



Mooney Caravan XXII



General Briefing
July 19, 2019 at Madison, WI



Nimis Brevis Vita Est Volare Tarde



Introduction



- **TIME HACK** – Synchronize to establish radio check-in time
- **ROLL CALL:**
 - Mooney Lead: [REDACTED]
 - Alternate Lead: [REDACTED]
 - Element Leaders: In Sequence
Bravo through Whiskey
 - Mooney Tail: [REDACTED]



Fisk Arrival



Mass Arrival

Nimis Brevis Vita Est Volare Tarde



Lineup



Section 1 - Red (23 aircraft)

	#3 (Left Wing)			Lead			#2 (Right Wing)	
A	N5660Q	E		N808WM	R		N5726Q	C
B	N201QH	J		N6949V	F		N6961V	F
C	N943RW	E		N1079B	K			
D	N1909Y	C		C-FSWR	E		N252AP	K
E	N33ZZ	C		N5280J	J		N242MD	R
F	N231CH	K		N112DB	J		N205MH	J
G	N4361H	J		C-FQKM	C		N619BL	TN
H	N2014U	J		N9932S	J		N9244M	E



Lineup



Section 2 - White (22 aircraft)

	#3 (Left Wing)		Lead		#2 (Right Wing)	
I	N52611	J	N58086	J	N11MH	J
J			N9618V	F	N3215F	E
K	N231DH	K	N1068A	J	N57986	J
L	N6909N	C	N252AD	K	N341BE	M
M	N6715N	C	N79840	E	N7074V	C
N	N5816Q	C	N6896N	C		
O	N755FM	K	N201CK	J	N4224N	F
P	N369RP	J	N202PC	J	N79339	R



Lineup



Section 3 - Blue (20 aircraft)

	#3 (Left Wing)		Lead		#2 (Right Wing)	
Q	[REDACTED] N1084L	J	[REDACTED] N3089U	K	[REDACTED] N6716U	C
R	[REDACTED] N205VV	J	[REDACTED] N6924U	E	[REDACTED] N201MB	J
S	[REDACTED] N2165K	M	[REDACTED] N4583H	J	[REDACTED] N7462V	F
T	[REDACTED] N201XG	J	[REDACTED] N252RD	K	[REDACTED] N8871P	PA24 250
U	[REDACTED] N477T	F	[REDACTED] N201UT	J	[REDACTED] N201NU	J
V	[REDACTED] N8345P	PA24 250	[REDACTED] N300RA	M		
W	Kevin Kammer N197CV	U	Larry "Joker" Brennan N9201A	J		
Tail			[REDACTED] C_GWFJ	K		



Mission Overview



PRIMARY MISSION

- Safely and professionally execute a formation flight from KMSN to KOSH

MISSION ESSENTIALS

- Understand the procedures (get answers before the flight)
- Execute as briefed
- Maintain flight discipline at all times
- Clear, concise, professional communication (essentials only)

SECONDARY OBJECTIVES

- Demonstrate the skill and professionalism of Mooney Caravan pilots
- Arrive in style! (make it look easy)
- HAVE FUN!

THREATS

- All other aircraft! (uncontrollable - stay vigilant)
- Our own buffoonery (controllable by knowledge and discipline)
- Unanticipated complications (controllable by planning)



Mission Timeline



EVENT	TIME	
Pilot Briefings	Friday 16:00 Friday 17:00	Element Leads & Tail <u>Only</u> (required) <u>All</u> Caravan Pilots (required)
Element Brief	09:20	Within-element planning, Q&A
Step	09:50	Out to the airplanes, preflight checks
Check In	10:10	Establish comms on Mooney Freq
Taxi & Runup	10:20	Reposition flight to T/O runway
Takeoff	10:50	Launch the Mooney Caravan
Land	11:30	Arrive Whitman Regional (in style)
DEBRIEF	13:30	Debrief 2 hours after landing



Radio Frequencies



Facility	Frequency	When?
<i>Mooney Mission Freq</i>	123.55	On primary radio AT ALL TIMES
Madison ATIS	124.65	Before engine start (copy)
Madison Ground	121.90	Before check-in (monitor)
Madison Tower	119.30	During taxi (monitor)
Madison Departure	120.10	After takeoff (monitor, if able)
Oshkosh Arrival ATIS	125.90	Lead will relay ATIS
Oshkosh Tower - Runway 18/36	126.60	Enroute (monitor), OR
Oshkosh Tower- Runway 9/27	118.50	Enroute (monitor)
Mooney Backup Freq	123.35	Only if directed



Mooney Lead Responsibilities



As with all Formation Flights....

The Flight Lead is ultimately responsible for the safe and effective conduct of the mission

- Plan and Brief the Mission (with some help)
- Execute the Mission - direct all maneuvers
- Clear for the Formation - ensure a safe flight path
- Handle Contingencies - modify the plan as needed
- Navigate - fly the planned route, speed and altitude
 - Fly the **Magenta Line**
- Communicate - handle ALL ATC
- Lead the debrief at the conclusion of the mission



Section Lead Responsibilities



The Mooney Caravan will be configured into a number of Sections each consisting of up to nine 3-ship elements. Additional spacing is introduced between sections to absorb compression.

A Section Lead is an Element Lead with Additional Duties

- Plan for an alternate destination in the event of a divert
- Review mission plan and alternate plan with element leads
- Lead the section to Oshkosh and maintain SA on flight progress
- Fly a smooth and stable platform (on speed, altitude and track)
 - With greater spacing, a Section Lead may lose sight (haze)
 - Accurate navigation on planned track essential
 - Fly the **Magenta Line**
- Make **position reports** airborne and over enroute waypoints
- If directed by Mooney Lead...
 - Lead the section to a safe recovery at the alternate destination
 - Assume duties as Flight Lead for navigation and communication



Element Lead Responsibilities



In addition to leading their wingmen, Element Leads have the essential responsibility for maintaining consistent in-trail spacing between elements during the mission.

Element Leads are the Backbone of the Mooney Caravan

- Review mission plan and alternate plan with wingmen
 - Ground ops as well as flight details
- Answer wingmen's questions (or, get answers)
- Lead the element to Oshkosh and maintain SA on flight progress
- Fly a smooth and stable platform (on speed, altitude and track)
 - Fly the **Magenta Line**
- Maintain in-trail spacing from preceding element
 - Keep preceding element(s) in sight
 - Make spacing adjustments in turns using **geometry**
 - Know power settings beforehand - minimize throttle adjustments
- Clear for the formation and report factor traffic

"Echo has traffic, 2-o'clock above"



Wingman Responsibilities



As with all Formation Flights....

The wingman's primary responsibility is to maintain flight path deconfliction and proper position as directed by Lead

- **DO NOT HIT YOUR ELEMENT LEAD**
- **KEEP LEAD IN SIGHT - KEEP EYES ON LEAD**
 - May look away briefly (a few seconds) only while in route
 - Do a quick Ops Check each time Lead puts you in route
- Be There - In position and on frequency
- Clear for the formation (look "through" lead) and report threats
 - "Echo has traffic, 2-o'clock above"*
- Execute the plan as briefed
- Stay with your element Lead and follow his/her directives



Weather / Airfield Status



- **Madison (KMSN)**
 - **Current Observation**
 - **Takeoff Weather**
 - **Airfield Status**
 - **Expected Takeoff Runway**
 - **Factor NOTAMs**
- **Enroute WX:**
- **Oshkosh (KOSH)**
 - **Current Observation**
 - **Arrival Weather**
 - **Airfield Status**
 - **Expected Arrival Runway**
 - **Factor NOTAMs**

ALL PILOTS MUST HAVE A COPY OF OSHKOSH ARRIVAL NOTAM!



Go/ No Go Decision Tool



Condition	Go	Caution	No Go
Ceiling	3,000' +	2,000'-3,000'	<2,000
Visibility	5+ miles	3-5 miles	<3 miles
Precipitation	None	Scattered	Solid
Forecast Trend	Improving or Steady	Deteriorating	IFR soon
Takeoff Crosswind	<8 KTS	8-12 KTS	>12 KTS
Takeoff Tailwind	<5 KTS	5-10 KTS	>10 KTS
Landing Runway	36L & 36R	36L	9-27 or 18
Landing Crosswind	<8 KTS	8-12 KTS	>12 KTS
Landing Tailwind	<5 KTS	5-12 KTS	>12 KTS
Gusts	<5 KTS	5-10 KTS	>10 KTS
Field Conditions	Clear and Dry	Damp	Muddy

All Green: Low Risk, fly as planned

Yellow: Medium Risk, address factor(s) as appropriate. Mitigate risk factor(s) by mission delay, runway change, and/or mission profile change. Brief contingency plans to mitigate any yellow category risk. Proceed with caution.

Single Red: Higher Risk. Mitigate risk to place in yellow or green by mission delay, runway change, and/or mission profile change. If addressed, brief risk issue and contingency plan.

Multiple Red: High Risk. Hold Mission. Flight Operations to assess methods to reduce risk, hold, or cancel mission.



MSN Ground Ops - Showtime



Preflight: Upon arrival at MSN from the hotel

Element Brief: Plane side at **09:20** complete by **09:50**

Step: 09:50 (Horn Blast)

- Board, strap in, pre-start checks
- Plan your engine start time as necessary to BE THERE for check-in
- Set Mooney Frequency **123.55** on primary radio ASAP (and forget it)
- Monitor MSN Ground **121.9** on secondary radio
- **Radio Check-In: 10:10 on 123.55**
- *"Mooney Flight Check, Alpha One", "Alpha Two", "Alpha Three", etc.*

Aircraft Configuration

- Transponder: **OFF**
- Flaps: **PILOT'S DISCRETION** (Interval Takeoff)
- Lights: **ALL ON** (except Element Lead Strobes)
- Altimeter: **887'** (not ATIS altimeter setting)
- Mixture: **LEAN** (as appropriate in your airplane for long taxi)
- Documents: **AT HAND** (mission data, GAC/GAP signs, NOTAM, etc)

BE ON MOONEY FREQUENCY 123.55 AT ALL TIMES



MSN Ground Ops

Mooney Lead requests Taxi Clearance

- **10:20** (30 mins before takeoff)

Expected Runway **3/21**

- Runway 14/32 closed
- Tower will prefer that we not use 18/36

Elements Taxi **IN SEQUENCE**

- Section Leads will guide taxi flow
- Know the plane you are following!
- Lead taxi speed-limit is 12 kts
- Maintain 1 ship-length in trail (**tight**)
- Slow into turns

Runway 3

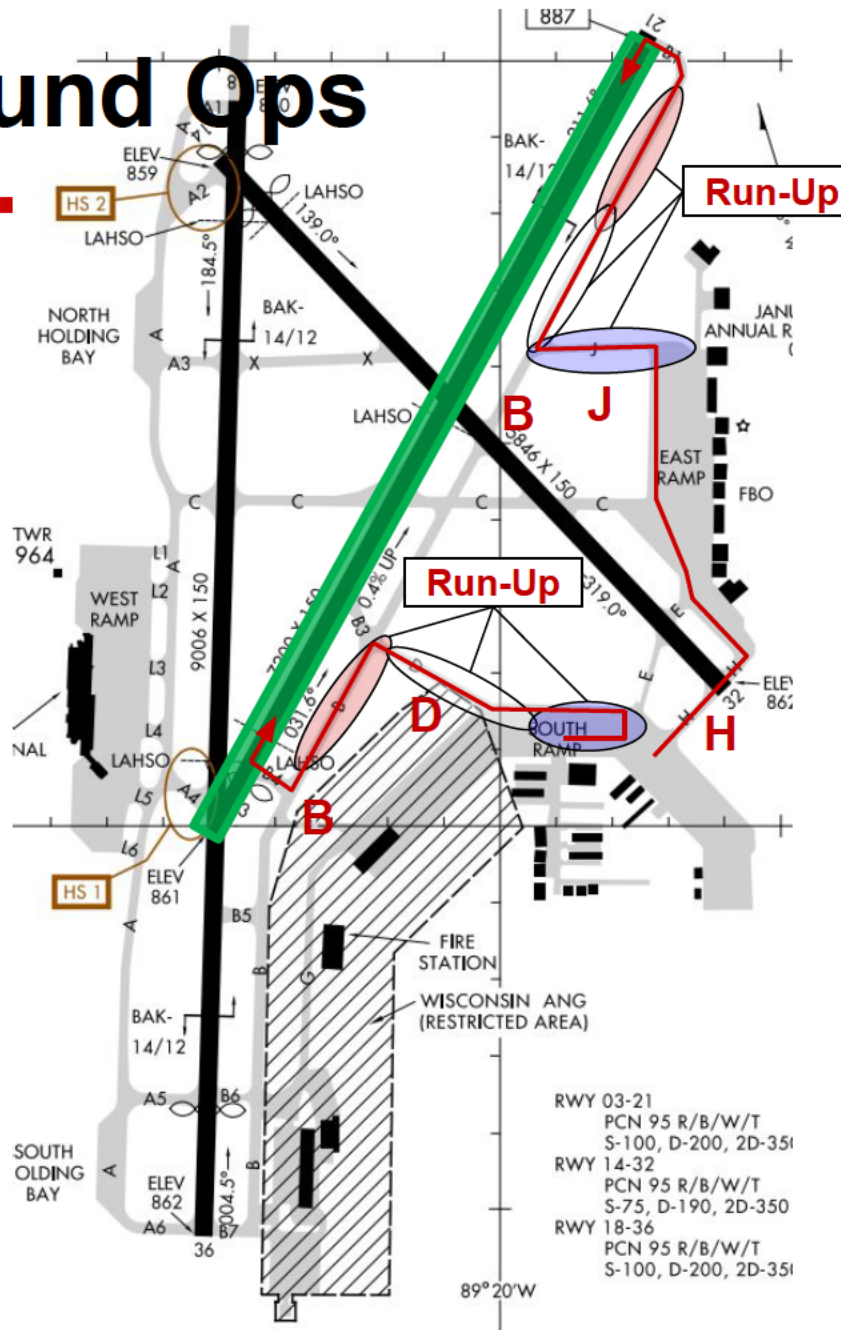
- Expect taxi via **D, B** to hold short at **B4**

Runway 21

- Expect taxi via **H, East Ramp, J, B**

Upon Reaching

- Conduct your normal run-up





MSN Ground Ops - Run-Up



Approaching Run-Up Position

- **Anticipate** turn to position
- **No overlap** of wingtips (leave an "out")
- Turn **45° toward runway**
- "Sit" **on Centerline**

Upon Reaching Run-Up Position

- Perform **normal** run-up (plenty of time)
- No signal or radio call to begin run-up
- Pass thumbs-up from 3 to 2 to Element Lead
- Monitor MSN Tower on **119.3**

Mooney Tail: *"Mooney Tail Run-Up Complete"*

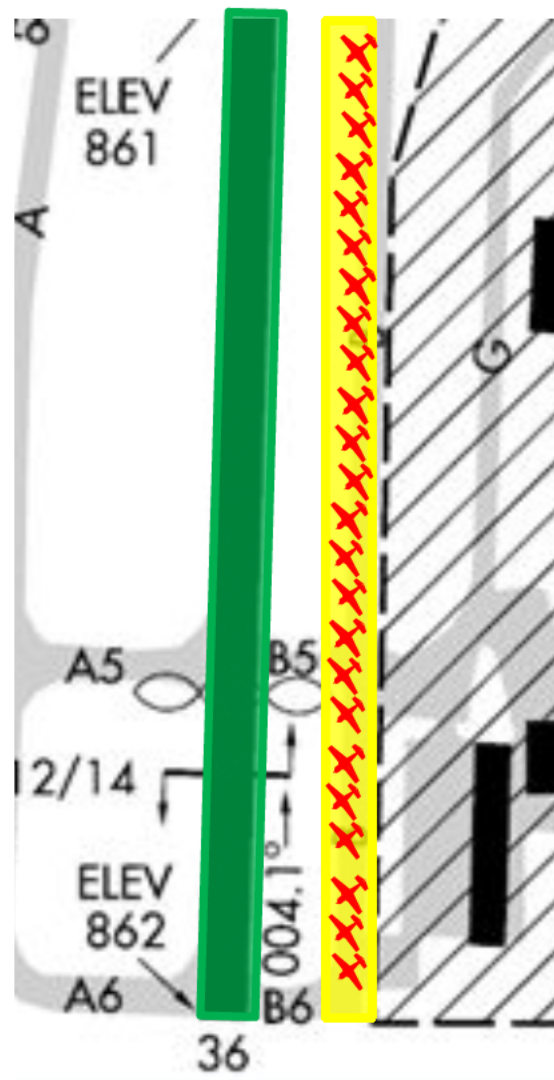
Mooney Lead: *"Mooney Flight Ready, "Alpha"*

Element Leads (in sequence):

"Bravo", "Charlie", "Delta", etc.

