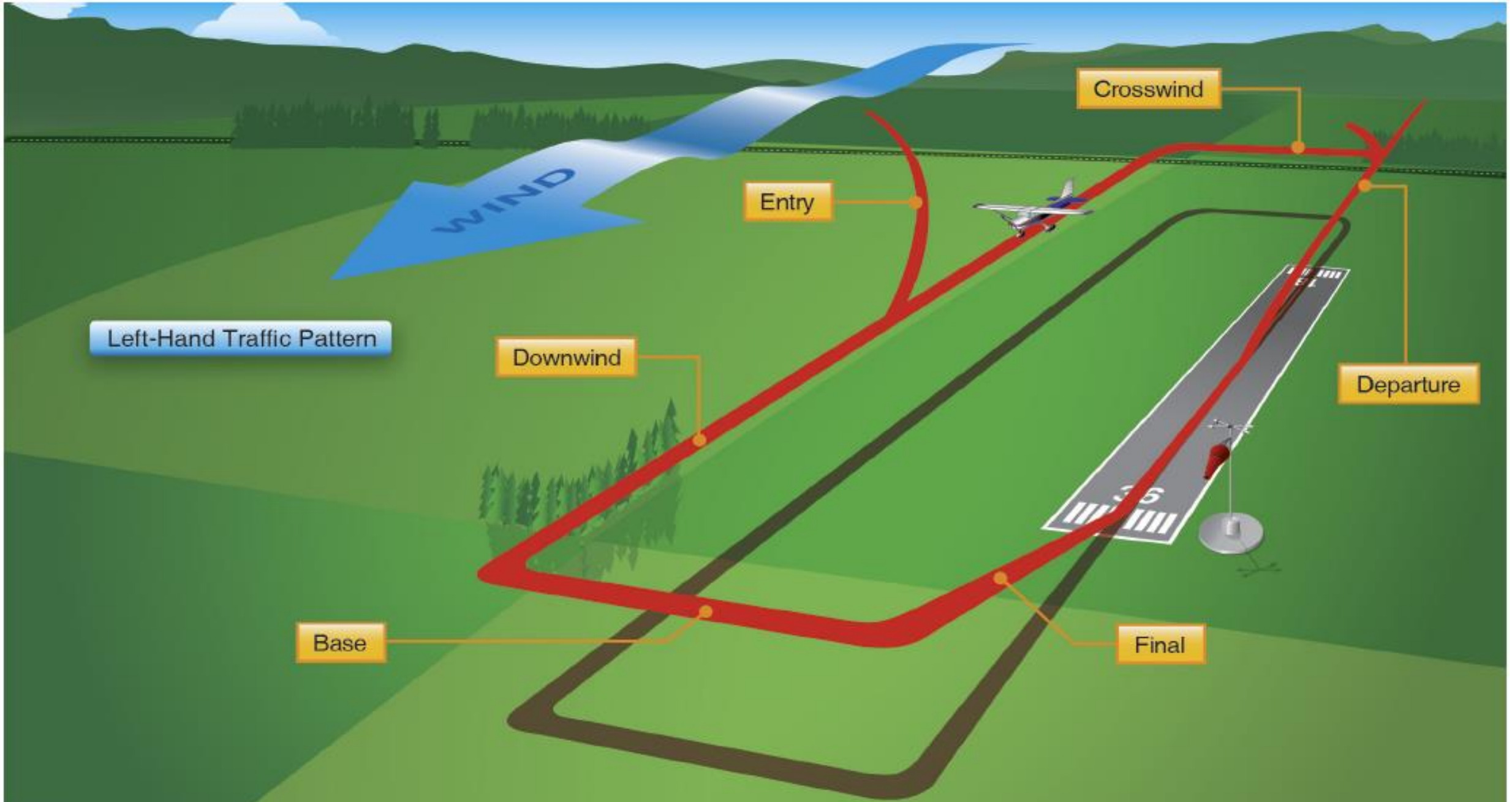
APPENDIX A. TRAFFIC PATTERNS

Single Runway (Diagram from the AIM, Paragraph 4-3-3)

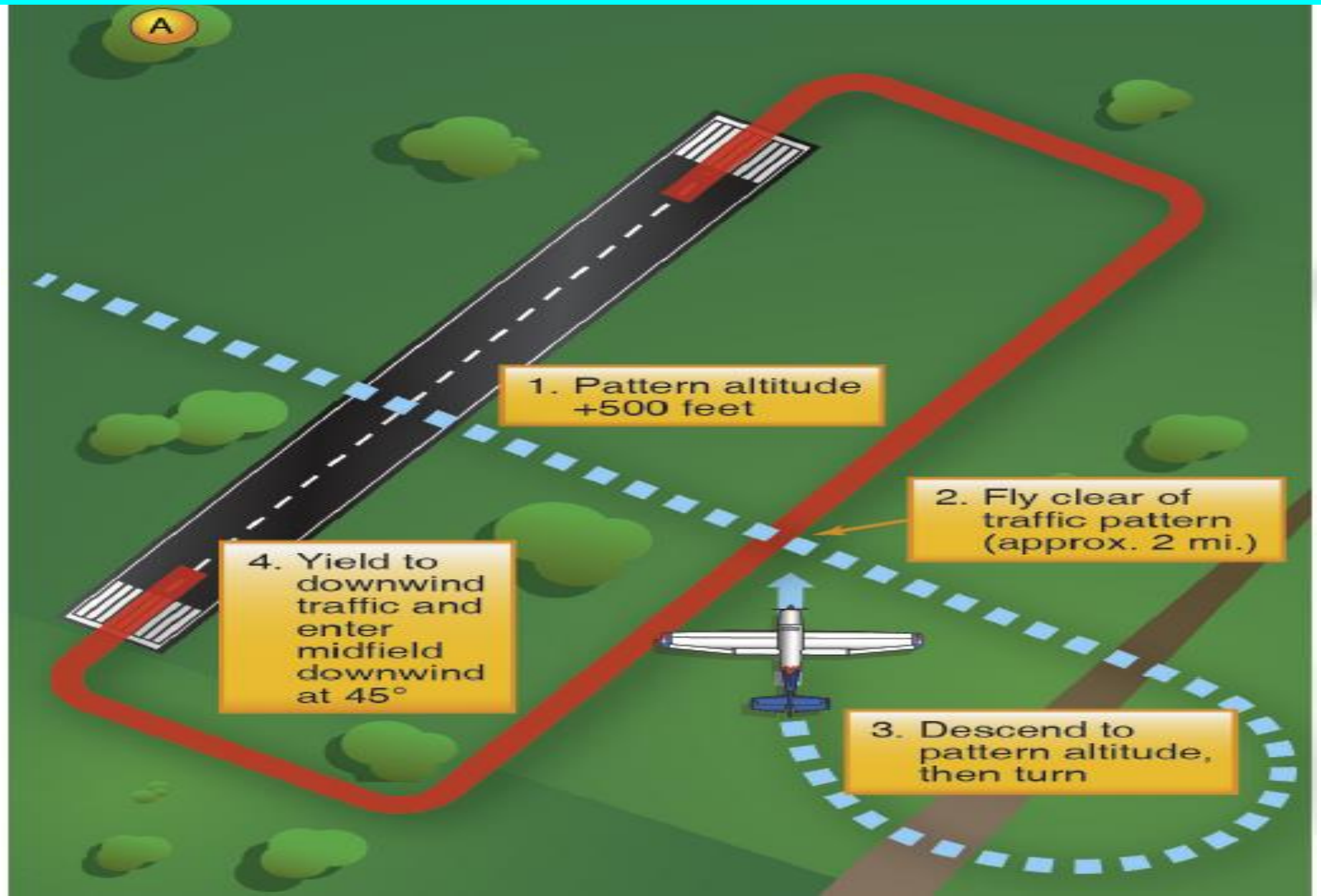



Application of Traffic Pattern Indicators
(Standard Right-Han
Pattern would be the
ENTRY
1
2
DOWNWIND
CROSS-WIND
BASE LEG
SEGMENTED CIRCLE
DEPARTURE
5
6
6
3
RUNWAY
4
HAZARD OR POPULATED AREA
TRAFFIC
INDICAT
LANDING RUNWAY