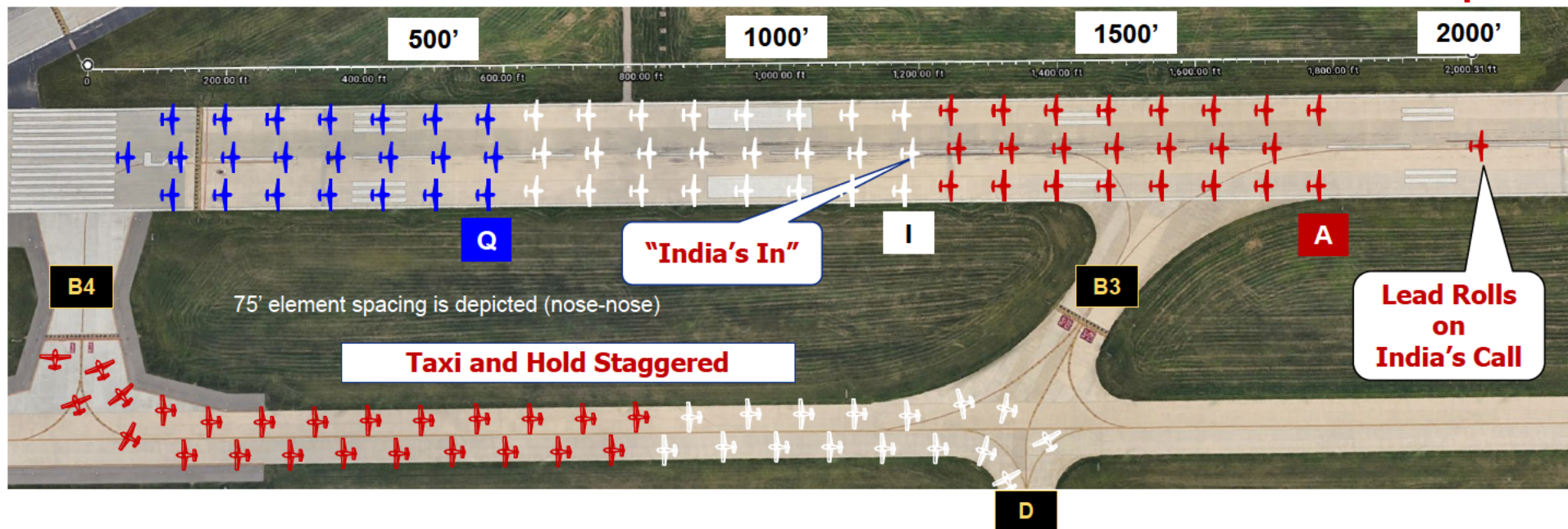
Maintain Radio Discipline

Resist temptation to add extra words but speak up **if there is a problem** or more time is needed





Runway 3 Lineup



Taxi via D, B to hold short at B4 in **staggered formation** after runup complete
When Cleared for Takeoff, taxi on and forward. Section leads: **know expected position**

Red Lead: Where B3 taxiway line joins runway centerline

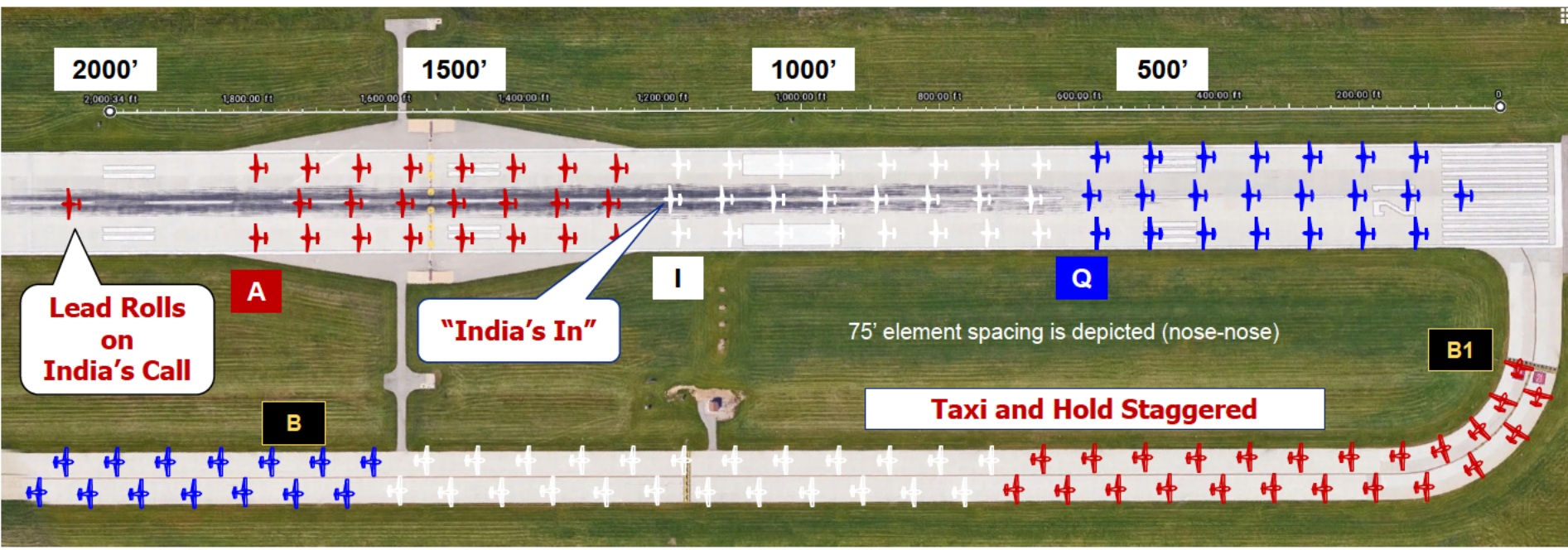
White Lead: Midway between 1000' and 1500' stripes

Blue Lead: Approx midway between 500' and 1000' stripes

Lead starts takeoff roll when India element (White section lead) takes their mark



Runway 21 Lineup



Taxi via H, East Ramp, J, B to hold short at B1 in **staggered formation** after runup complete
When Cleared for Takeoff, taxi on and forward. Section leads: **know expected position**

Red Lead: At far end of runway flare

White Lead: Beyond 1000' stripes (captain's bars)

Blue Lead: Beyond 500' stripes

Lead starts takeoff roll when India element (White section lead) takes their mark



Interval Takeoff

Start Takeoff Roll on Time

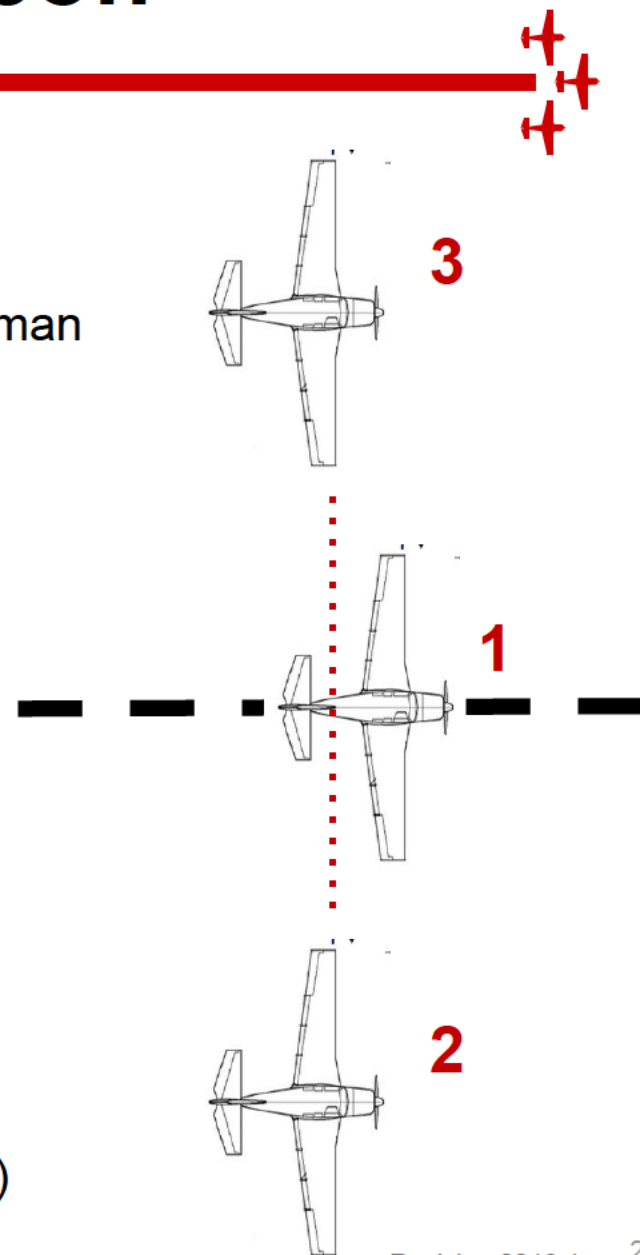
- Wingmen: **5 seconds** after previous ship
- Element Leads: **15 seconds** after previous lead
 - Or, as soon as **safe** after prior-element wingman
- Section Leads: **30 seconds** after previous lead

Takeoff Roll

- **Normal** takeoff (you are single ship for t/o)
- Maintain your runway lane

Initial Climbout

- Gear-Up, Flaps Up, Expect Wake/Vortices
- Leads:
 - Establish **100 kts, 500 ft/min** climb
 - Establish wind correction
 - Maintain ground track - **Magenta Line**
- Wingmen:
 - **Keep Lead in Sight**
 - Establish airspeed advantage (+10 kts)
 - Get seen by lead ASAP (don't fly on lead's 6)

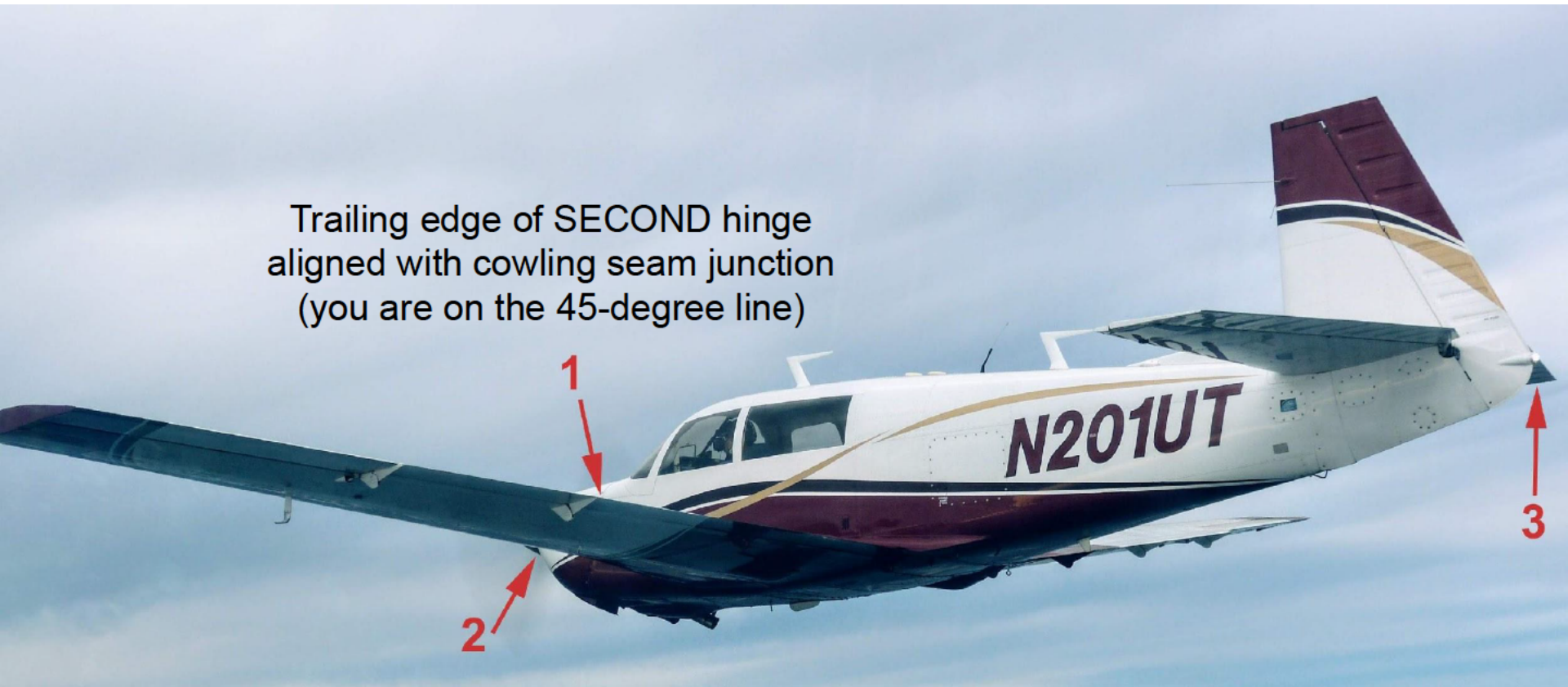




Mooney Caravan Standards



Fingertip Position



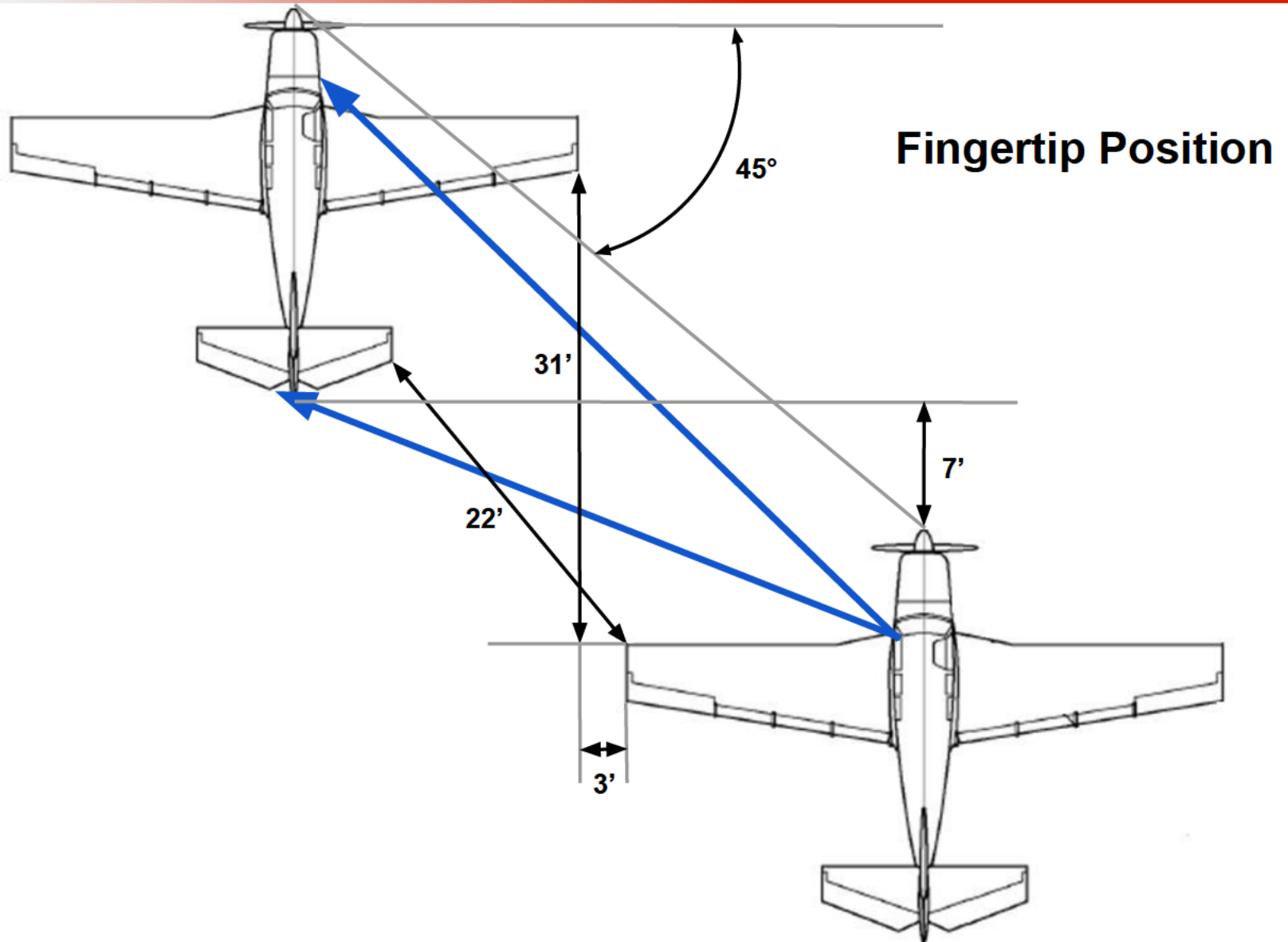
Trailing edge of SECOND hinge
aligned with cowling seam junction
(you are on the 45-degree line)

Spinner just visible below the wing
(you are below Lead)

At least some opposite-side elevator visible
(you are behind Lead)



Mooney Caravan Standards





Mooney Caravan Standards



Route Position



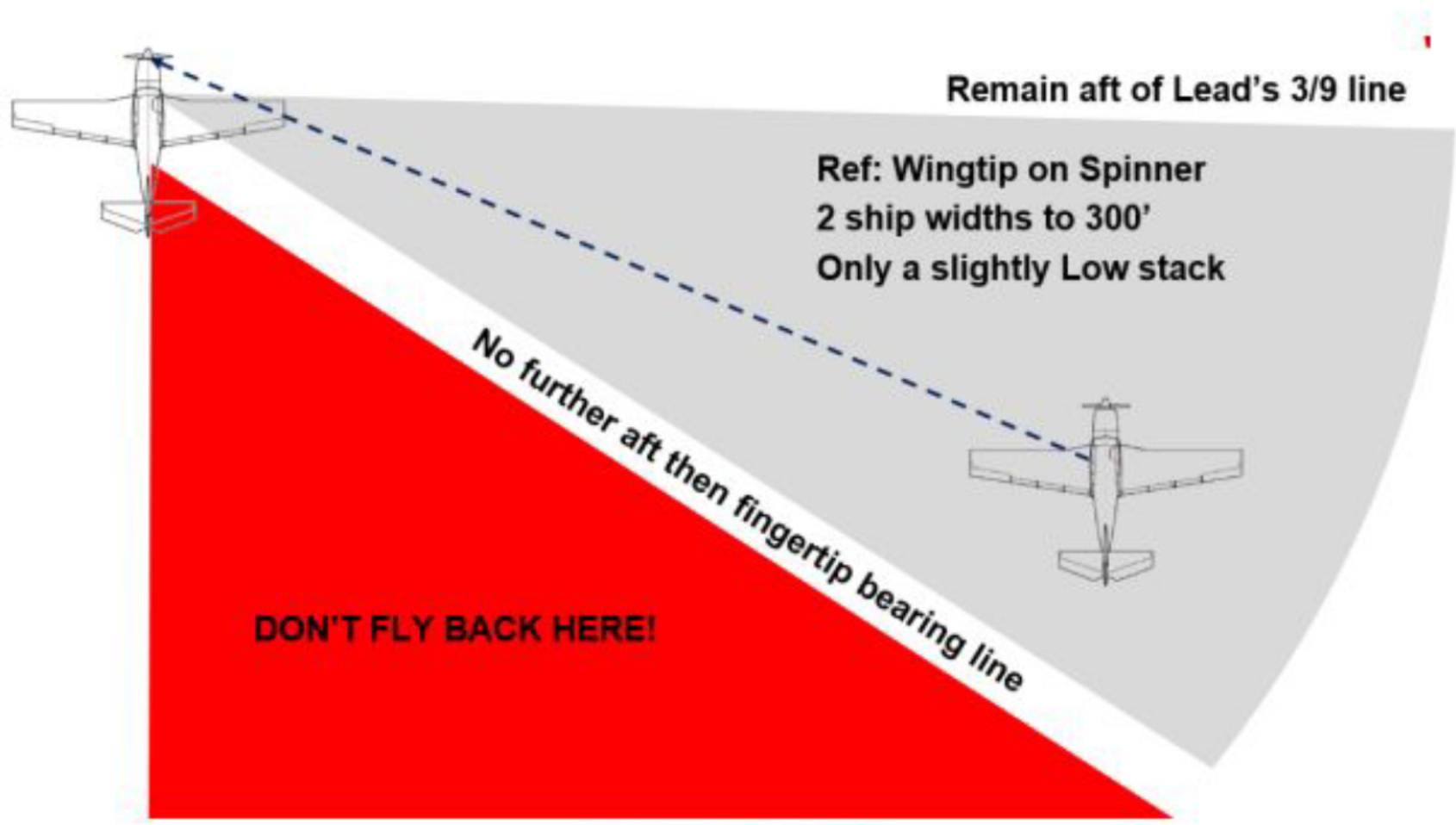
WINGTIP ALIGNED WITH SPINNER
2-4 WINGSPANS SEPARATION
(More acute and less stack down than fingertip)



Mooney Caravan Standards



Route Position





Mooney Caravan Standards



Element Landing Position



WINGTIP ALIGNED WITH COWLING SEAM
LEAD'S HEAD ON HORIZON
10 FEET WINGTIP SEPARATION MINIMUM
(More acute but **wider** than fingertip. Level stack.)