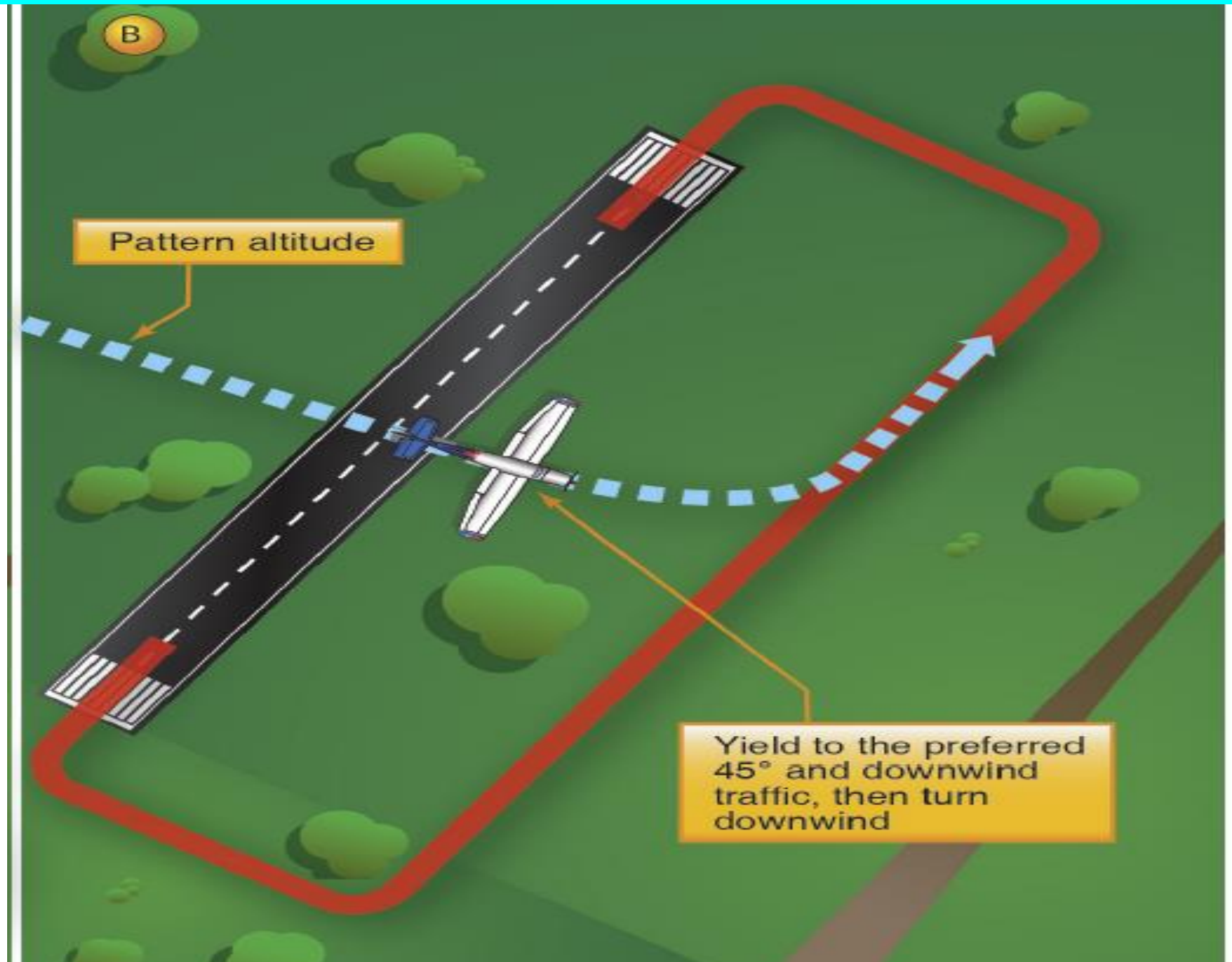
ONE METHOD OF PATTERN ENTRY (AIRPLANE FLYING HANDBOOK 8083-3C)



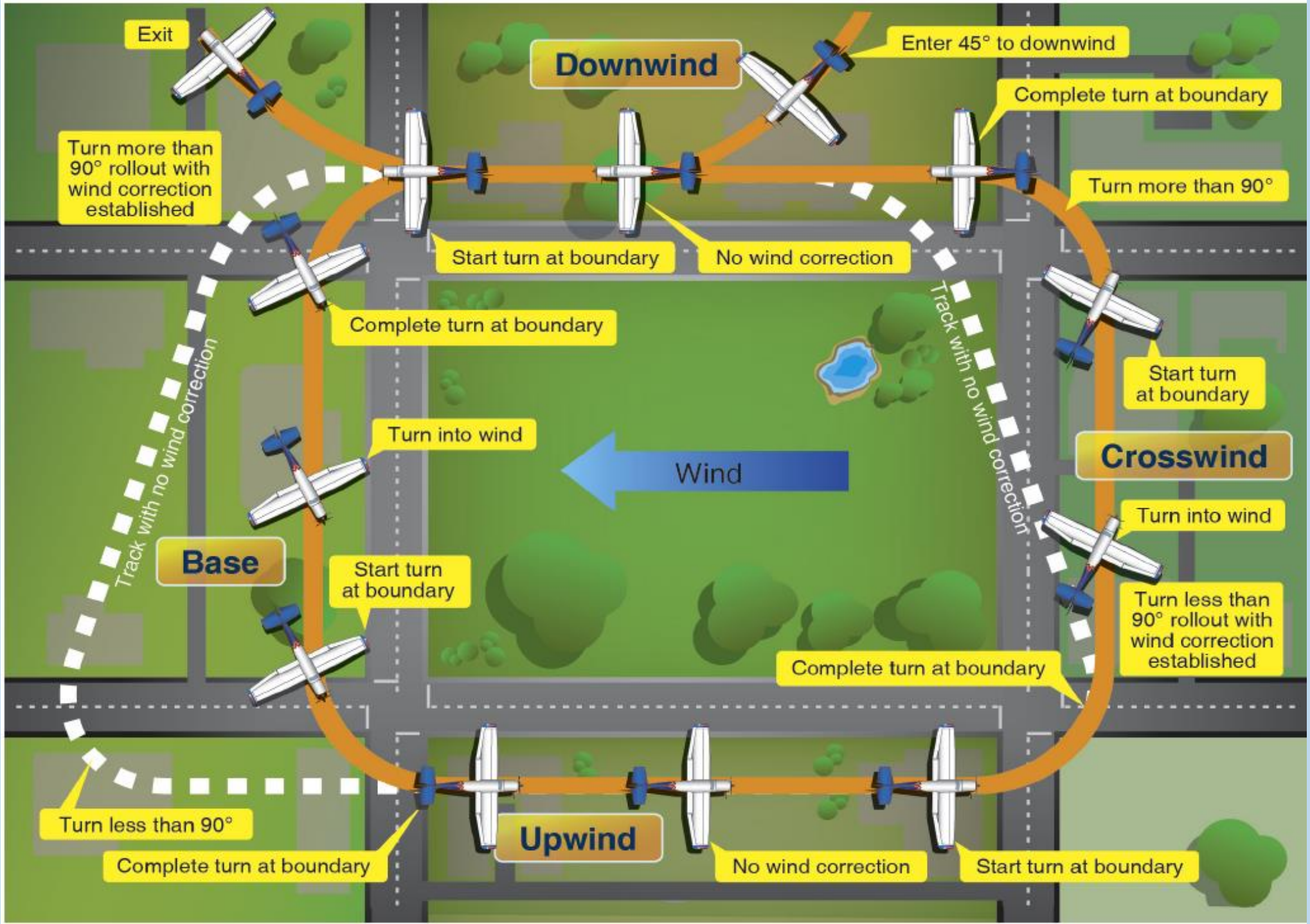
ANOTHER METHOD OF PATTERN ENTRY (AIRPLANE FLYING HANDBOOK 8083-3C)