Element Rejoin

Lead Climbs Straight-Out

- **100 kts, 500 ft/min**

Wingmen Maintain Airspeed Advantage

- +10 kts
- Prioritize **airspeed** over altitude

Maintain Your Side

As Closure Becomes Visible...

- Establish lateral spacing (**route** distance)
- Continue moving **forward, parallel** to lead
- Reduce power/airspeed approaching bearing line
- **Stabilize** in route position

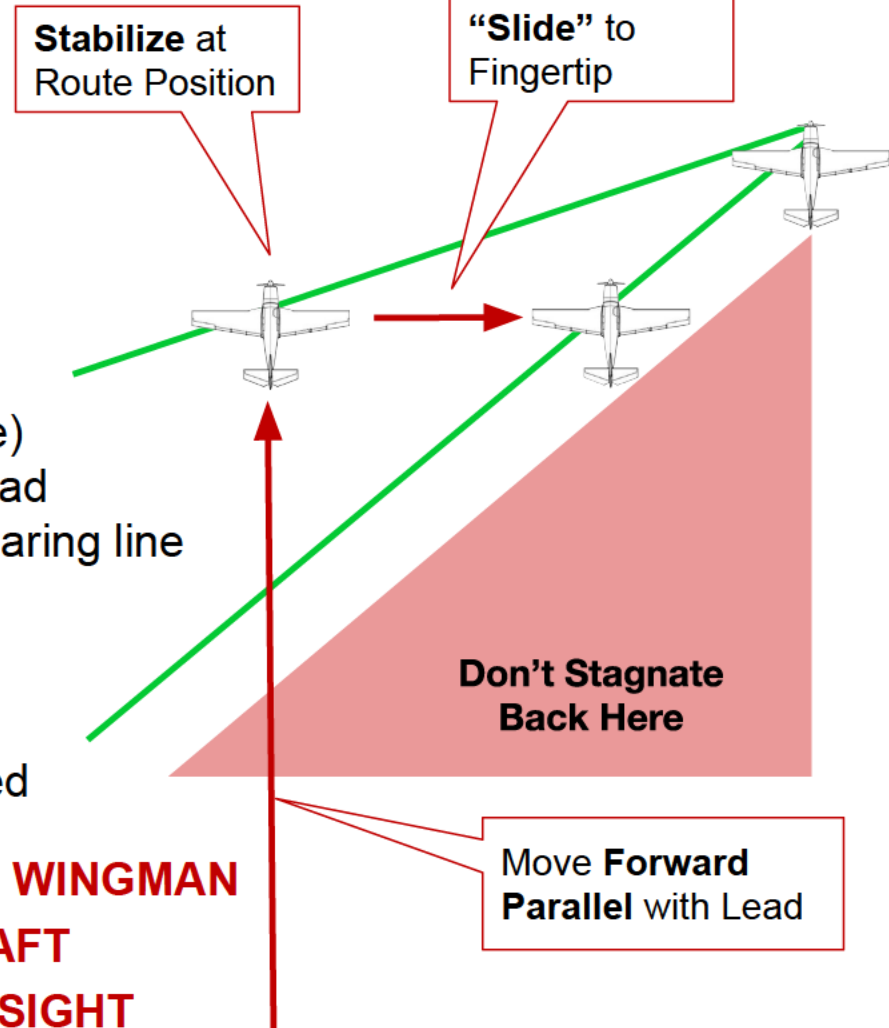
When Stabilized in Route...

- **Close** to fingertip position with rudder
- Little, if any, power adjustment is required

** **FLY OFF OF LEAD, MONITOR PRECEDING WINGMAN**

** **ALWAYS STAY BEHIND PREVIOUS AIRCRAFT**

** **MAINTAIN ALL PRECEDING AIRCRAFT IN SIGHT**





MSN Area Departure



Element Leads

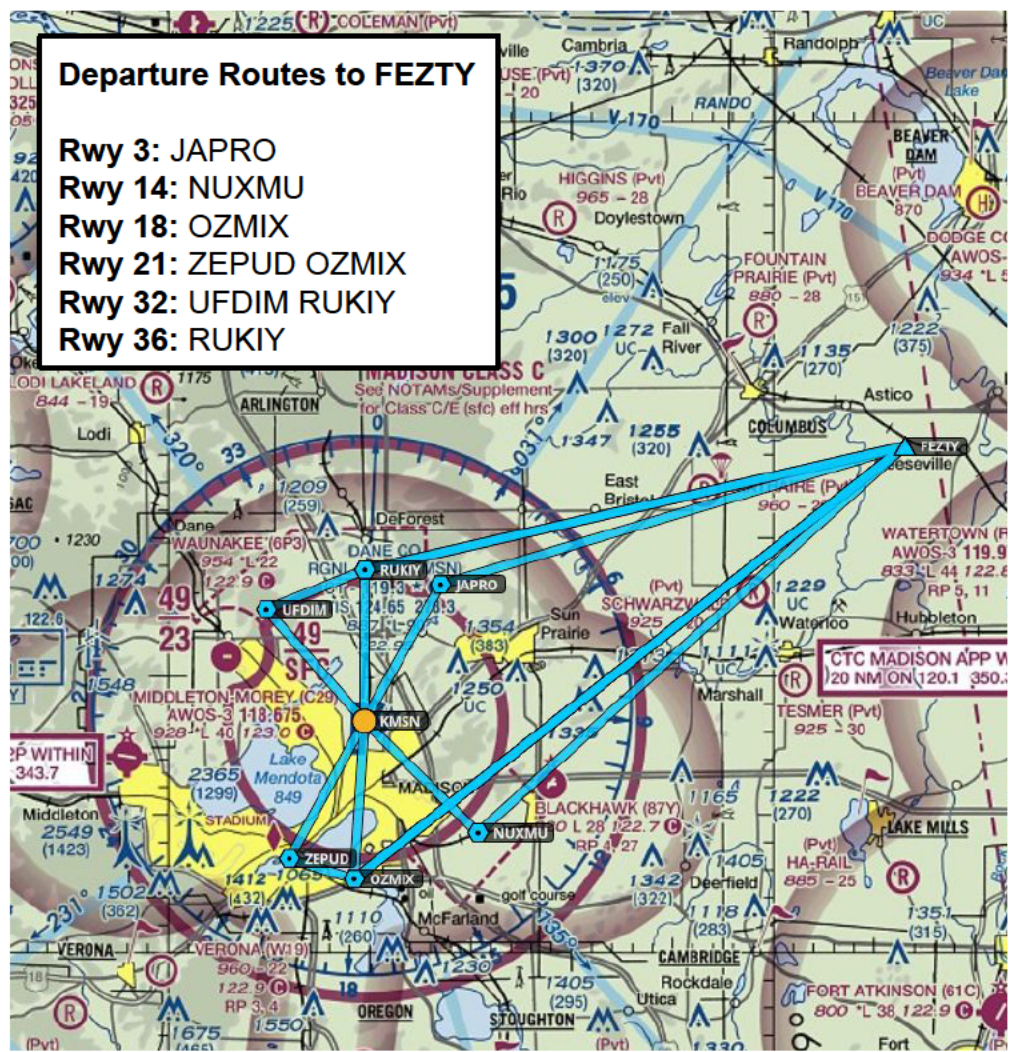
- Climb straight out
- **Magenta Line** to Departure Fix
- **100 KIAS, 500 ft/min**
- Know your power setting
- Maintain spacing
 - Use **geometry** in the turns
- Level at **2500 MSL**

Wingmen

- Keep Lead In Sight
- Rejoin on Lead
- Prioritize airspeed over altitude
- Keep up with Lead!

First Turn at Departure Fix

- Continue climbing to **2500 MSL**
- Gentle turns toward FEZTY
- Make Fingertip Turn





Enroute

Establish Level at 2500 MSL

Maintain 100 KIAS

Mooney Tail Reaches 2500 MSL

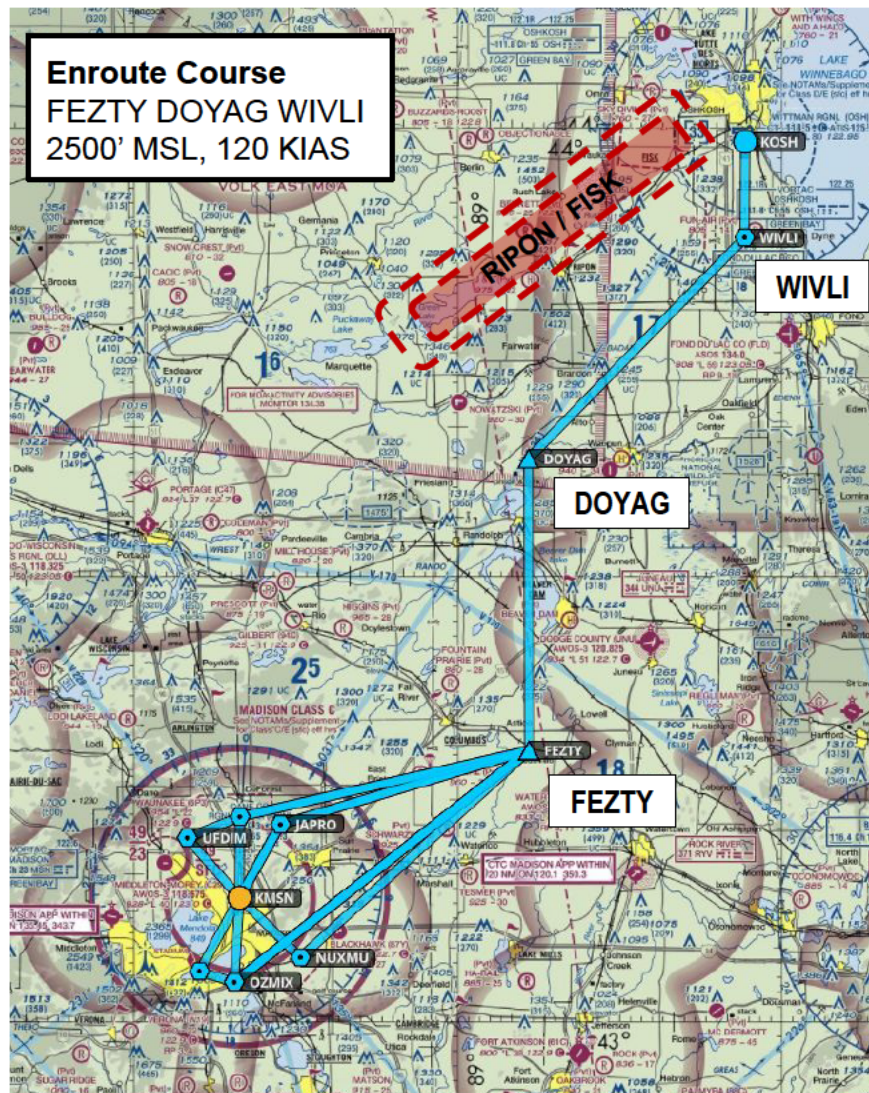
- Tail: *"Mooney Tail, 2500 Level"*
- Lead: *"Mooney Flight, 120 Knots"*

All Elements

- Increase power **gradually**
- Establish **120 KIAS**
- Go **Route** (if not already)
- Ops Check (silent unless trouble)
- Monitor MSN Departure **120.10**
- **Minimize** throttle changes
- Maintain Course - **Magenta Line**
- Maintain spacing with **geometry**
- Route or Fingertip (element lead)
- Report **factor** traffic only

Section Leads & Mooney Tail

- Report Departure Fix, FEZTY, DOYAG, WIVLI





Oshkosh Arrival Plan



Arrival Course DOYAG WIVLI OSH

When Mooney Lead 5 NM From WIVLI

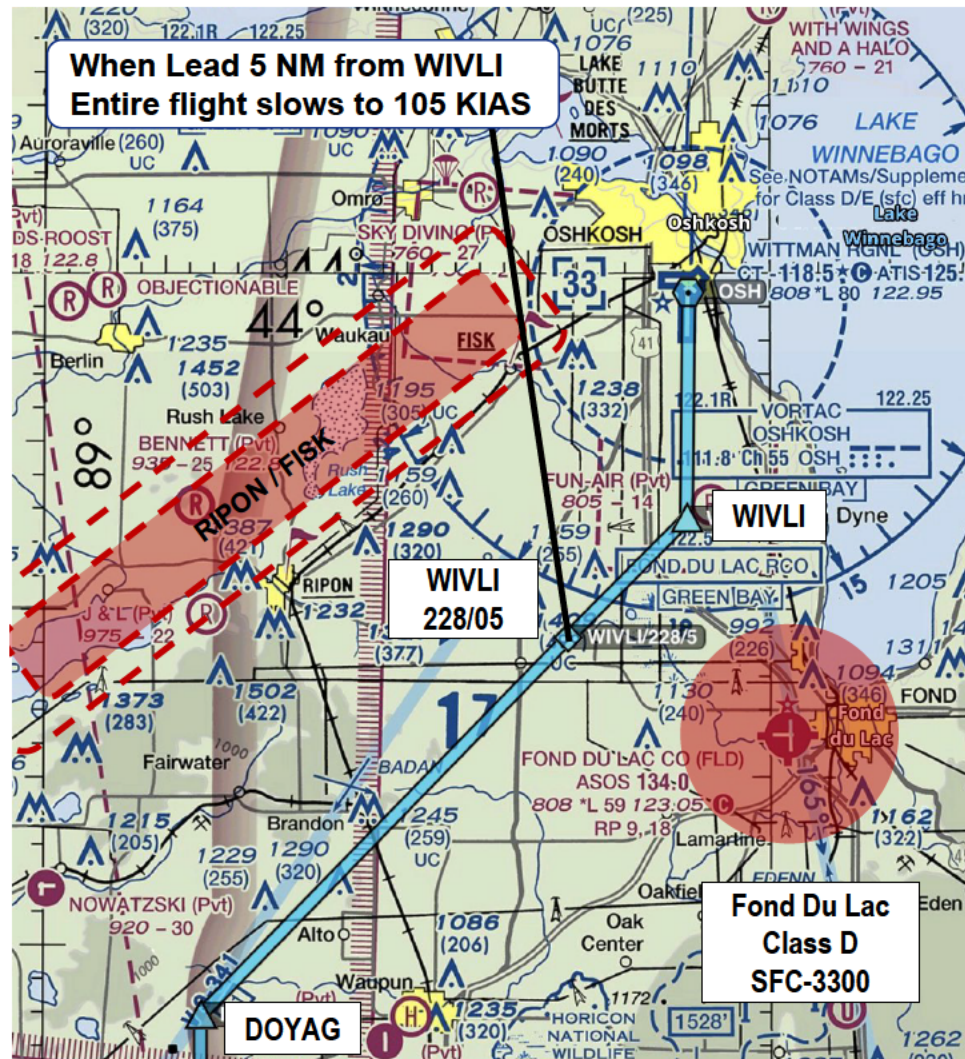
"Mooney Flight, 105 Knots"

Element Leads

- Reduce power **gradually**
- Establish **105 KIAS**
- Fly the course - **Magenta Line**
- Maintain **2500 MSL**
- Be aware of KFLD Class D (traffic)
- Monitor Oshkosh Tower **126.6**

Wingmen

- Stay with your Lead
- Monitor Oshkosh Tower **126.6**
(go to route position first)





Oshkosh Arrival Plan 36L / 36R

Arrival Course DOYAG WIVLI OSH

When Mooney Lead At WIVLI

"Mooney Flight, 90 Knots"