YET ANOTHER METHOD OF PATTERN ENTRY (AIRPLANE FLYING HANDBOOK 8083-3C)



AND LET'S BE CERTAIN TO TRAIN OUR STUDENTS SUCH THAT THEY FLY A RECTANGULAR GROUND PATH, TAKING WIND INTO ACCOUNT WHILE IN THE TRAFFIC PATTERN. 8083-3C HAS A GREAT GRAPHIC FOR THIS -


Exit
Downwind
Enter 45° to downwind
Complete turn at boundary
Turn more than 90° rollout with wind correction established
Turn more than 90°
Start turn at boundary
No wind correction
Complete turn at boundary
Track with no wind correction
Track with no wind correction
Start turn at boundary
Crosswind
Turn into wind
Wind
Base
Turn into wind
Start turn at boundary
Turn less than 90° rollout with wind correction established
Complete turn at boundary
Turn less than 90°
Upwind
Complete turn at boundary
No wind correction
Start turn at boundary

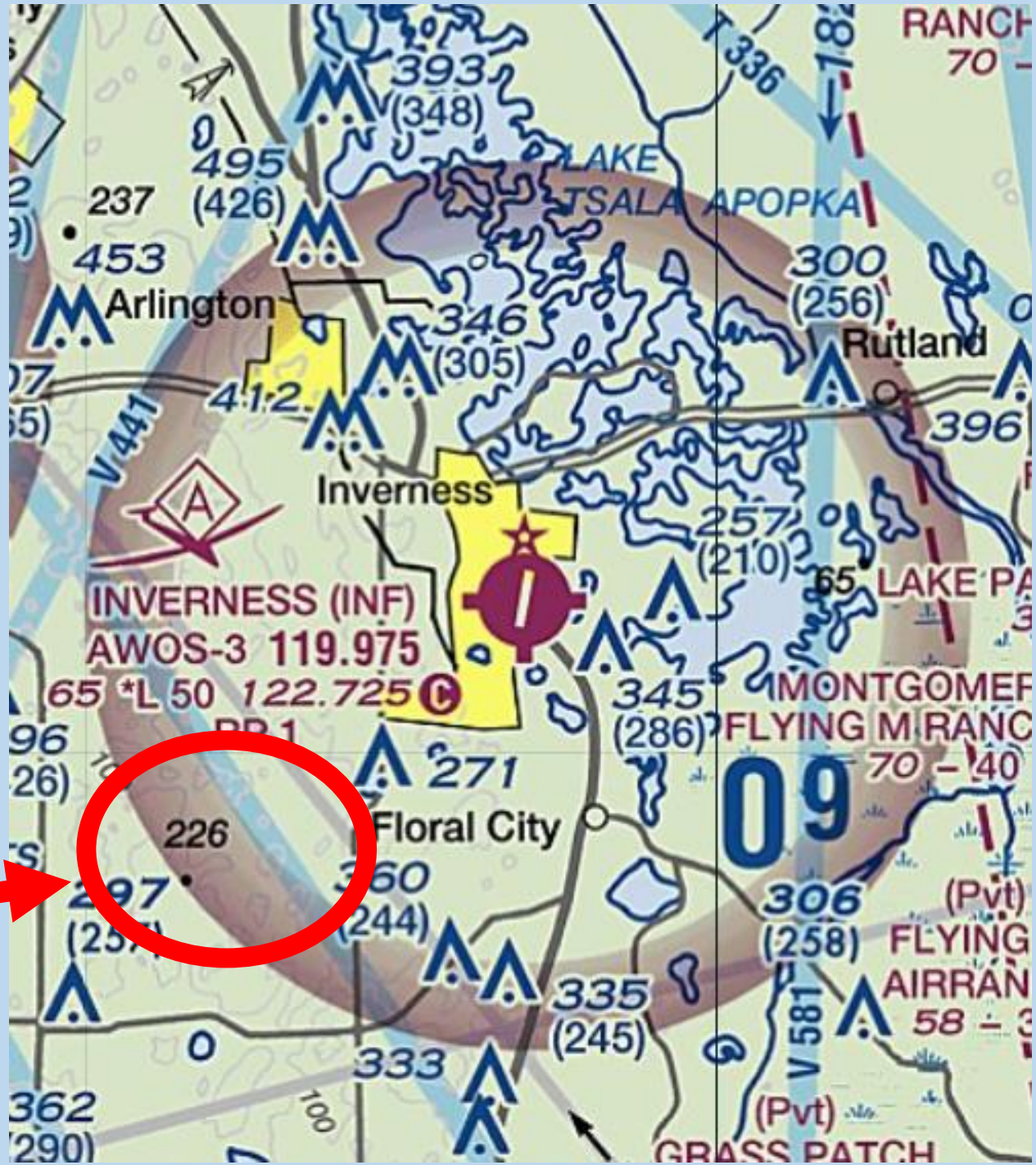
- **NOW THAT WE'VE DISCUSSED THE IMPORTANCE OF THE PRIOR SLIDE, LET'S GET ON THE BANDWAGON OF MEETING ALL PILOTS EXPECTATIONS AND *FLY A RECTANGULAR GROUND TRACK* IN THE TRAFFIC PATTERN MAKING CERTAIN TO TAKE WIND INTO ACCOUNT THEREBY MEETING EXPECTATIONS AND ENHANCING SAFETY!!**

CREDIT TO DIRECT ENERGY & WKFR FOR THE PIX

What airspace are we in at KINF?

(*at the surface*)

(BIG HINT!)



§ 91.126 Operating on or in the vicinity of an airport in Class G airspace.

(a) ***General.*** Unless otherwise authorized or required, each person operating an aircraft on or in the vicinity of an airport in a Class G airspace area **must** comply with the requirements of this section.

(b) ***Direction of turns.*** When approaching to land at an airport without an operating control tower in ***Class G airspace*** -

(1) Each pilot of an airplane **must** make all turns of that airplane to the left **unless** the airport displays approved light signals or visual markings indicating that turns should be made to the right, in which case the pilot must make all turns to the right; and

(2) Each pilot of a helicopter or a powered parachute must avoid the flow of fixed-wing aircraft.

BACK HISTORY ON 14 CFR 91.126 and related LEGAL INTERPRETATIONS AND WHY THERE MAY BE CONFUSION ON OCCASION CURRENTLY.

U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Chief Counsel

800 Independence Ave., S.W.
Washington, D.C. 20591

JUN 30 2009

Daniel Murphy
[redacted]

Dear Mr. Murphy:

This is in response to your requests for a legal interpretation that were postmarked on January 29, 2009, and February 4, 2009. In your letters you requested clarification regarding three issues: (1) whether 14 C.F.R. § 91.126(b)(1) allows a pilot to conduct a circling approach with turns to the right to an uncontrolled airport in instrument meteorological conditions (IMC) if the pilot determines that turns to the left are undesirable; (2) whether a pilot may log pilot-in-command (PIC) flight time under 14 C.F.R. § 61.51(e)(1) during a practical test when 14 C.F.R. § 61.47(b) requires that the pilot act as PIC; and (3) to what point must an approach continue to constitute an instrument approach under 14 C.F.R. §§ 61.65(d)(2)(iii)(B) and 61.57(c)(1)(i).[1]

Your letter requested clarification of the requirements in section 91.126(b)(1) using the following example. A pilot, flying an aircraft under instrument flight rules in IMC, executes a circling approach to an uncontrolled airport. The airport, by operation of section

EXCERPTED FROM LETTER OF PRIOR SLIDE

“Your letter requested clarification of the requirements in section 9 l .126(b)(1) using the following example, A pilot, flying an aircraft under instrument flight rules in IMC, executes a circling approach to an uncontrolled airport. The airport, by operation of section 91.126(b)(l), has established turns to the left for the approach. However, the pilot determines that turns to the left are undesirable because they are not in the interest of safety (for example, the wing of the aircraft blocks the view of the runway during turns to the left). You ask whether that pilot can make turns to the right on the approach.”

Section 91. 126(a) states, in relevant part, that each person operating an aircraft on or in the vicinity of an airport in Class G airspace area must comply with the requirements of section 91.126 "[u]nless otherwise authorized or required."

EXCERPTED FROM LETTER OF A PRIOR SLIDE, continued

Section 91. 126(b)(1) states, in relevant part, that when approaching to land at an airport without an operating control tower in Class G airspace, "[e]ach pilot of an airplane must make all turns of that airplane to the left" unless the airport displays approved light signals or visual markings indicating that turns should be made to the right, in which case the pilot must make all turns to the right." The use of "must" in sections 91.126(b)(l) and 91.126(a) do not permit a pilot's discretion in determining in which direction to make turns when approaching the airport. Section 91.126(a) provides an exception to the requirement to make turns to the left if authorized or required by air traffic control (ATC). *This exception permits a pilot to request clearance to make right hand turns under these circumstances*. However, the regulation does not obligate ATC to grant such a request.

U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Chief Counsel

800 Independence Ave., S.W.
Washington, D.C. 20591

JUN 20 2014

John J. Krug
[redacted]

Dear Mr. Krug:

This letter responds to your request for a legal interpretation dated January 24. 2014. You have asked several questions pertaining to conducting a flight into an airport without an operating control tower in Class G airspace.

This letter responds to your request for a Legal interpretation dated January 24. 2014. You have asked several questions pertaining to conducting a flight into an airport without an operating control tower in Class G airspace. In your first question, you have requested clarification of a 2009 legal interpretation issued to Daniel Murphy regarding whether air traffic control (ATC) may issue a clearance authorizing right-hand turns to an airport without an operating tower in Class G airspace.

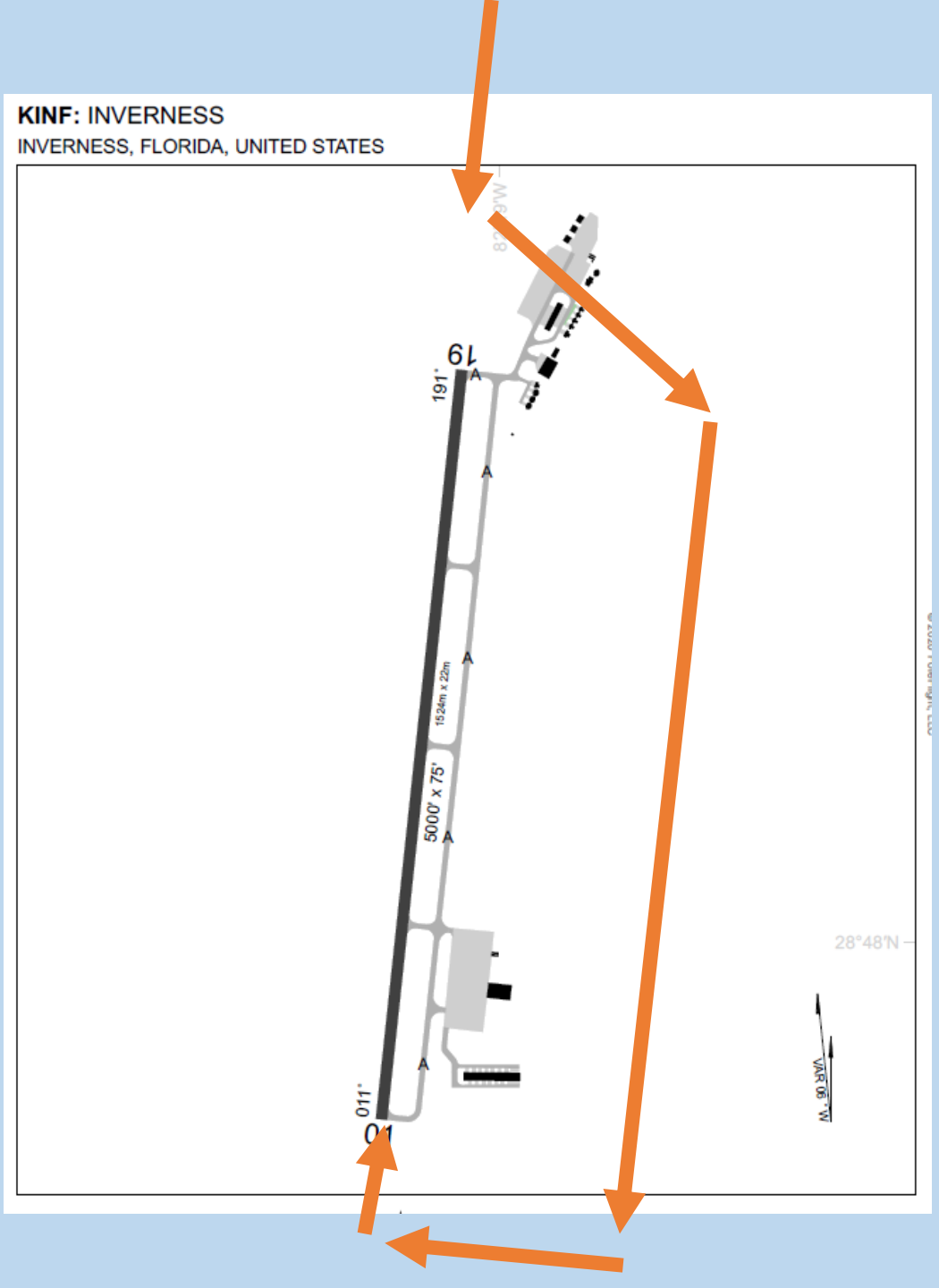
Under Title 14 of the Code of Federal Regulations (14 CFR) § 91.126(a), each person operating an aircraft on or in the vicinity of an airport in Class G airspace area must comply with requirements of that section unless otherwise "authorized or required." Among those requirements, § 9 l. l 26(b)(1) states that each pilot of an airplane, when approaching to land at an airport without an operating control tower in Class G airspace., must make all turns to the left unless the airport displays approved light signals or visual markings indicating turns should be made to the right.