Element Leads

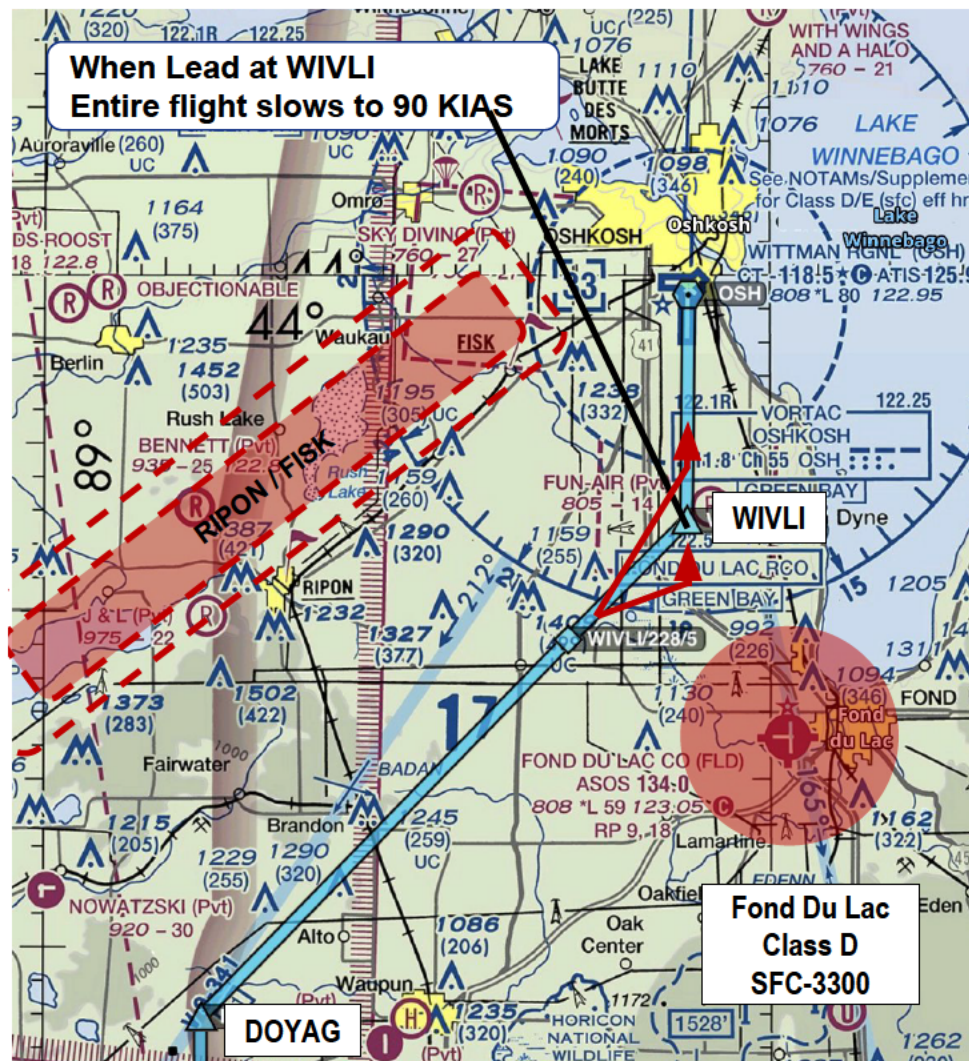
- Reduce power **gradually**
- Establish **90 KIAS**
- Fly the course - **Magenta Line**
- Maintain **2500 MSL**

Approaching WIVLI

- Acquire the field **visually**
- Plan your turn to intercept the final
- **Outside** WIVLI to open spacing
- **Inside** WIVLI to close spacing
- **DO NOT OVERSHOOT FINAL**

Wingmen

- Stay with your Lead





Landing 36L / 36R

Airport Elevation: 808' MSL

36L: 6700' x 150' 36R: 6300' x 50'

Landing Distance: 4950' from Purple Dot

Element Leads (At WIVLI)

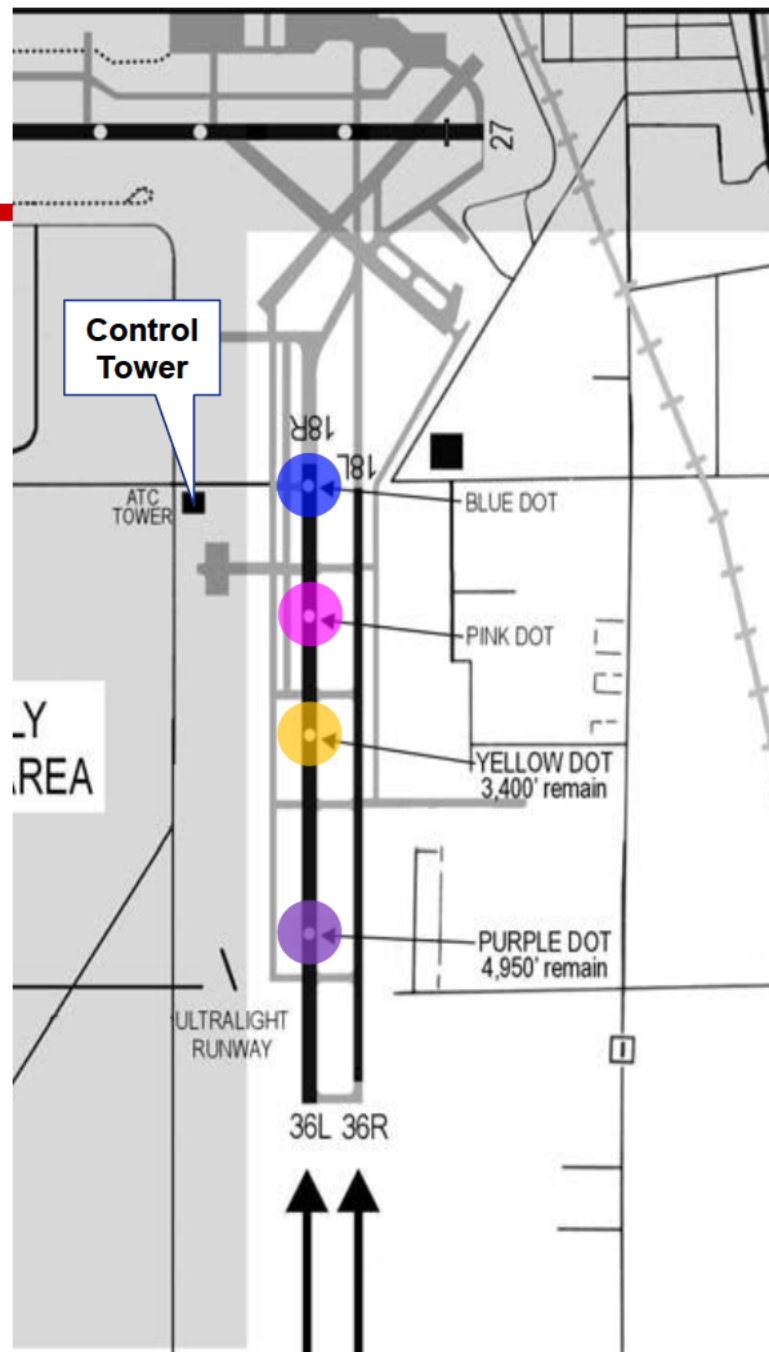
- **2500' MSL**
- **Gear Down**
- Begin Descent (5.5 Mile Final From WIVLI)
- Maintain **90 KIAS**
- Aim for **Purple Dot**
- Direct wingman sidestep to 36R
 - **not less than 2 NM final**

At 100' AGL (approximately)

- Smooth power reduction
- Slow during roundout / flare
- Touchdown not beyond **Yellow Dot**
- **OR GO AROUND**

Wingmen

- Stay with or abeam (36R) your Lead





RNAV 36

SA Tool for Element Leads

- Lateral Guidance
- Ensure Proper Glidepath

Element Lead Technique

- Intercept and fly the LPV
- One Dot High (above GS)
- 90 KIAS to 100' AGL
- Aimpoint: Purple Dot
- Smooth power reduction
- Transition to flare

**DO NOT OVERTHROTTLE FINAL!
STRIVE TO BE ON CENTERLINE!**

OSHKOSH, WISCONSIN AL-730 (FAA) 15008

WAA5 CH 65602 W36A APP CRS 004° Rwy Idg 8002 THRE 808 Apt Elev 808

RNAV (GPS) RWY 36 WITTMAN RGNL (OSH)

MALSRS MISSED APPROACH: Climb to 2800 direct FAVBU and hold.

ATIS 125.9 MILWAUKEE APP CON 127.0 263.075 OSHKOSH TOWER * 118.5 (CTAF) 290.9 GND CON 121.9 UNICOM 122.95

CATEGORY	A	B	C	D
LPV DA		1008/24	200 (200-1/2)	
LNAV/VNAV DA		1247/50	439 (500-1)	
LNAV MDA	1200/24	392 (400-1/2)	1200/35	392 (400-3/4)
CIRCLING	1280-1 472 (500-1)	1300-1 492 (500-1)	1360-1 1/2 552 (600-1 1/2)	1440-2 632 (700-2)

OSHKOSH, WISCONSIN Amdt 2 22AUG13 43°59'N-88°33'W WITTMAN RGNL (OSH) RNAV (GPS) RWY 36



LPV Approach to 36L (One Dot High)



A FRIENDLY REMINDER

A “low” needle indicates that the aircraft is ABOVE glideslope.
In each of these examples the aircraft is “one dot high”

THIS IS WHAT THE ELEMENT LEAD SHOULD FLY



Element Approach - Wingman



- Strive to be in fingertip position as Lead lines up on final
- Anticipate Lead's power reductions
- Maintain fingertip until configured on final, then
 - **Move to Element Landing position**
 - **Lead's head on horizon - 10 feet (minimum) between wingtips**
- Plan to land in the center of **your half** of the runway

LEAD IS THE PRIMARY REFERENCE FOR THE WING LANDING

- Cross-check the runway on short final to ensure proper alignment
- **Fly the proper position on Lead throughout the flare and touchdown**
- May touch down slightly before or at the same time as Lead
- Maintain relative position **on your side** of the runway
- After touchdown, use a normal braking technique
- Treat the runway centerline as a **"Brick Wall": STAY ON YOUR SIDE**



Go Around - Runway 36L/36R



DO NOT HESITATE TO EXECUTE A GO-AROUND

At KOSH Traffic Patterns are **NORTH** and **EAST** of the runways at 1800' MSL
Runways 18R, 18L, 9: Left Traffic
Runways 36L, 36R, 27: Right Traffic

Element (Initiated By an Element Lead)

- **Element Lead (directive):** *"Golf Element, Go Around"*
- **CLEAR FLIGHT PATH AND INITIATE THE GO AROUND!**
- **Wingmen follow, except**
 - **#2 continues landing if already side-stepped for 36R**
- **Turn crosswind before end of runway**
 - **36L/36R Turn crosswind before control tower**
- **Switch to and advise Oshkosh Tower 126.6** *"Golf Element, Going Around"*
- **Extend downwind until last element or Mooney Tail in sight**
- **Turn base and final to follow Mooney Tail**
 - **18L/18R Do not descend below 1500' MSL until crossing 9/27**

MOONEY TAIL: BE OBNOXIOUSLY OBVIOUS



Go Around - Runway 36L/36R



DO NOT HESITATE TO EXECUTE A GO-AROUND

At KOSH Traffic Patterns are **NORTH** and **EAST** of the runways at 1800' MSL
Runways 18R, 18L, 9: Left Traffic
Runways 36L, 36R, 27: Right Traffic

Individual (Initiated By a Wingman)

- **CLEAR FLIGHT PATH AND INITIATE THE GO AROUND!**
- Turn crosswind before end of runway
 - **36L/36R Turn crosswind before control tower**
- Switch to and advise Oshkosh Tower **126.6 "Golf 3, Going Around"**
- Extend downwind until last element or Mooney Tail in sight
- Turn base and final to follow Mooney Tail
 - **18L/18R Do not descend below 1500' MSL until crossing 9/27**

MOONEY TAIL: BE OBNOXIOUSLY OBVIOUS



2019 Mooney Tail



On the go-around, look for this airplane!



Chris “Toro” Shopperly and family in their tastefully appointed M20K
“We don’t need no stinkin’ N-number, eh?”



Landing 36L / 36R

Touchdown

- Lead - **Right** half of 36L
- #3 - **Left** half of 36L
- #2 - Center of 36R

Rollout

- Light braking only
- Less than **20 knots** passing **Blue Dot**
- #3 Move in-trail of Lead when able

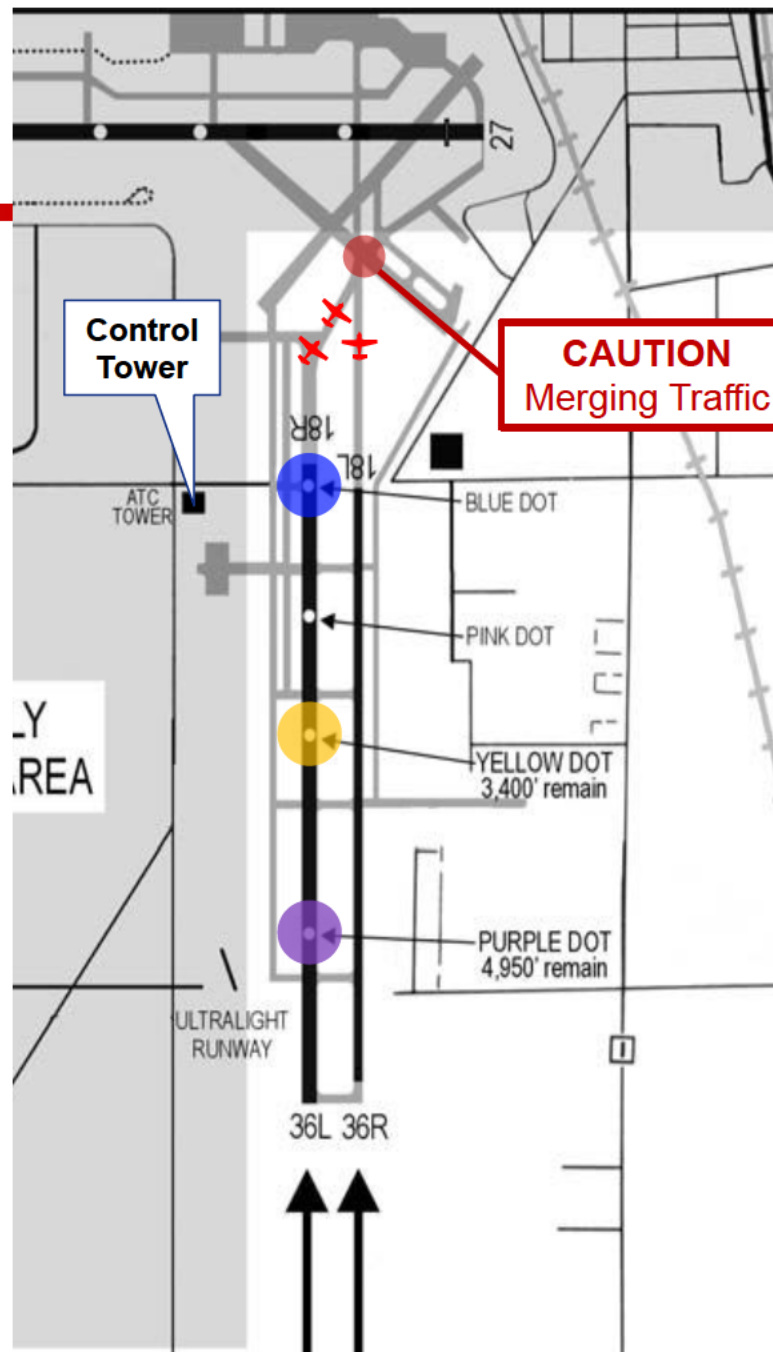
Taxi

- **Merge** to in-trail at taxiway junction
- Restore element order **if possible**
- Cowl flaps and mixture for **long taxi**
- Elevator trim full **nose up**

In The Grass

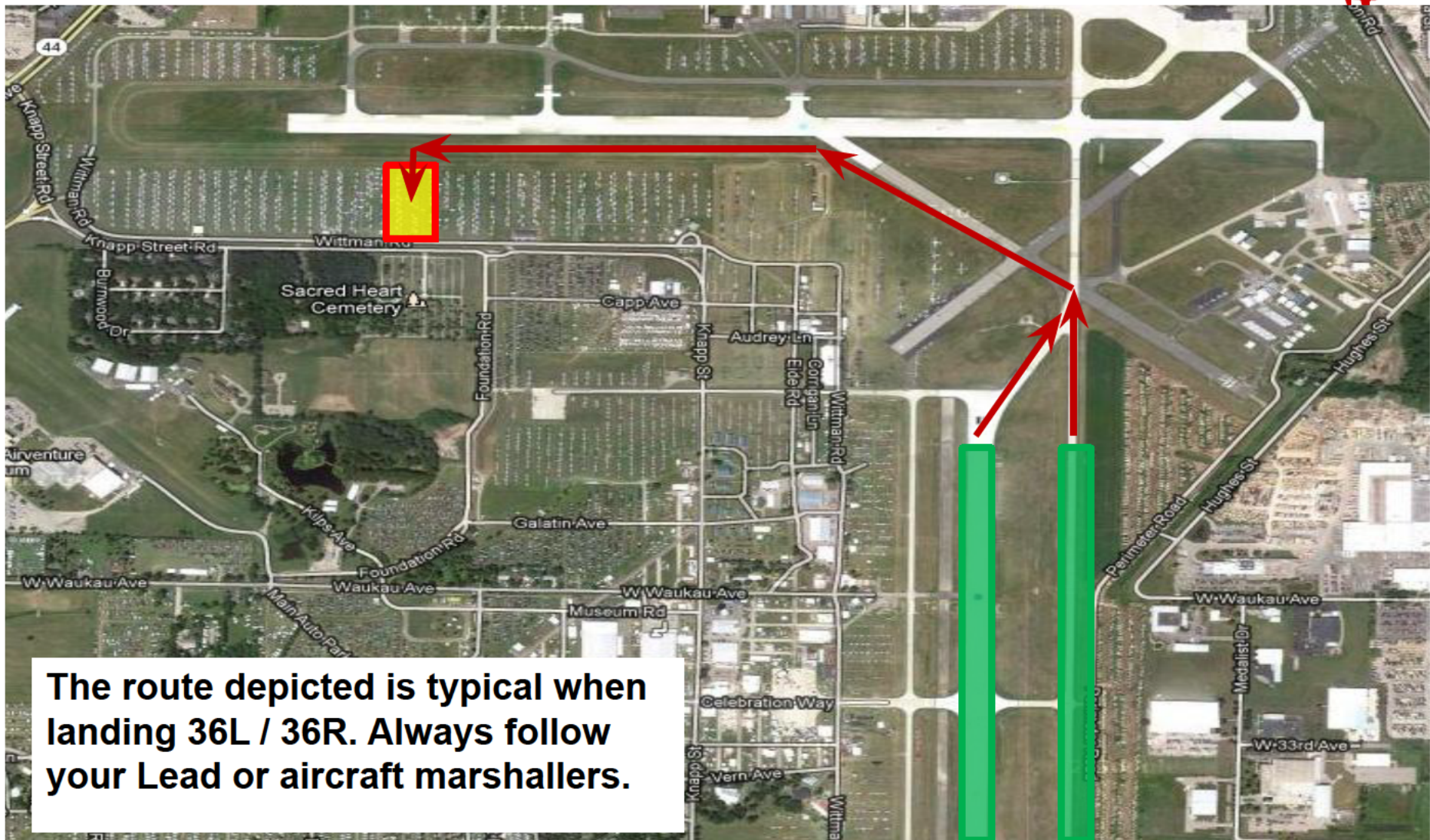
- Hold **full up** elevator
- Anticipate need for more power
- **KEEP IT ROLLING**
- Follow Marshalls

BE ALERT FOR FLAGMEN





Taxi To North 40 Camping



The route depicted is typical when landing 36L / 36R. Always follow your Lead or aircraft marshallsers.



Parking

Watch for Spectators and Fellow Pilots
Regarding Flag Men & Marshalls

- **TRUST, BUT VERIFY**

Shutdown

- **Mixture: Lean**
- **Mags: Off**
- **Master: Off**
- **Keys: In-Hand or On Glareshield**

Assist Tailing-In Airplanes

- **Grab your towbar and help push**

STAY ALERT
for
MOVING AIRCRAFT
SPINNING PROPELLERS





Contingencies: Mission Slip



- **Weather Delay**
 - **Mooney Lead will announce “Weather Hold” and provide an update time**
 - **Pilots/crews should stay at FBO or on ramp and be ready to go**
 - **Expect other arrangements for extended delays**
- **Severe Weather at KMSN**
 - **Secure aircraft**
 - **Rally inside FBO or hangar**
- **Caravan will delay until KOSH closing time precludes our arrival**



Emergency Procedures:

Abort



Ground: Individual

- Report issues on Mooney Frequency *"Delta 2, fouled plug, need a minute"*
- Lead Directs: Flight will **Hold or Continue**
- Trouble Persists: **Disabled aircraft (element) hold position, flight will taxi past**

Takeoff: Element Abort

- Element Lead (directive): *"Foxtrot Element Abort"*
 - **Advise cause for abort on Mooney Frequency (fouled runway, etc)**
- Lead and Wingmen: Throttle back, maintain directional control and runway lane
 - Exit runway when able (entire element, sympathetic abort)
 - Contact Ground Control with intentions (rejoin after tail)

Takeoff: Wingman Abort

- Wingman (informative): *"Foxtrot 2's Aborting"*
 - **Advise cause for abort on Mooney Frequency (door pop, etc)**
- Wingman: Throttle back, maintain directional control and runway lane
 - Exit runway when able (solo abort)
 - Contact Ground Control with intentions (rejoin with tail)
- Remainder of Element: Continue takeoff if able (safe)

Following Elements: Hold Position Until Runway Clear



Emergency Procedures: Abort / Divert



Airborne: Mooney Caravan Abort/ Divert:

- **Mooney Lead:** *"Mooney Flight, Mooney Lead, Caravan Mission Abort, ...reason..., Section Leads acknowledge"*
- **Section Leads (in sequence):** *"Section # Diverting to..."*
- **Mooney Lead:** *"Mooney Flight, Mooney Lead, Section # Detach"*
- **Section Lead:** *"Section #"*
 - **Section Lead assumes lead responsibility for section**
 - **Aviate, navigate, communicate (squawk VFR)**
 - **Visually clear and begin a gradual turn toward divert field**

During an Abort or Divert:

- **Maintain Element integrity**
- **Element Leads follow your Section Lead to divert field**
- **Once safely on deck, report to Mooney Lead / Alternate Lead**
 - **Adam (Sled) Carney: (732) 433-7764**
 - **Bucko (Sandman) Strehlow: (210) 887-0144**



Emergency Procedures: Oshkosh Arrival Delay



Airfield temporarily closed or unable to accept the Mooney Caravan

- **Mooney Lead will coordinate with Oshkosh Tower**
- **Caravan WILL NOT enter a standard holding pattern**
- **Lead will direct a “timing leg” if airfield availability can be expected**
 - **Maintain 2500 MSL at 120 KIAS**
 - **Proceed on alternate routing as directed by Mooney Lead to reposition Caravan inbound to intercept final**
- **If Oshkosh Tower has no estimate till field open, then Lead will direct a Caravan Abort with instructions to either proceed to Alternates Airport(s) or return to Madison (KMSN)**

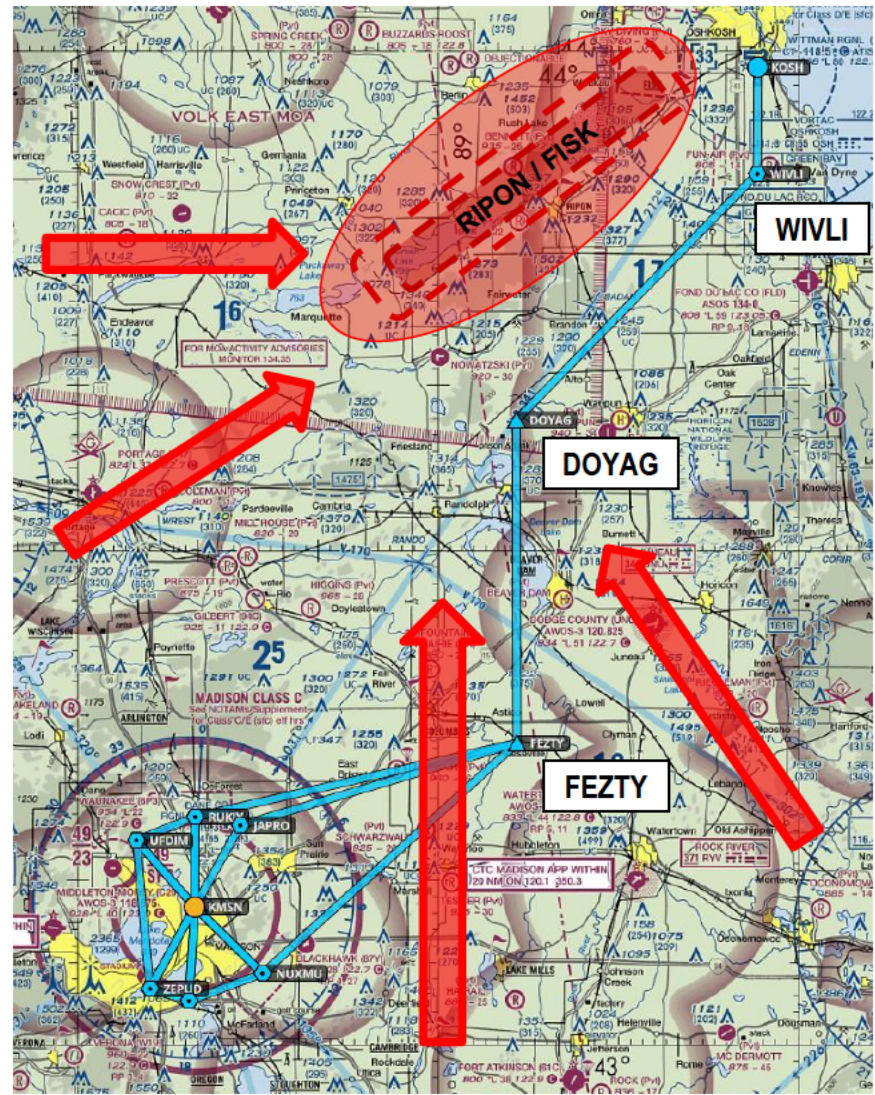


Mid Air Collision Avoidance



- **Extremely High Traffic Area!**
 - **Hundreds of VFR targets**
 - **Squawk OFF = EYES OUT**
 - **Mooney Lead – ATC**
- **Hot Spots**
 - **RIPON – FISK**
 - **Northbound Traffic descending to RIPON-FISK**
 - **1800 and 2300 ft**
- **Call Factor Traffic Only**

"Echo has traffic right 2 o'clock, slightly high"
- **Element Leads maneuver if threatened**



MOONEY CARAVAN



SINGLE RUNWAY PROCEDURE

Used When

- Mooney Caravan is airborne and
- Configured as 3-ship elements and
- Parallel runways are unavailable

Examples

Mooney Caravan is assigned runway 18R, 9 or 27 at KOSH

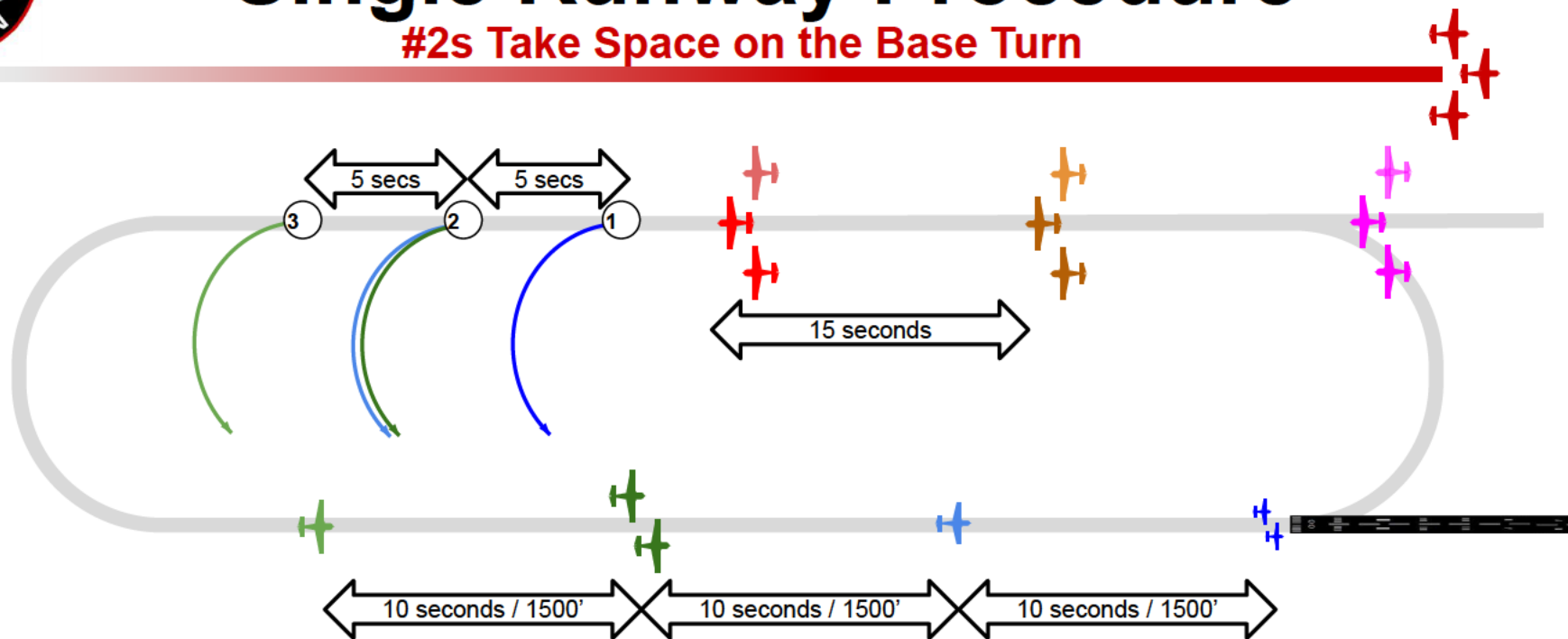
Mooney Caravan diverts to alternate airport





Single Runway Procedure

#2s Take Space on the Base Turn



- ① Base turn for A1, A3 as element
- ② Base turn for A2 **AND** B1, B3 as element
- ③ Base turn for B2 **AND** C1, C3 as element

**Go Around:
Climb straight ahead
Join behind tail (or per Tower)**

Base leg moves downwind 5 seconds for each element (about 800')

For 26 Elements, Tail would turn base about 3 to 4 miles out

Section Leads can close spacing by turning base earlier (visual to follow)

This will "reset" base closer to runway for his section

Begin descent on base or final as appropriate for normal glide path (**GEAR DOWN**)

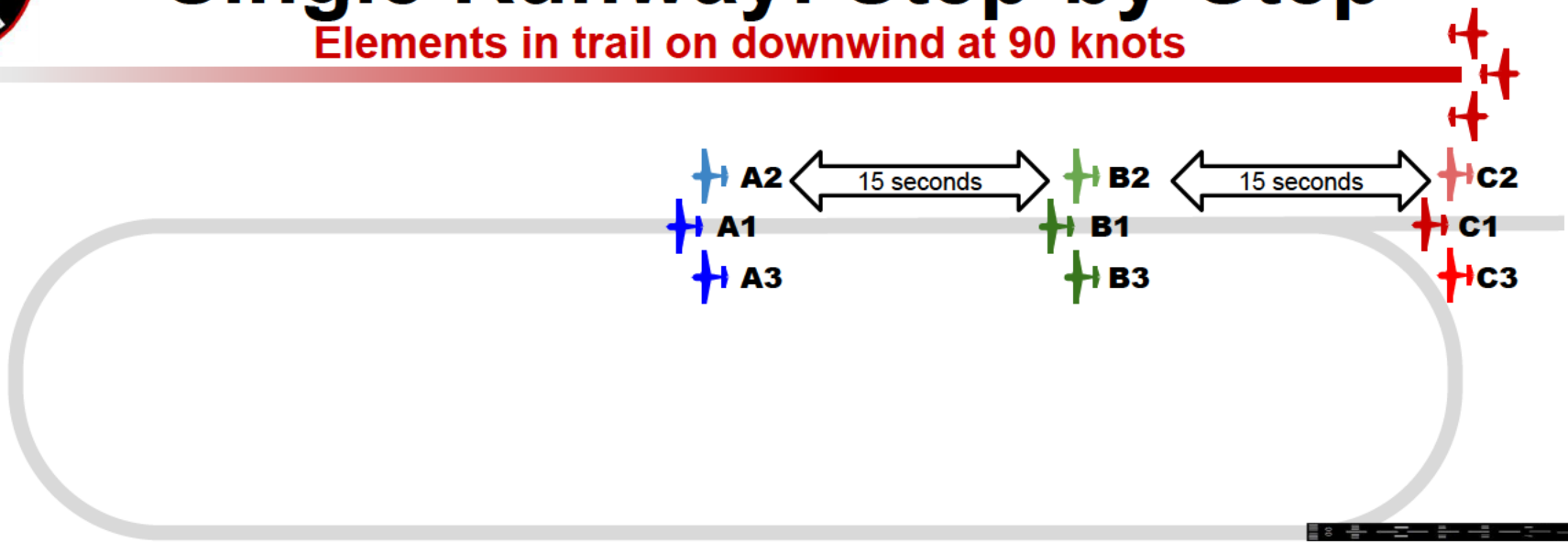
Element wingman (#3) may cross under if wind dictates opposite wing for landing

Upon landing move to "cold" side (wingman behind lead)



Single Runway: Step-by-Step

Elements in trail on downwind at 90 knots

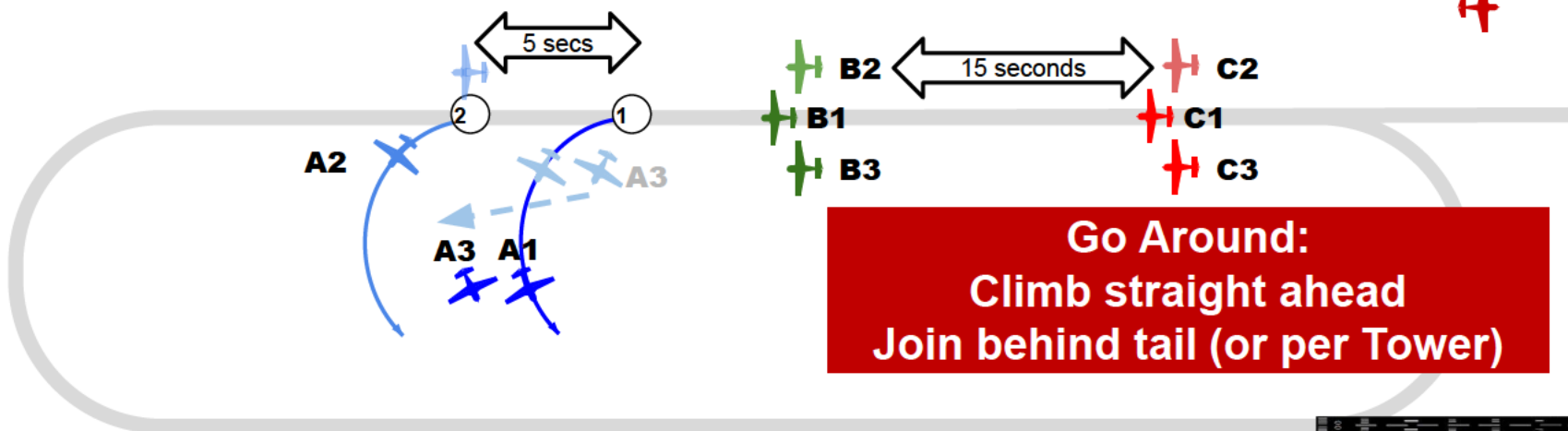


Radio call "Mooney Caravan, single-runway procedure for runway 9."