The Murphy Interpretation stated that § 91.126(a) "provides an exception to the requirement to make turns to the left if authorized or required by air traffic control (ATC)." ***This statement was in error, as noted in a subsequent legal interpretation issued to John D. Collins on August 8, 2013.*** That interpretation correctly states that ATC does not control traffic in Class G airspace. Therefore, ATC may not issue clearance to conduct a right-hand turn at an airport without an operating control tower in Class G airspace. The Collins Interpretation notes that the circumstances under which a deviation from the left-hand turn requirement in § 91.126(b)(l) is "authorized or required" are very limited. Specifically, a deviation must be "authorized or required" by approach guidelines to a specific airport or by another FAA regulation. (ED: OR EMERGENCY)

Practice Instrument Approaches in VMC Conditions. Pilots conducting practice instrument approaches should be particularly alert for other aircraft that may be departing in the opposite direction or on a base leg or final approach to the runway associated with the approach. Conducting any practice instrument approach, regardless of its direction relative to other airport operations, does not take priority over other VFR aircraft. Pilots should be ready to communicate on CTAF, discontinue the approach, and enter a traffic pattern as needed, based on the traffic saturation of the airport and/or the current runway in use, to maintain aircraft separation and aviation safety. Pilots are reminded that circling approaches, practice or actual, must comply with § 91.126(b), unless the approach procedure explicitly states otherwise. This has been upheld by prior FAA legal interpretations of § 91.126(b).**Note:** If the Chart Supplement lists right-hand traffic at a non-towered airport, pilots conducting practice instrument approaches in VMC conditions should circle to the right to enter the traffic pattern. (AC 90-66C)

KINF INSTRUMENT APPROACH TO RUNWAY 19, CIRCLE TO LAND 01

Runway 01 is RIGHT TRAFFIC



NON-TOWERED DEPARTURE PROCEDURES

Does the FAA REGULATE Traffic Pattern DEPARTURE?

NO, THE FAA ONLY REGULATES TRAFFIC PATTERN ***FLOW***.

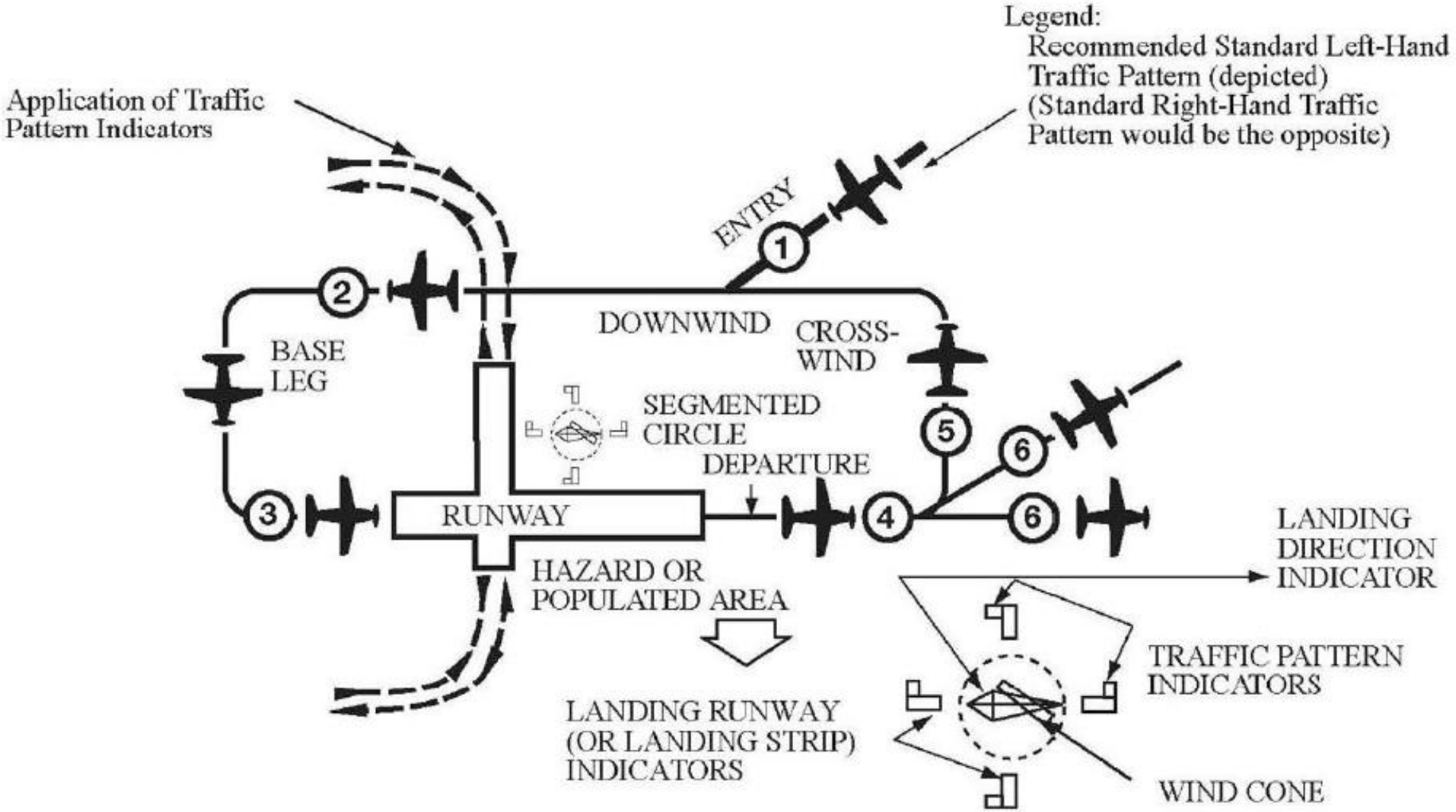
(AC 90-66C)

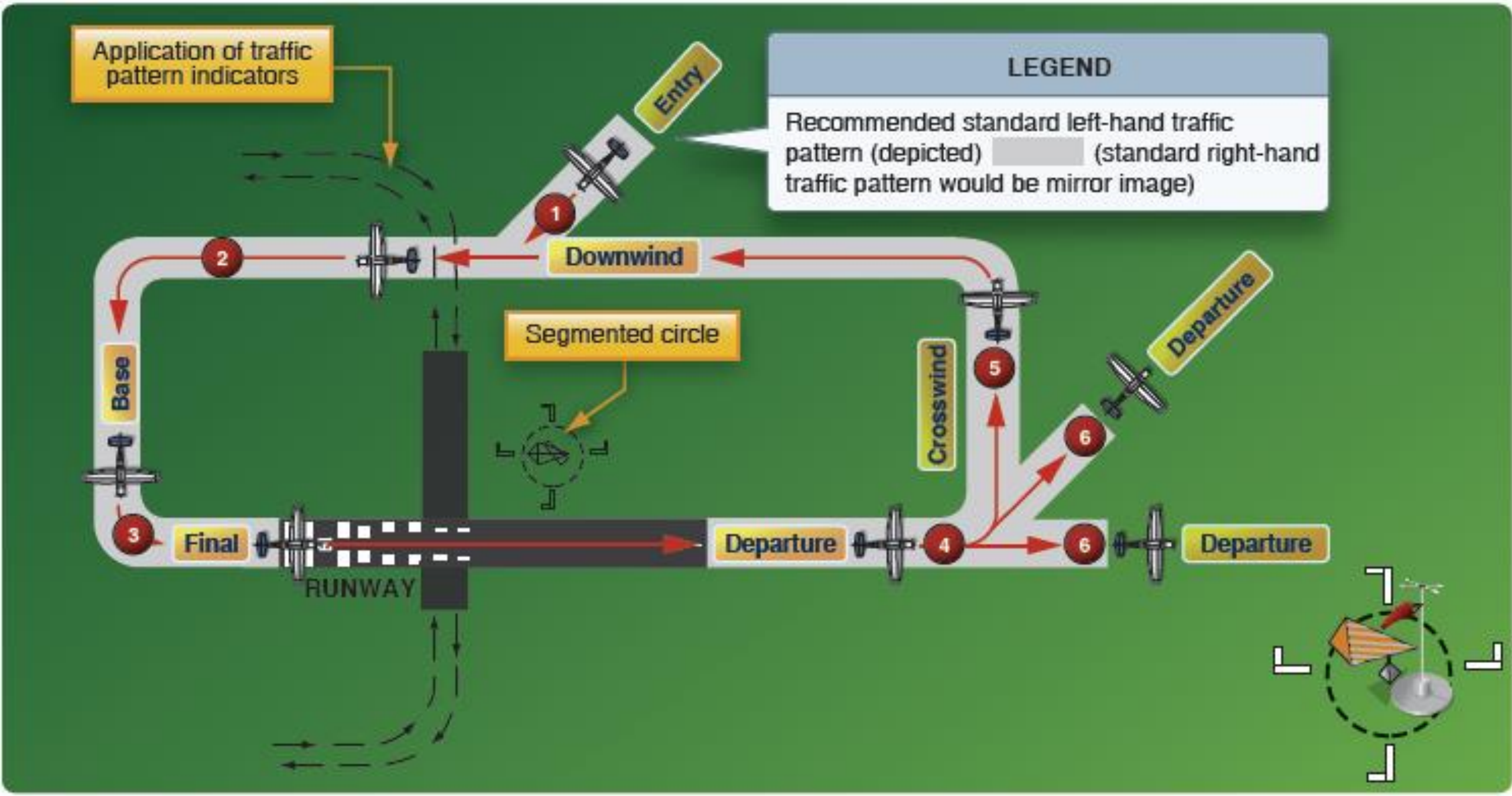
Departing the Pattern. When departing the traffic pattern, airplanes should continue straight out or exit with a 45-degree left turn (right turn for right traffic pattern) beyond the departure end of the runway after reaching pattern altitude. Pilots need to be aware of any traffic entering the traffic pattern prior to commencing a turn. (AC 90-66C/AIM)

If departing the traffic pattern, continue straight out, or exit with a 45-degree turn (to the left when in a left-hand traffic pattern; to the right when in a right-hand traffic pattern) beyond the departure end of the runway, after reaching pattern altitude. (FAA-8083-25C PHAK)

APPENDIX A. TRAFFIC PATTERNS

Single Runway (Diagram from the AIM, Paragraph 4-3-3)




Application of traffic pattern indicators
Entry
LEGEND
Recommended standard left-hand traffic pattern (depicted) (standard right-hand traffic pattern would be mirror image)
1
Downwind
2
Segmented circle
Base
Crosswind
5
Departure
6
3
Final
RUNWAY
Departure
4
6
Departure

(FAA-8083-25B)

NON-TOWERED

COMMUNICATIONS

DO I HAVE TO TALK ON THE RADIO?

DO I HAVE TO LISTEN TO THE RADIO?

DO I EVEN HAVE TO HAVE A RADIO?

WHY, SHOULD I COMMUNICATE ANYWAY?

Risk Management Handbook

U.S. Department of Transportation

Federal Aviation Administration

EVERY OPPORTUNITY TO AVOID HAZARDS, SHOULD BE CONSIDERED IN ORDER TO REDUCE THE RISK OF EACH AND EVERY OPERATION

IF YOU ARE RISK ADVERSE, AMONGST OTHER SAFETY OPPORTUNITIES, YOU SHOULD BE COMMUNICATING.
AND COMMUNICATING MEANS LISTENING AS WELL AS SPEAKING.

Using proper radio phraseology and procedures contribute to a pilot's ability *to operate safely and efficiently in the airspace system.*

A review of the Pilot/Controller Glossary contained in the AIM assists a pilot in the use and understanding of standard terminology. The AIM also contains many examples of radio communications. (AC 90-66C)

“HEY, THEY ARE NOT GOING TO DO THAT AT

AIRPORT!!!!”

“Any decision by an ALJ may be appealed to the FAA Administrator or the NTSB”

(FAA.GOV; OFFICE OF THE CHIEF COUNSEL)

SERVED: August 22, 1994

NTSB Order No. EA-4236

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

DAVID R. HINSON, Administrator, Federal Aviation Administration, Complainant, v. RICHARD A. FEKETE,	)	Dockets SE-13696 and SE-13428

3. While you were flying the base leg for a visual approach to and landing on Runway 10 at MIV, a Robinson R-22 helicopter ("R-22") making practice instrument approaches was on final approach to the same runway.

4. At the time you turned your aircraft onto final approach for Runway 10, you were in front of and at an altitude approximately 100 feet above the R-22.

5. You were aware that the R-22 was making a final approach to Runway 10 at the time you turned your aircraft onto final approach to Runway 10, and that your turn would place your aircraft in the path of the R-22's approach to Runway 10.

6. The R-22 passed under your aircraft and, upon reaching the threshold of Runway 10, changed course to the right of the runway to get clear of your landing aircraft.

7. Your turn from base leg to final approach in the path of the R-22 created a collision hazard endangering the lives and property of others.

8. On or about May 9, 1994, you again acted as pilot in command of N18625, operating in the vicinity of MIV.

9. While you were flying the downwind leg for a visual approach and landing on Runway 28 at MIV on or about May 9, 1994, a Cessna Citation jet aircraft, identification number N40FJ, announced on the frequency that it was turning onto final approach for Runway 28.