Single Runway: Step-by-Step

#1 and #3 turn Base as an element, #2 waits 5 seconds



Hand signal: Twirl finger, then hold up 5 to #2: *We're turning base, you wait 5*

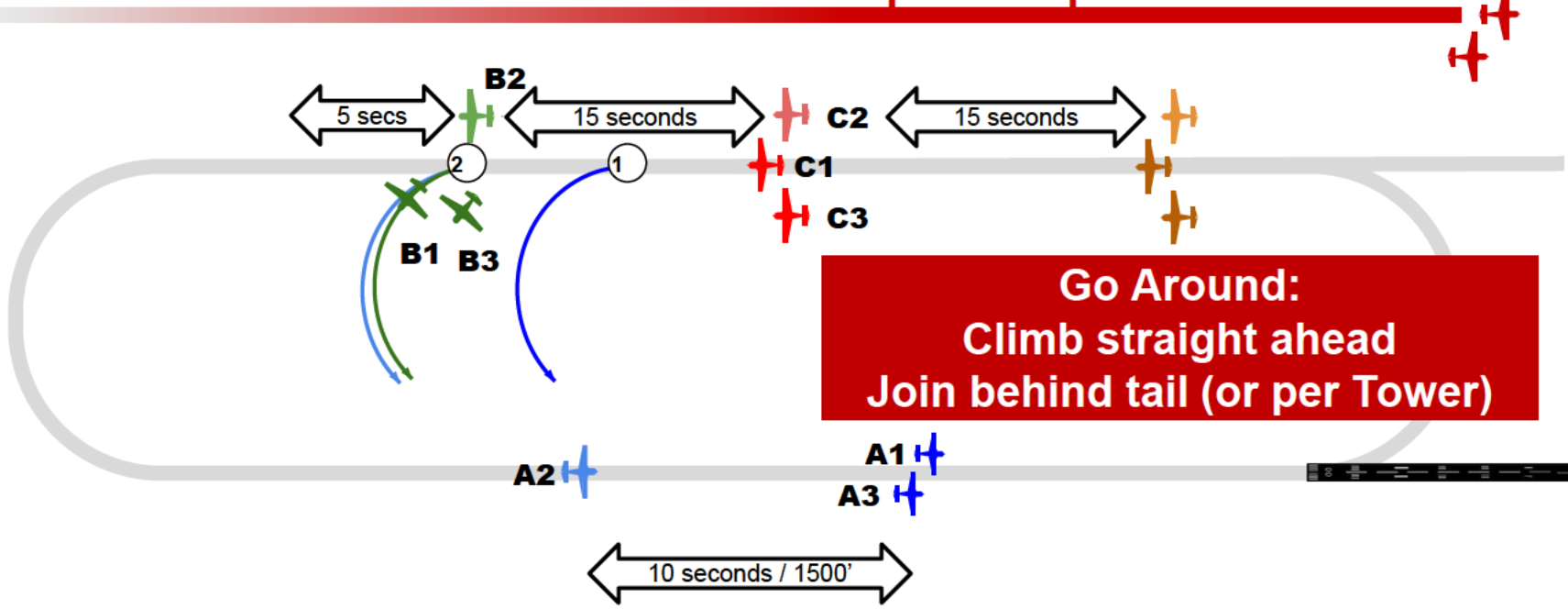
- ① Base turn for A1, A3 as **element**. A2 **extend downwind 5 seconds**.
A3 may cross to outside of turn if wind dictates opposite wing for landing.
- ② Base turn for A2.

Begin descent on base or final as appropriate for normal glide path (**GEAR DOWN**)
Upon landing move to "cold" side (wingman call "A2 cold" if lead needs to cross in front)



Single Runway: Step-by-Step

Next element turns base at same point as previous #2



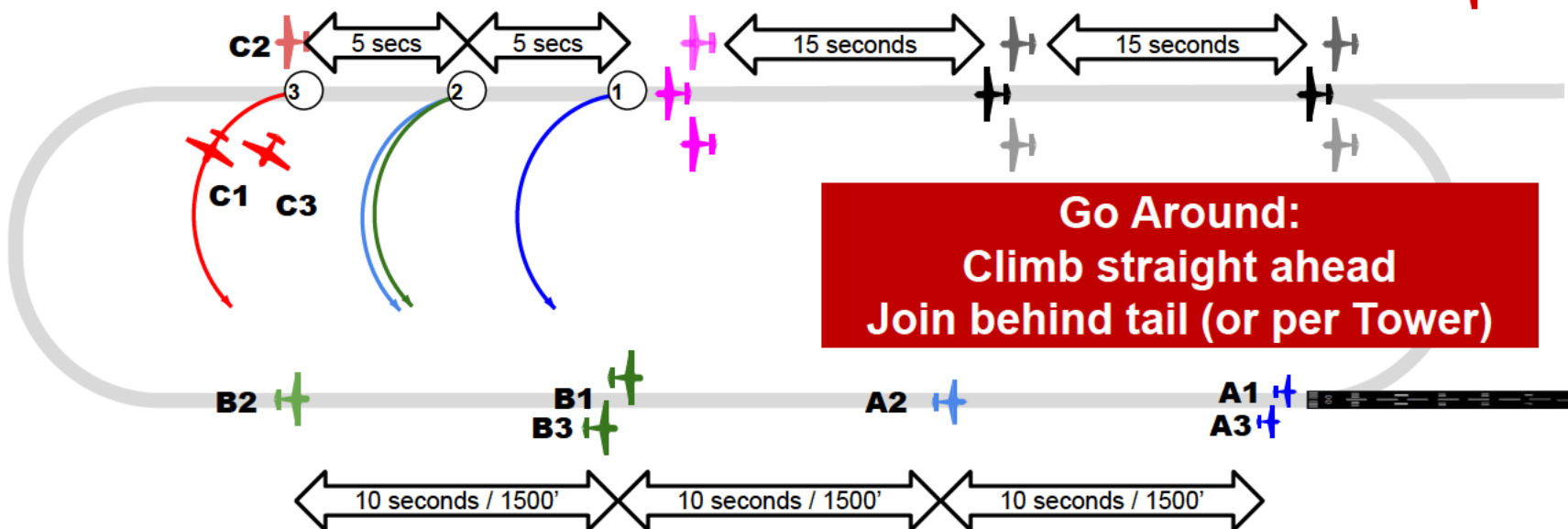
- ① Base turn for A1, A3 as element. A2 extend downwind 5 seconds.
- ② Base turn for A2. B1 & B3 turn base at the same location as A2.

Begin descent on base or final as appropriate for normal glide path (**GEAR DOWN**)
 Upon landing move to "cold" side (wingman call "A2 cold" if lead needs to cross in front)



Single Runway: Step-by-Step

Downwind extends with each element base turn



- ① Base turn for A1, A3 as **element**. A2 **extend downwind 5 seconds**.
- ② Base turn for A2. **B1 & B3 turn base at the same location** as A2.
- ③ Base turn for B2 **AND** C1, C3 as **element**

Begin descent on base or final as appropriate for normal glide path (**GEAR DOWN**)
 Upon landing move to "cold" side (wingman call "A3 cold" if lead needs to cross in front)

Base leg moves downwind 5 seconds for each element (about 800')

For 26 Elements, Tail would turn base about 3 to 4 miles out
 Section Leads can close spacing by turning base earlier



18R Arrival

6700' x 150', 808 MSL

Arrival Route

WIVLI DWN18 (BAS18 DAGTE)

Mooney Lead 5 NM FROM WIVLI

- Mooney Lead:
"Mooney Flight, 105 knots"
- Entire flight slows to 105 KIAS

Mooney Lead at WIVLI

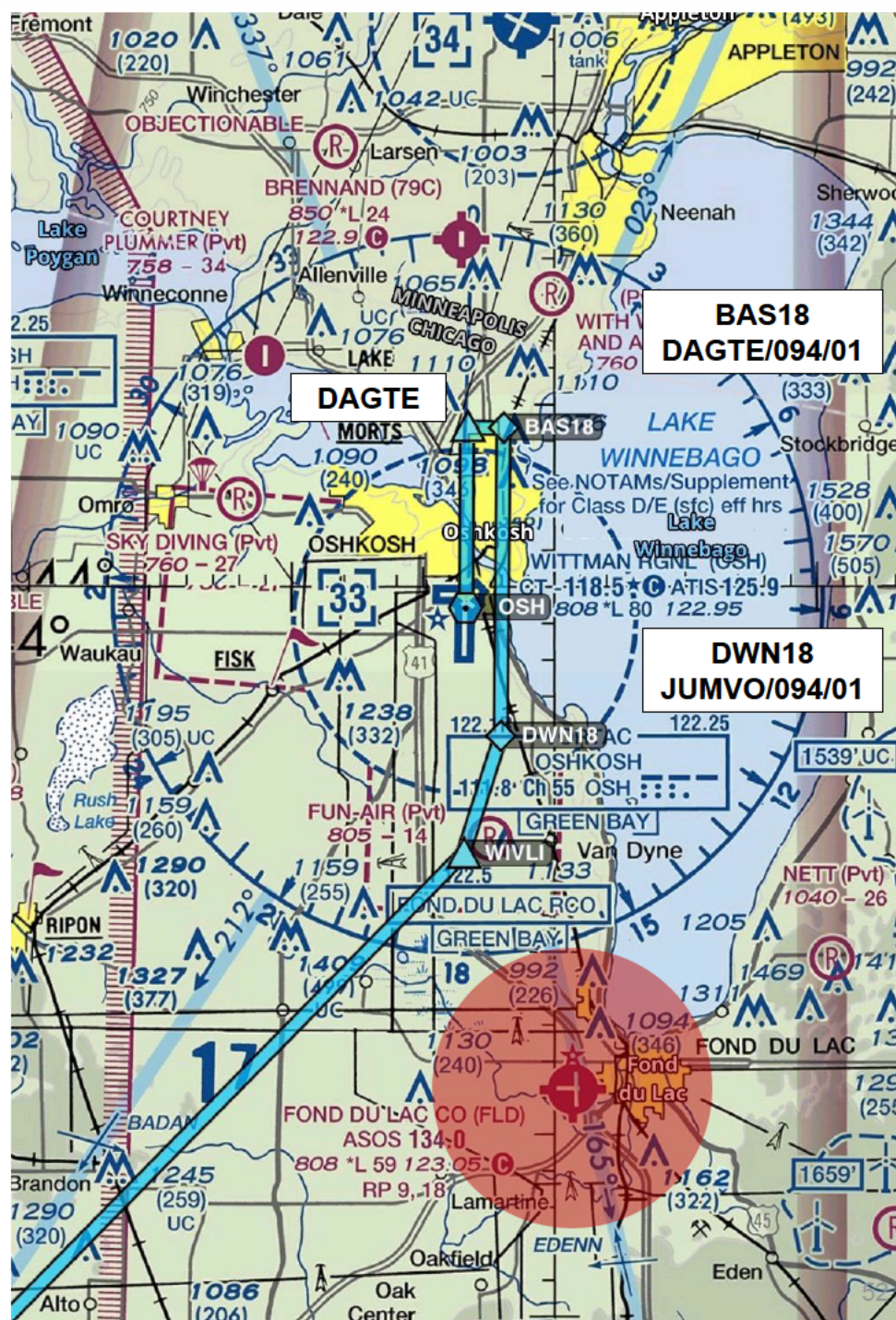
- Mooney Lead:
"Mooney Flight, 90 knots"
- Entire flight slows to 90 KIAS

At WIVLI, begin descent to **1800 MSL**

Single Runway Procedure

- Aimpoint: **Pink Dot** (4750' remaining)
- Touchdown not beyond **Yellow Dot**
- Check **GEAR DOWN** on final
- Mooney Tail: Report DWN18

**MAINTAIN AT OR ABOVE 1500 MSL
UNTIL SOUTH OF RUNWAY 9/27
(Runway 9/27 traffic below 18R final)**





9 Arrival

6179' x 150', 808 MSL

Arrival Route

WIVLI DWN18 DWN09 (BAS09 CEKEP)

Mooney Lead 5 NM FROM WIVLI

- Mooney Lead:
 "Mooney Flight, 105 knots"
- Entire flight slows to 105 KIAS

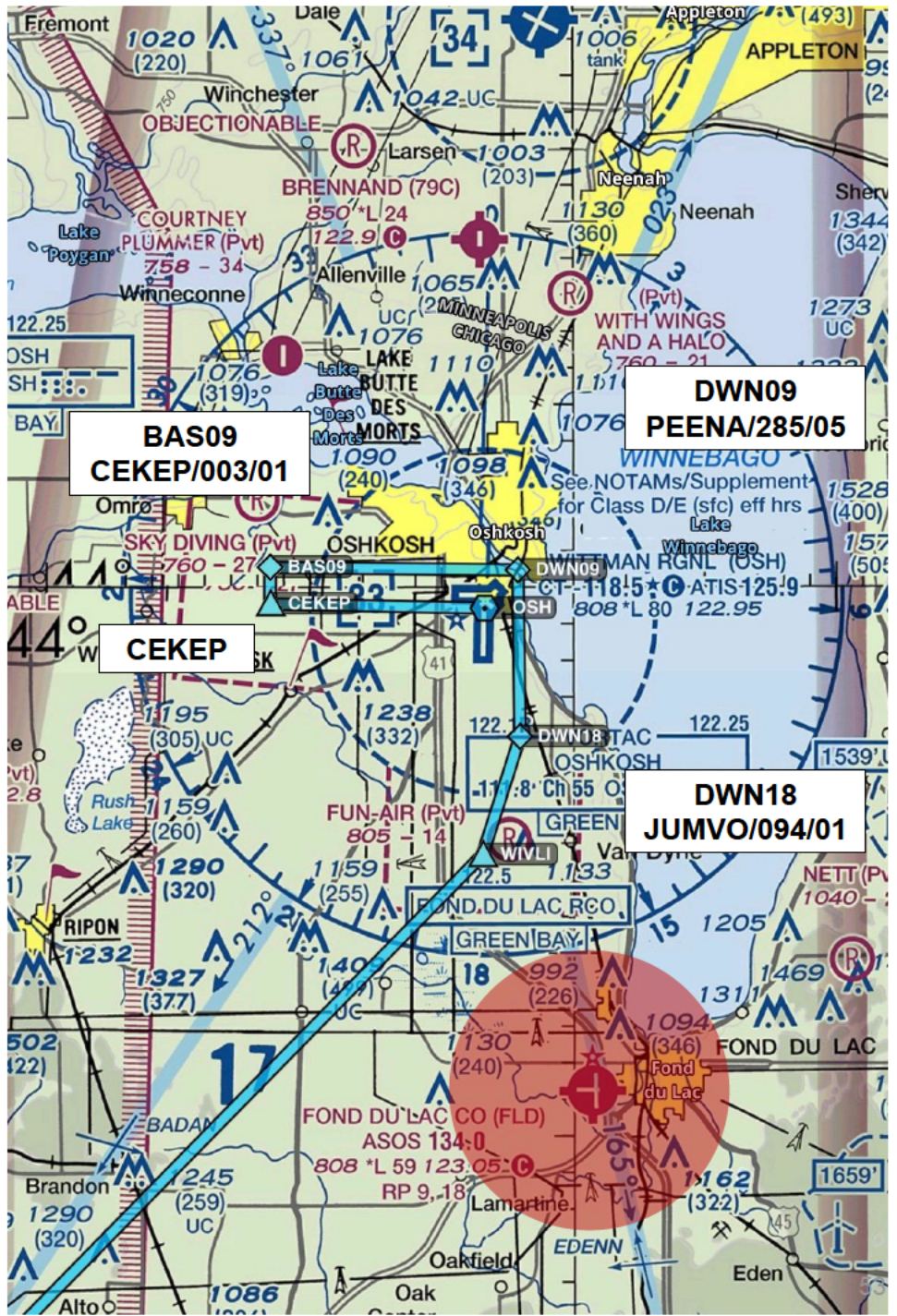
Mooney Lead at WIVLI

- Mooney Lead:
 "Mooney Flight, 90 knots"
- Entire flight slows to 90 KIAS

At WIVLI, begin descent to **1800 MSL**

Single Runway Procedure

- Aimpoint: Numbers (6179' remaining)
- Touchdown not beyond **White Dot**
- Check **GEAR DOWN** on final
- Mooney Tail: Report DWN09





27 Arrival

6179' x 150', 808 MSL

Arrival Route

WIVLI DWN18 DWN27 (BAS27 PEENA)

Mooney Lead 5 NM FROM WIVLI

- Mooney Lead:
"Mooney Flight, 105 knots"
- Entire flight slows to 105 KIAS

Mooney Lead at WIVLI

- Mooney Lead:
"Mooney Flight, 90 knots"
- Entire flight slows to 90 KIAS

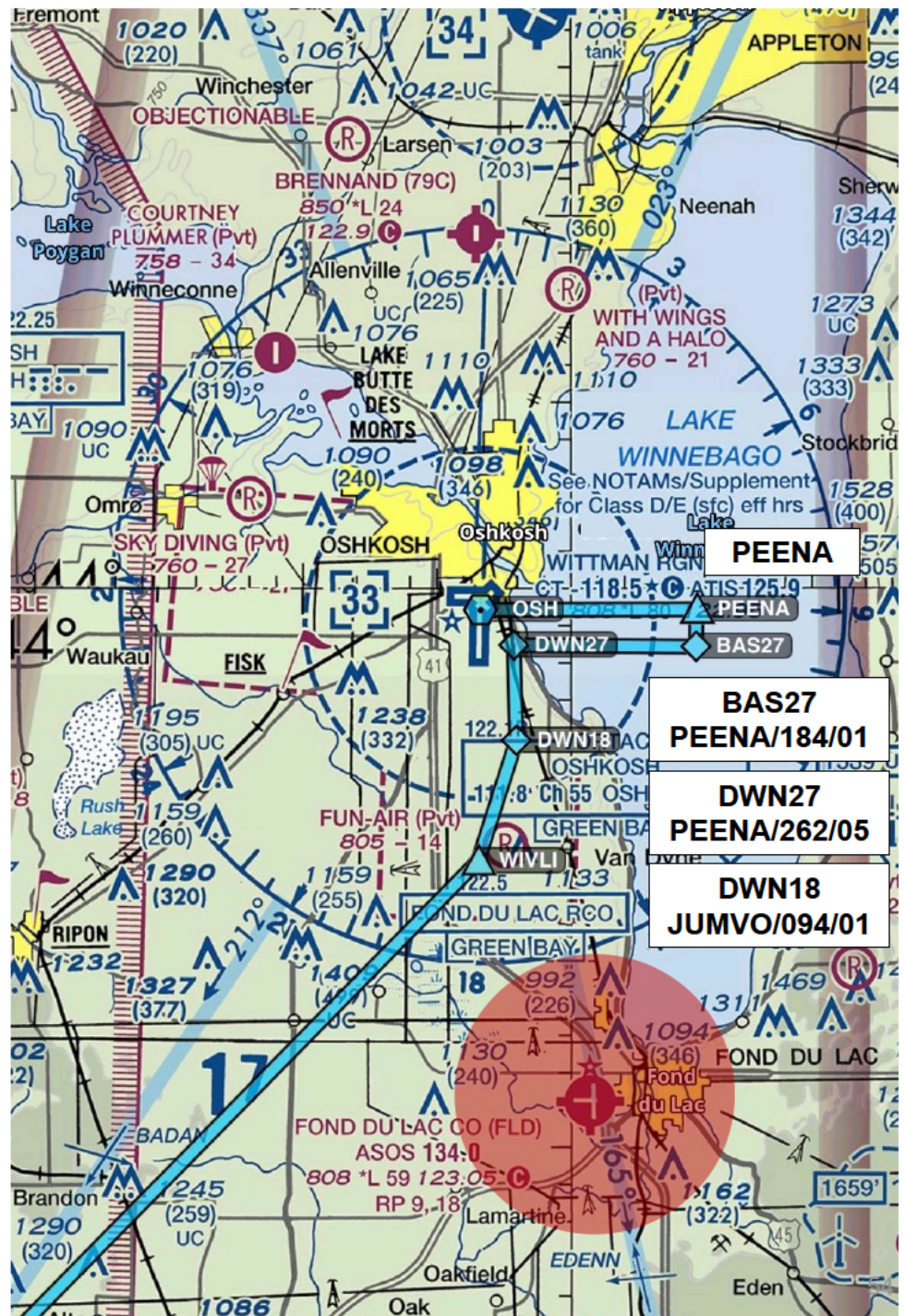
At WIVLI, begin descent to **1800 MSL**

Single Runway Procedure

- Aimpoint: Numbers (6179' remaining)
- Touchdown not beyond **Orange Dot**
- Check **GEAR DOWN** on final
- Mooney Tail: Report established final

Go Around:

**Climbing RIGHT turn to downwind
Turn base abeam Tail (or per Tower)**





Waypoints and Routes



NAME	REF/RADIAL/DISTANCE	LAT/LON
DWN09	PEENA/285/05	44.0078N/88.5352W
BAS09	CEKEP/003/01	44.0091N/88.6913W
DWN18	JUMVO/094/01	43.9319N/88.5340W
BAS18	DAGTE/094/01	44.0726N/88.5321W
DWN27	PEENA/262/05	43.9746N/88.5355W
BAS27	PEENA/184/01	43.9739N/88.4224W

DEPARTURE ROUTES (KMSN to FEZTY)

- Rwy 3:** KMSN JAPRO FEZTY
- Rwy 14:** KMSN NUXMU FEZTY
- Rwy 18:** KMSN OZMIX FEZTY
- Rwy 21:** KMSN ZEPUD OZMIX FEZTY
- Rwy 32:** KMSN UFDIM RUKIY FEZTY
- Rwy 36:** KMSN RUKIY

ARRIVAL ROUTES (FEZTY to KOSH)

- Rwy 36**FEZTY DOYAG WIVLI OSH
- Rwy 18**FEZTY DOYAG WIVLI DWN18 BAS18 DAGTE OSH
- Rwy 9:** FEZTY DOYAG WIVLI DWN18 DWN09 BAS09 CEKEP OSH
- Rwy 27**FEZTY DOYAG WIVLI DWN18 DWN27 BAS27 PEENA OSH

Notes

OSH VOR rather than KOSH used as waypoint because OSH located closer to runway junction

Downwind, base and final segments defined to illustrate arrival procedure and provide GPS cross-check. These segments to be flown by visual reference to runway environment and elements ahead.