10. While you were flying the base leg for Runway 28, you confirmed specifically with the Citation jet via radio that it was on final approach to Runway 28 and then turned your aircraft onto final approach to Runway 28.

11. At the time you turned your aircraft onto final approach for Runway 28, you were in front of and at an altitude higher than that of the Citation jet.

12. You were aware at the time you turned your aircraft onto final approach to Runway 28 that your turn would place your aircraft in the path of the Citation jet's approach to Runway 28.

13. The Citation jet abandoned its approach and performed a "go-around" to avoid colliding with your aircraft.

14. Your turn from base leg to final approach in the path of the Citation jet created a collision hazard endangering the lives and property of others.

……..respondent had violated sections 91.113(g), 91.111(a), and 91.13(a) of the Federal Aviation Regulations("FAR," 14 CFR Part 91) and that the violations demonstrated that the respondent lacks the care, judgment, and responsibility required of a certificate holder.[4] We deny the appeal.

CONCLUSION:

UNLESS IT IS AN EMERGENCY, IF YOU TURN IN FRONT OF ANOTHER AIRCRAFT, EVEN IF YOU ARE CLOSER TO THE AIRPORT AND ON BASE, BEING UNHAPPY ABOUT SOMEONE THAT DID NOT ENTER THE PATTERN IN THE PRESCRIBED MANNER, AND CUT THEM OFF, THAT IS A VERY HAZARDOUS AND DANGEROUS ATTITUDE AND COULD LEAD TO CERTIFICATE REVOCATION AS HAPPENED IN OUR INSTANT CASE..

AND WHEN THEY SAY IT WAS A CERTIFICATE REVOCATION, THAT MEANS IT'S BYE BYE AS IN GONE!

LET'S BE SAFE, VIRTUOUS AIRPORT USERS & SHOW OTHER PILOTS RESPECT WHETHER THEY DESERVE IT OR NOT.

ON THE GROUND IS A DIFFERENT PLACE, AND TRY TO BE POLITE.

BUT JUST WHAT DO I

SAY ON THE RADIO?

SHORT ANSWER:

YOU SAY WHATEVER IT IS YOU WOULD LIKE TO KNOW IF YOU WERE A PILOT LISTENING, SAID IN THE PROPER FORMAT.

AND REMEMBER, OTHER PILOTS MAY BE INBOUND TO LAND, DEPARTING THE PATTERN, BE ON A PRACTICE INSTRUMENT APPROACH, FLYING AROUND THE LOCAL AREA, WAITING TO DEPART, REMAINING IN THE TRAFFIC PATTERN, DEPARTING THE PATTERN, ETC.

WHO WE ARE

WHERE WE ARE (3D)

WHAT WE WOULD LIKE TO DO

ANYTHING SPECIAL

WHAT DO & DON'T WE SAY ON THE RADIO?

EXAMPLE:

“MORON”,

IS NOT IN THE PILOT/CONTROLLER GLOSSARY

TO HELP ACHIEVE THE GREATEST DEGREE OF SAFETY, IT IS ESSENTIAL THAT:

All radio-equipped aircraft transmit/receive on a common frequency identified for the purpose of airport advisories, as identified in appropriate aeronautical publications.

Pilots use the correct airport name, as identified in appropriate aeronautical publications, when exchanging traffic information to reduce the risk of confusion. For example, using “Midwest National Traffic” instead of the town name “Mosby Traffic” or “Clay County Traffic” at KGPH when the airport name is printed “Midwest National” on aeronautical charts.

Pilots clarify intentions if a communication sent by either their aircraft or another aircraft was potentially not received or misunderstood.
(AC 90-66C/AIM, paraphrasing)

TO HELP ACHIEVE THE GREATEST DEGREE OF SAFETY, IT IS ESSENTIAL THAT (continued):

Pilots limit communications on CTAF frequencies to safety-essential information regarding arrivals, departures, traffic flow, takeoffs, and landings. The CTAF should not be used for personal conversations. BE PRUDENT.

Pilots should not broadcast their assumed number in the landing sequence when transmitting their position in the pattern. This is the responsibility of ATC at towered airports.

NON-STANDARD Terminology should be avoided. And the aviation communication radio is not a CB radio nor is it your chance to audition for Stairway to the Stars…..

Self-Announce Position and/or Intentions. "Self-announce" is a procedure whereby pilots broadcast their aircraft call sign, position, altitude, and intended flight activity or ground operation on the designated CTAF.

Pilots should use the published CTAF to self-announce position and/or intentions when entering within 10 miles of the airport.

Self-announce transmissions may include aircraft type to aid in identification and detection. Paint schemes and color or style descriptions may be added to the use of the aircraft call sign and type**, but should not replace type or call sign**. For example, "MIDWEST TRAFFIC, TWIN COMMANDER FIVE ONE ROMEO FOXTROT TEN MILES NORTHEAST" or "MIDWEST TRAFFIC, FIVE ONE ROMEO FOXTROT TWIN COMMANDER TEN MILES NORTHEAST."

When referring to a specific runway, **pilots should use the runway number and *not use the phrase* "Active Runway,"** because there is no official active runway at a non-towered airport. To help identify one airport from another when sharing the same frequency, the airport name should be spoken at the beginning and end of each self-announce transmission.

IMPORTANCE OF PROPER POSITION REPORTS

WHERE AM I??

TO HELP ACHIEVE THE GREATEST DEGREE OF SAFETY, IT IS ESSENTIAL THAT (continued):

AVOID CONFUSING LANGUAGE. To avoid misunderstandings, pilots should avoid using the words “to” and “for” whenever possible. I.E. What does “I’m 10 north heading to for INF.”

The use of the phrase “ANY TRAFFIC IN THE AREA, PLEASE ADVISE” is not a recognized self-announce position and/or intention phrase and should not be used under any condition. Any traffic that is present at the time of your self-announcement that is capable of radio communications should reply without being prompted to do so.

******IF YOU SEE SOMETHING, SAY SOMETHING. YOU ARE AN IMPORTANT PART OF THE OVERALL SAFETY CIRCLE******

DISAGREEMENTS

PLEASE do not correct other pilots on frequency (unless it is safety critical), particularly if you are aware you are correcting a student pilot. If you disagree with what another pilot is doing, operate your aircraft safely, communicate as necessary, clarify their intentions and, if you feel you must discuss operations with another pilot, wait until you are on the ground to have that discussion. Keep in mind that while you are communicating, you may block transmissions from other aircraft that may be departing or landing in the opposite direction to your aircraft due to IFR operations, noise abatement, obstacle avoidance, or runway length requirements. An aircraft might be using a runway different from the one favoring the prevailing winds. In this case, one option is to simply point out the current winds to the other pilots and indicate which runway you plan on using because of the current meteorological conditions. (AC 90-66C)

Radio Technique

LISTEN before you transmit. Many times you can get the information you want through ATIS/AWOS or by monitoring the frequency. Except for a few situations where some frequency overlap occurs, if you hear someone else talking, the keying of your transmitter will be futile and you will probably jam their receivers causing them to repeat their call. If you have just changed frequencies, pause, listen, and make sure the frequency is clear.

THINK before keying your transmitter. Know what you want to say and if it is lengthy; e.g., a flight plan or IFR position report, jot it down.