Mission Debrief is Mandatory



**Mooney Caravan Tent
13:30 or 2 Hours after Landing**





Radio Frequencies



Facility	Frequency	When?
<i>Mooney Mission Freq</i>	123.55	On primary radio AT ALL TIMES
Madison ATIS	124.65	Before engine start (copy)
Madison Ground	121.90	Before check-in (monitor)
Madison Tower	119.30	During taxi (monitor)
Madison Departure	120.10	After takeoff (monitor, if able)
Oshkosh Arrival ATIS	125.90	Lead will relay ATIS
Oshkosh Tower - Runway 18/36	126.60	Enroute (monitor), OR
Oshkosh Tower- Runway 9/27	118.50	Enroute (monitor)
Mooney Backup Freq	123.35	Only if directed



QUESTIONS?



MOONEY CARAVAN



ALTERNATE AIRPORTS



KFLD	Fond Du Lac
KATW	Appleton
KGRB	Green Bay
KUNU	Dodge County
KPCZ	Wapaca
KSBM	Sheboygan

KFLD**Fond Du Lac County
Fond Du Lac, WI**

1.00 mi W of city N43 46.2700' W88 29.3050' Mag Var: 04W

Nav aids:

Type:	ID:		Freq:	Radial:	Dist:
VORTAC	OSH	----	111.80	165	14 nm
VOR	BJB - - - -	109.80	324	26 nm
VOR/DME	FAH - -	110.0	273	28 nm

Traffic Patterns:

No TPA reported. Assume 1,000 AGL.

Runways:

09/27: 3602X75; asphalt, no surface treatment, in fair condition; Trees, 300 ft Left of center, 75 ft high, 2,300 ft from end, 28:1 clearance slope; Road, 280 ft Right of center, 15 ft high, 720 ft from end, 34:1 clearance slope;

18/36: 5941X100; asphalt, no surface treatment, in good condition; Sign, 330 ft Left of center, 36 ft high, 1,100 ft from end, 25:1 clearance slope; Trees, 200 ft Left of center, 86 ft high, 3,150 ft from end, 34:1 clearance slope;

Right Traffic: 09, 18

Communication Freqs:

App/Dep 127.0
WX 134.0T
CTAF 123.05
UNICOM 123.05

Lights: HIRL Ry 18/36 Preset on Low
Intst; to Incr Intst & Actvt MIRL Ry
09/27; MALSR Ry 36; REIL Ry 18;
PAPI Rys 18/36; HIRL Ry 18/36 - CTAF

Elevation: 808 ft (246.3 m)

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<http://www.aopa.org/destinations/airports/KFLD/details>
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Phone: (920) 904-2143**Weather:** 920-922-4444 (ASOS)**Fees:** Tiedown, Hangar, Ramp**Charts:** NACO: Chicago Sectional**Fuel:** 100LL Low-Lead, Jet A1**Business Summary****Fond Du Lac Skyport**

Fuel: Unknown-100LL; Unknown-Jet-A

Location: E; Hours: 8:00 AM - 6:00 PM

Frequencies: Unicom: 123.05

Phone Number: 920-922-6000

KFLD Temporary Class D

**4 NM Radius
SFC-3300 MSL
ATIS: 121.1
Tower: 120.4**

SEE AIRVENTURE NOTAM

KATW**Appleton Intl
Appleton, WI**

3.00 mi W of city N44 15.4850' W88 31.1450' Mag Var: 02W

Nav aids:

Type:	ID:	Freq:	Radial:	Dist:
VORTAC	OSH --- ··· ····	111.80	004	16 nm
VORTAC	GRB --- ··· ····	115.50	217	23 nm
DME	MTW	111.0	282	37 nm

Traffic Patterns:

No TPA reported. Assume 1,000 AGL.

Runways:

03/21: 8002X150; concrete, grooved, in good condition; Tree, 200 ft Left of center, 56 ft high, 2,400 ft from end, 39:1 clearance slope; Tree, 350 ft Left of center, 62 ft high, 2,600 ft from end, 38:1 clearance slope;

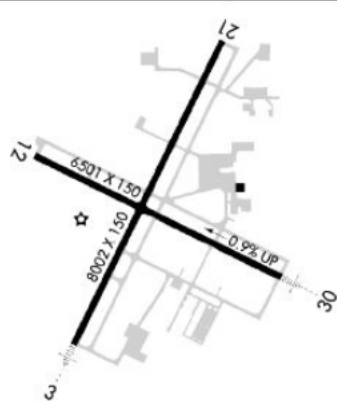
12/30: 6501X150; concrete, grooved, in good condition; Tree, 350 ft Right of center, 57 ft high, 2,800 ft from end, 45:1 clearance slope;

SPECIAL PROCEDURES**SEE AIRVENTURE NOTAM****Communication Freqs:**

App/Dep 126.3
 ATIS 127.15
 WX 920-832-2597
 CTAF 119.6
 Gnd 121.7
 Tower 119.6
 UNICOM 122.95

Tower: Tower Hrs: 0530-2300

Lights: When ATCT Clsd HIRL Rwy
 03/21 Preset on Low Intst; to Incr Intst
 & Actvt MALS Rwy 03, 30; REIL Rwy
 12, 21; PAPI Rwy 12; HIRL Rwy 03/21,
 12/30 - CTAF

Elevation: 918 ft (279.8 m)**Phone:** 920-832-5267**Weather:** 920-832-2597 (AWOS-3)**Fees:** Landing, Tiedown, Hangar**Charts:** NACO: Green Bay Sectional**Fuel:** 100LL Low-Lead, Jet A**Notes/Remarks:**

When ATCT Clsd, for Cd CTC Minneapolis Artcc at 651-463-5588
 Us Cstms and Border Protection. Ppr Us Cstms Svc Mon-Fri 1300-2100z
 (0800-1600 Local) Call 920-968-2348
 Snow Removal Opns in Progress Winter Months. Vehicle Operators Will be
 Monitoring CTAF; Acft Lndg/Dep Appleton Should Use CTAF When ATCT
 Clsd
 Birds & Migratory Waterfowl on & Invov Arpt
 Security Directive SD-8G

Business Summary**CAVU Flight Academy**

Location: E; Hours: 24/7
 Phone Number: 920-738-3031

Fox Valley Flyers, Inc.

Location: SE; Hours: Irregular
 Phone Number: 920-779-6543

Fox Valley Flying Club

Phone Number: 920-205-2550

Gulfstream Aerospace Services Corporation

Fuel: Unknown-Jet-A
 Location: NE; Hours: Mon - Fri, 12:00 AM - 11:59 PM; Sat - Sun, 6:00 AM -
 6:00 PM
 Frequencies: ARINC: 132.0
 Phone Number: 920-735-7000

Platinum Flight Center

Fuel: Unknown-100LL; Unknown-100LL; Unknown-Jet-A; Unknown-Jet-A
 Location: S; Hours: 5:00 AM - 9:00 PM
 Frequencies: Unicom: 122.95
 Phone Number: 920-738-3034

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*Nimis Brevis Vita Est Volare Tarde*

Revision 2019.1

61

KGRB

Green Bay-Austin Straubel Intl Green Bay, WI

7.00 mi SW of city N44 29.0780' W88 7.7828' Mag Var: 02W

Nav aids:

Type:	ID:	Freq:	Radial:	Dist:
VORTAC	GRB --- ···	115.50	146	5 nm
DME	MTW	111.0	318	29 nm
VORTAC	OSH --- ···	111.80	030	35 nm

Traffic Patterns:

Airport Manager:	Aircraft	Altitude (MSL)
	Light Aircraft	1700

Runways:

06/24: 7700X150; concrete, grooved, in good condition;
18/36: 8700X150; concrete, grooved, in good condition; Road, 540 ft Left of center, 12 ft high, 580 ft from end, 31:1 clearance slope;
Right Traffic: 18

Noise Abatement:

Flight trng rstr, informal fit opn rstr, ctc APM

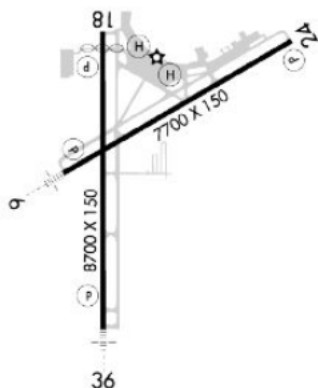
Communication Freqs:

ATIS 124.1 WX 920-494-7140 App 119.4
DEP/P 126.55 CTAF 118.7 CLASS C 119.4 Clnc-Del 121.75
Gnd 121.9
Tower 118.7

Tower: Tower Hrs: 0530-2330
Secondary Depart. Control Hrs:
HOURS GREEN BAY APCH CLSD.
Primary Depart. Control Hrs:
0530-2330
Secondary Approach Control Hrs:
HOURS GREEN BAY APCH CLSD.
Primary Approach Control Hrs:
0530-2330

Lights: When ATCT Clsd the Preferred Ry is Preset on Low or Med Intst; to Incr Intst & Actvt MALSRS Ry 06; HIRL Ry 06/24; MALSRS Rys 36; REIL Ry 18; HIRL Ry 18/36 - CTAF

Elevation: 695 ft (211.8 m)



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<http://www.aopa.org/destinations/airports/KGRB/details>
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Phone: 920-498-4800

Weather: 920-494-7140 (ASOS)

Fees: Parking, Tiedown, Hangar, Ramp, Landing

Charts: NACO: Green Bay Sectional

Fuel: 100LL Low-Lead, Jet A

Notes/Remarks:

Twy J Swb No Turn Onto Eb Twy D
Twy M Sbnd No Turn Onto Twy J
Twy J Swb No Turn Onto Nbnnd Twy M
Twy D Wbnd No Turn Onto Twy J
(A23) Ry 18 Touch & Go Traffic to Use Right Traffic During Hours When ATCT Clsd
Twys N & E Not Avbl for Acr with More Than 30 Psgr Seats
Request Voluntary Compliance in Avoiding Noise Sensitive Areas North & East of Arpt Between Midnight & 6 A.M
Security Directive SD-8G

Business Summary

CAVU Flight Academy

Location: NW; Hours: 24/7
Phone Number: 920-405-0506

Executive Air, LLC

Fuel: Unknown-100LL; Unknown-Jet-A
Location: NW; Hours: 5:30 AM - 9:00 PM
Frequencies: Unicom: 122.85
Phone Number: 920-498-4880

Intrepid Red Barons, Inc.

Hours: Irregular
Phone Number: 920-819-8570

Jet Air Group

Fuel: Epic-100LL; Epic-Jet-A
Location: NE; Hours: May 1 to Oct 1: 5:30 AM - 9:00 PM
Frequencies: Unicom: 122.95
Phone Number: 920-494-2669

Northern Aire Flying Club

Phone Number: 715-330-3843

Pilotsmith, Inc

Location: NE; Hours: Mon - Sun, 8:00 AM - 8:00 PM
Phone Number: 920-415-2359

KUNU

Dodge County
Juneau, WI

2.00 mi N of city N43 25.5883' W88 42.2317' Mag Var: 01W

Nav aids:

Type:	ID:	Freq:	Radial:	Dist:
VOR	BJB	109.80	272	25 nm
VOR/DME	BAE	116.40	313	26 nm
VORTAC	MSN	108.60	056	33 nm

Traffic Patterns:

Airport Manager:	Aircraft	Altitude (MSL)
	Light Aircraft	1936

Runways:

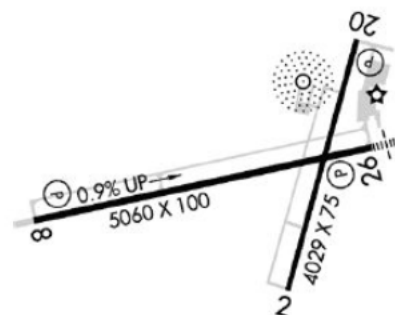
02/20: 4028X75; asphalt, no surface treatment, in fair condition; Power-Line, 350 ft Right of center, 42 ft high, 2,220 ft from end, 48:1 clearance slope; Tree, 290 ft Left of center, 47 ft high, 805 ft from end, 13:1 clearance slope;
08/26: 5070X100; asphalt, no surface treatment, in fair condition; Trees, 360 ft Right of center, 77 ft high, 2,500 ft from end, 30:1 clearance slope;

Communication Freqs:

App/Dep 119.15
WX 120.825T
CTAF 122.7
UNICOM 122.7

Lights: Actvt MALSFL Rwy 26; REIL Rwy 08, 02 & 20; PAPI Rwy 08 & 26; MIRL Rwy 02/20; MIRL Rwy 08/26 - CTAF. MIRL Rwy 08/26 Preset on Low Intst; to Incr Intst Actvt - CTAF

Elevation: 934 ft (284.7 m)



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<http://www.aopa.org/destinations/airports/KUNU/details>
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Phone: 920-386-2402

Weather: 920-386-5682 (AWOS-3)

Fees: Hangar

Charts: NACO: Chicago Sectional

Fuel: 100LL Low-Lead, Jet A

Notes/Remarks:

Mowing Opns Mon-Fri with Flashing Lgts Aft Dark
GCO Avbl on Freq 121.725 Thru Flt Svcs
Birds on & Invof Arpt
290 Ft Twy East End of Ry 08/26
Ireg Ultralight Activity on & Invof Arpt
LOC/DME rptd

Business Summary

Wisconsin Aviation-Dodge County

Fuel: Unknown-100LL; Unknown-Jet-A
Location: NE; Hours: 7:00 AM - 8:00 PM
Frequencies: Unicom: 122.7
Phone Number: 920-386-2402

KPCZ

Waupaca Muni Waupaca, WI

3.00 mi SE of city N44 19.9950' W89 1.1867' Mag Var: 01W

Nav aids:

Type:	ID:	Freq:	Radial:	Dist:
VORTAC	OSH --- ··· ····	111.80	314	29 nm
VORTAC	GRB --- ··· ····	115.50	249	38 nm
VORTAC	AUW ·- ··· ·- -	111.60	140	39 nm

Traffic Patterns:

No TPA reported. Assume 1,000 AGL.

Runways:

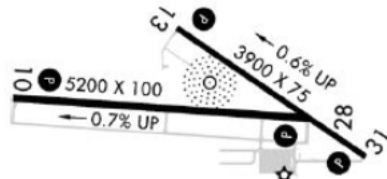
10/28: 5200X100; asphalt, no surface treatment, in fair condition; Trees, Both-Sides, 32 ft high, 1,300 ft from end, 34:1 clearance slope;
13/31: 3899X75; asphalt, no surface treatment, in fair condition; Trees, 220 ft Right of center, 45 ft high, 1,300 ft from end, 24:1 clearance slope; Road, 275 ft Left of center, 12 ft high, 440 ft from end, 20:1 clearance slope;
Right Traffic: 10, 28

Communication Freqs:

WX 118.625T
CTAF 122.8
UNICOM 122.8

Lights: Actvt REIL Ry 10/28; MIRL Ry 10/28 & Ry 13 31 - CTAF

Elevation: 840 ft (256.0 m)



Phone: 920-867-3070

Weather: 920-867-2407 (AWOS-3)

Fees: Hangar, Tiedown

Charts: NACO: Green Bay Sectional

Fuel: 100LL Low-Lead, Jet A

Notes/Remarks:

GCO Avbl on Freq 121.725 Thru Flt Svcs
(E81) Twy Lgts at Entrance Only

Business Summary

Plane Guys Aviation, LLC

Fuel: Unknown-100LL; Unknown-Jet-A

Location: SE; Hours: 24/7

Phone Number: 920-867-3070



KSBM

Sheboygan County Memorial Sheboygan, WI

3.00 mi NW of city N43 46.1867' W87 51.1033' Mag Var: 02W

Nav aids:

Type:	ID:	Freq:	Radial:	Dist:
VOR/DME	FAH	110.0	297	0 nm
DME	MTW	111.0	199	23 nm
VOR	BJB	109.80	031	24 nm

Traffic Patterns:

No TPA reported. Assume 1,000 AGL.