SPEAK in a normal, conversational tone. No Broadway premiers please.

(AC 90-66C/AIM/paraphrase)

Radio Technique (continued)

Be alert to the sounds *or the lack of sounds* in your receiver. Check your volume, recheck your frequency, and *make sure that your microphone is not stuck* in the transmit position. Frequency blockage can, and has, occurred for extended periods of time due to unintentional transmitter operation. This type of interference is commonly referred to as a “stuck mike,”

Be sure that you are within the performance range of your radio equipment and the ground station equipment. Remote radio sites do not always transmit and receive on all of a facility's available frequencies, particularly with regard to VOR sites where you can hear but not reach a ground station's receiver. Remember that higher altitudes increase the range of VHF “line of sight” communications.

- **Tune and verify radio frequencies before entering the airport traffic area.**
- **Monitor the correct Common Traffic Advisory Frequency (CTAF).**
- **Report position 10 miles out and listen for reports from other inbound traffic.**
- **At a non-towered airport, report entering downwind, turning downwind to base, and base to final.**
- **Descend to traffic pattern altitude before entering the pattern.**
- **Maintain a constant visual scan for other aircraft!!!!**
- **Be aware that there may be aircraft in the pattern without radios.**
- **Use exterior lights to improve the chances of being seen.**
- **Defuse, in lieu of lighting a fuse.**
- **Be respectful and a good neighbor**

Summary

The volume of traffic at an airport can create a hazardous environment. Airport traffic patterns are procedures that improve the flow of traffic at an airport and enhance safety when properly executed. Most reported mid-air collisions occur during the final or short-final approach leg of the airport traffic pattern.


WINGS Pilot Proficiency Program

Pilots who participate in regular proficiency training are much less likely to experience accidents.

FEDERAL AVIATION ADMINISTRATION

#FlySafe

The FAA WINGS Program

The objective of the WINGS Program is to address the primary accident causal factors that continue to plague the general aviation community. By focusing on this objective, we hope to reduce the number of accidents we see each year for the same causes. As you will see, it is not a simple "Award" program but is instead a true proficiency program, designed to help improve our skills and knowledge as pilots.

The *WINGS* - Pilot Proficiency Program is based on the premise that pilots who maintain currency and proficiency in the basics of flight will enjoy a safer and more stress-free flying experience.

THE WINGS PROGRAM IS BASED AT

www.FAASAFETY.GOV

Complete any phase of **WINGS** to satisfy the requirement for a **flight review.**

FEDERAL AVIATION ADMINISTRATION

#WINGScredit

FAASafety.gov

WINGS Sweepstakes

WINGS
Industry Network

E-Z WINGS

Login FAA *WINGS*

Request Credit

Validate Requested Credit

Give Credit

WINGS CREDIT IS AVAILABLE WHEN YOU TAKE AN FAA PRACTICAL TEST AS WELL!

ASK YOUR DPE FOR CREDIT!

SIMPLY GO TO –

www.ezwings.net

PARTICIPATING IN THE FAA'S WINGS PROGRAM IS EZ!

1. GO TO FAASAFETY.GOV

2. OPEN YOUR FREE ACCOUNT

3. SEARCH FOR WHAT YOU MAY HAVE AN INTEREST IN

4. BE CERTAIN TO ALWAYS USE THE SAME EMAIL ADDRESS

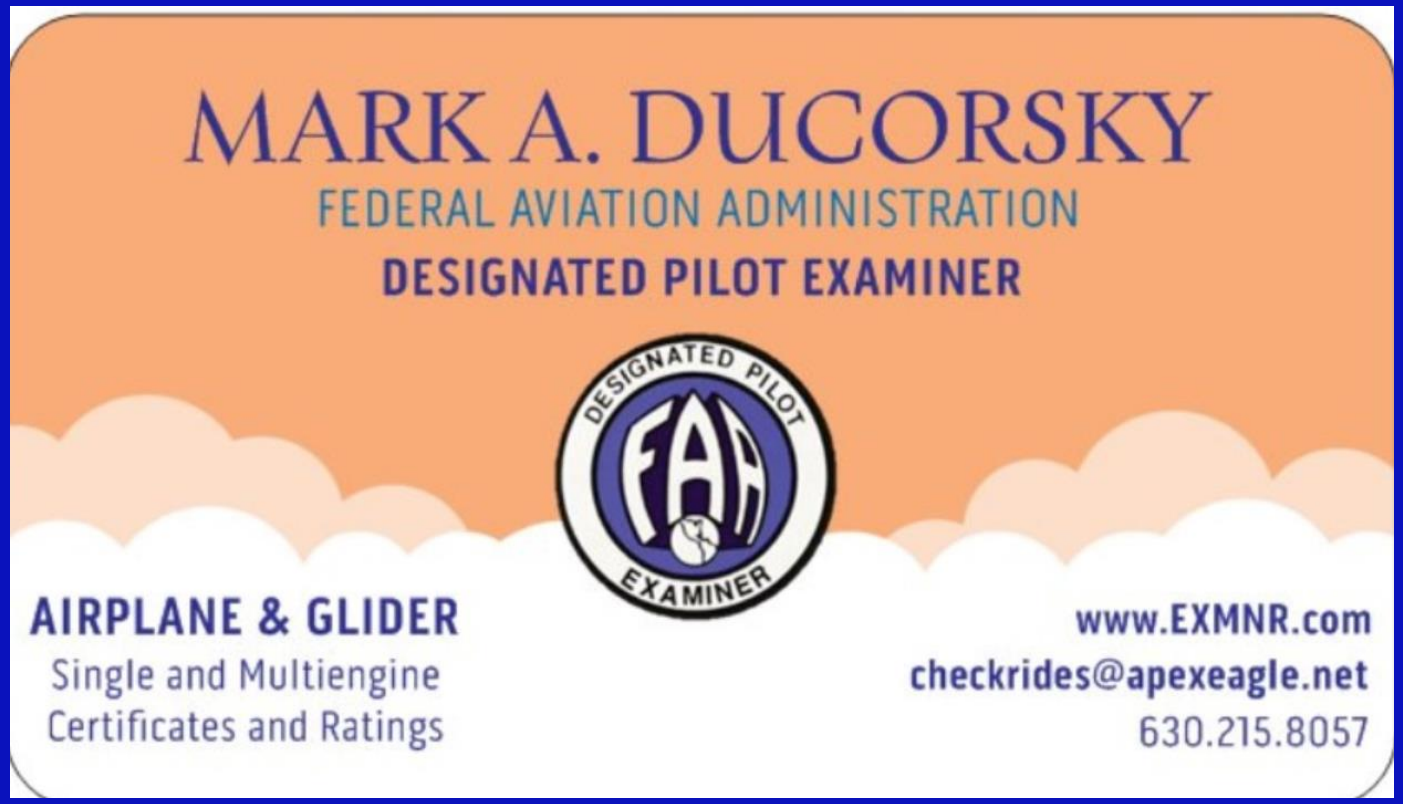
THAT'S IT!

Thank you for attending this WINGS seminar!

Questions??

Enjoy your WINGS CREDIT which will be issued after the conclusion of the webinar.

FAA Safety Team



www.exmnr.com

Mark.Ducorsky@apexeagle.net