Runways:

04/22: 6800X100; concrete, grooved, in good condition; Trees, 150 ft Right of center, 42 ft high, 1,800 ft from end, 38:1 clearance slope;

13/31: 5002X75; asphalt, no surface treatment, in excellent condition; Trees, Both-Sides, 75 ft high, 2,300 ft from end, 28:1 clearance slope; Trees, 440 ft Right of center, 57 ft high, 1,800 ft from end, 28:1 clearance slope;

Communication Freqs:

App/Dep 127.375

WX 110.0T

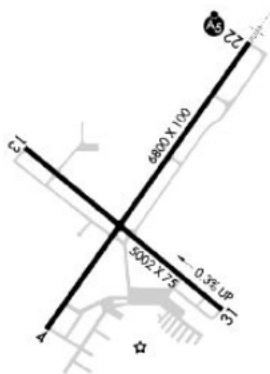
Cinc-Del 127.375

CTAF 122.7

UNICOM 122.7

Lights: HIRL Ry 04/22 & MIRL Ry 13/31 Preset Low Intst; to Incr Intst & Actvt PAPI Ry 04/22; REIL Ry 04 & MALSR Ry 22 - CTAF

Elevation: 755 ft (230.1 m)



Phone: 920-467-2978

Weather: 920-467-0744 (ASOS)

Fees: Parking, Tiedown, Hangar

Charts: NACO: Chicago Sectional

Fuel: 100LL Low-Lead, Jet A

Notes/Remarks:

GCO Avbl on Freq 121.725 Thru Flt Svcs

Waterfowl & Deer on & Invol Arpt

Ultralight Actvty on & in Vcnty of Arpt

Business Summary

Burrows Aviation, LLC

Fuel: Unknown-100LL; Unknown-100LL; Unknown-Jet-A

Location: CTR; Hours: Oct 1 to Apr 30: 7:00 AM - 5:00 PM; May 1 to May 31:

6:00 AM - 6:00 PM; Jun 1 to Jul 31: 5:30 AM - 8:30 PM; Sep 1 to Sep 30:

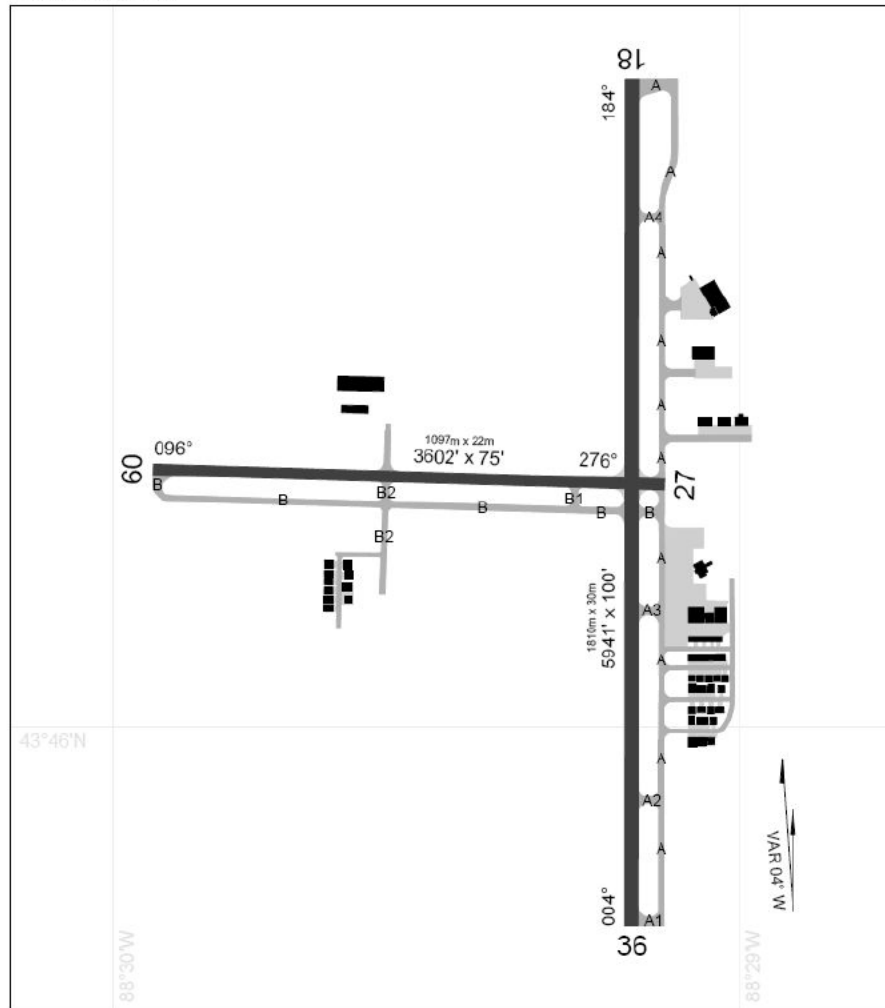
6:00 AM - 6:00 PM

Frequencies: ARINC: 129.85

Phone Number: 920-467-6151



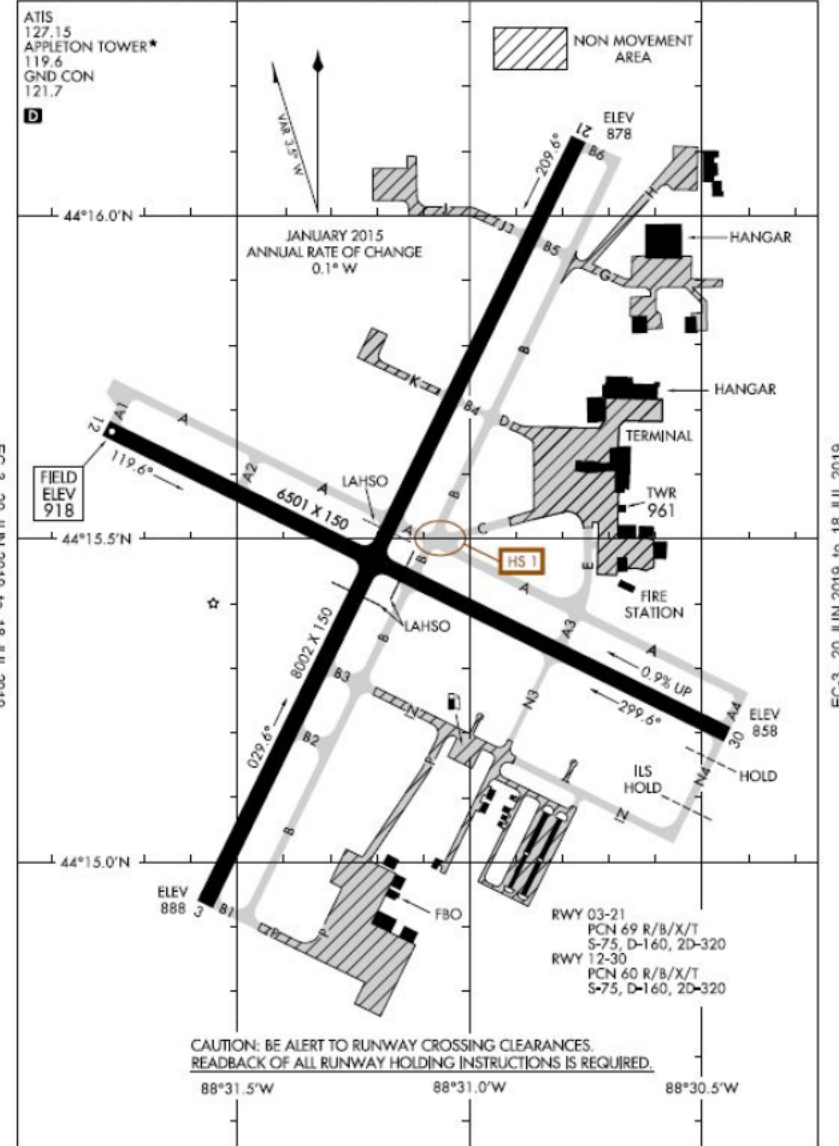
KFLD: FOND DU LAC COUNTY
FOND DU LAC, WI



18032
AIRPORT DIAGRAM

AL-5216 (FAA)

APPLETON INTL (ATW)
APPLETON, WISCONSIN



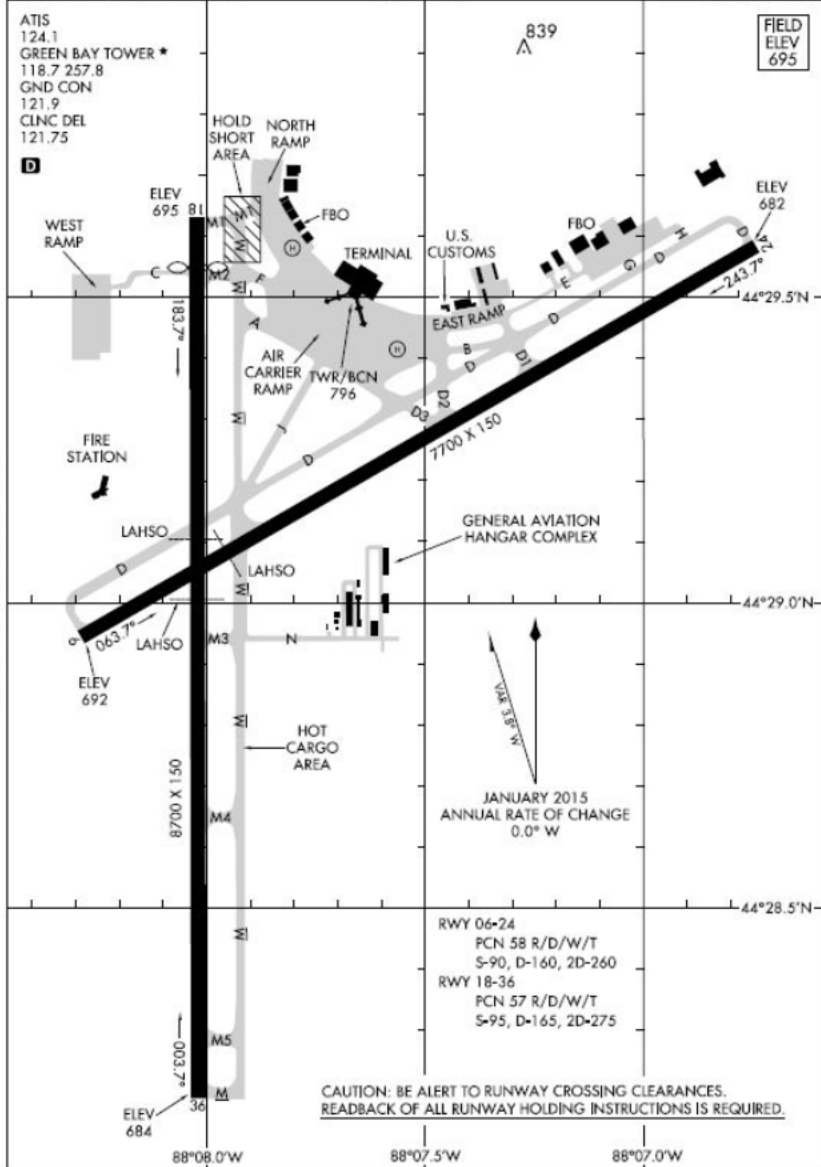
18032
AIRPORT DIAGRAM

APPLETON, WISCONSIN
APPLETON INTL (ATW)

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

18256
AIRPORT DIAGRAM

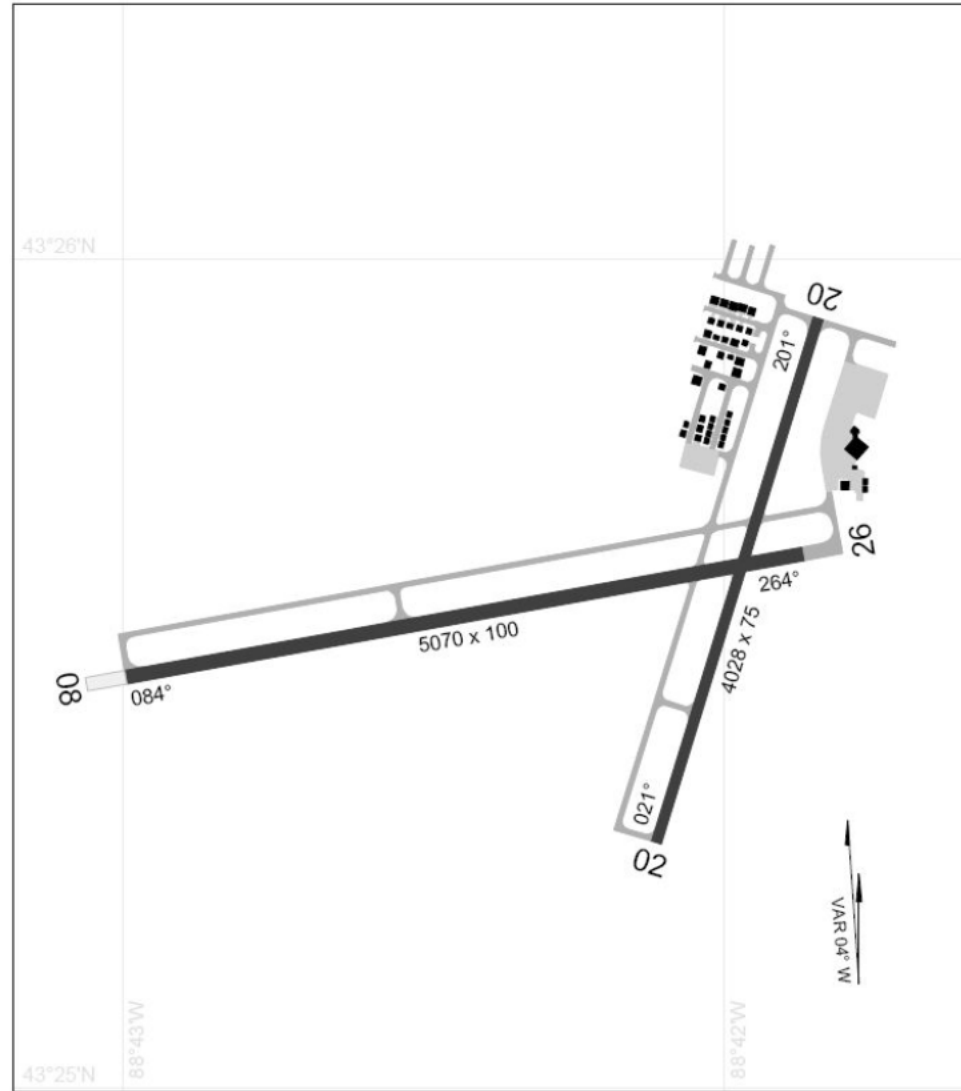
GREEN BAY-AUSTIN STRAUBEL INTL (GRB)
AL-873 (FAA) GREEN BAY, WISCONSIN



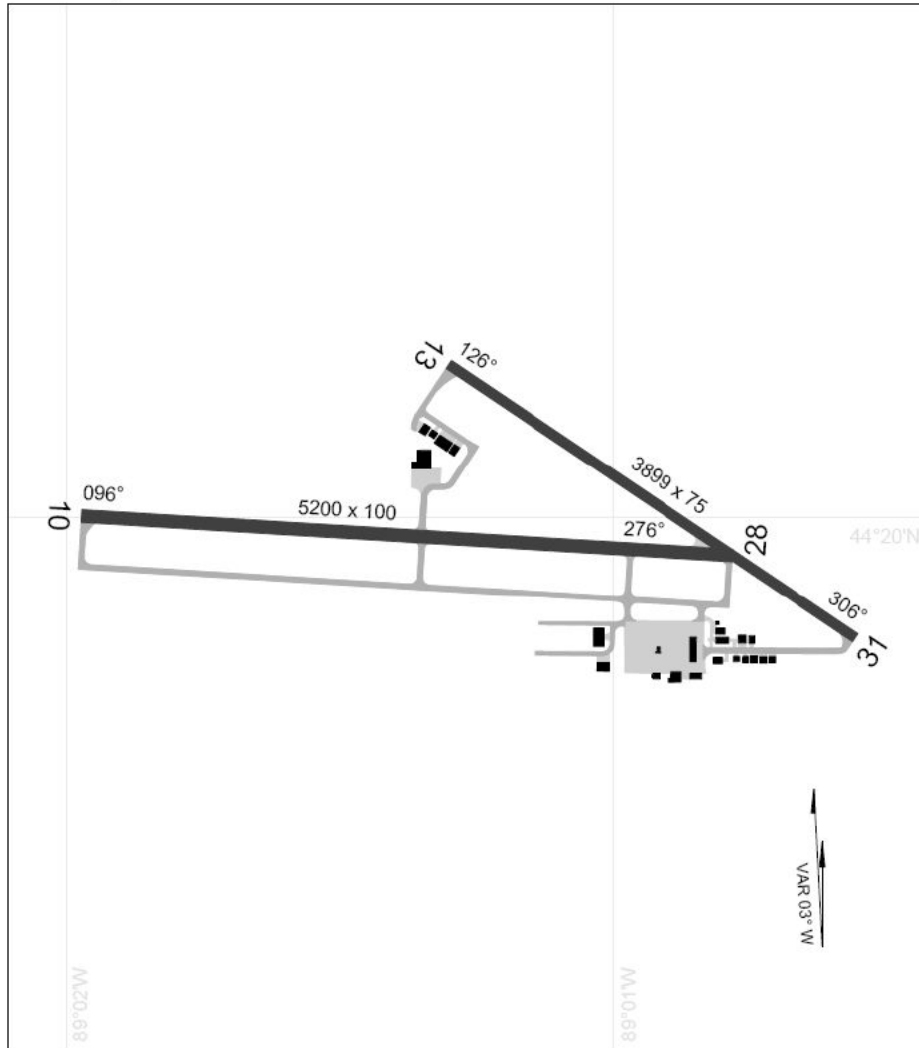
AIRPORT DIAGRAM
18256

GREEN BAY, WISCONSIN
GREEN BAY-AUSTIN STRAUBEL INTL (GRB)

KUNU: DODGE COUNTY
JUNEAU, WI



KPCZ: WAUPACA MUNICIPAL
 WAUPACA, WI



KSBM: SHEBOYGAN COUNTY MEMORIAL
 SHEBOYGAN, WI

