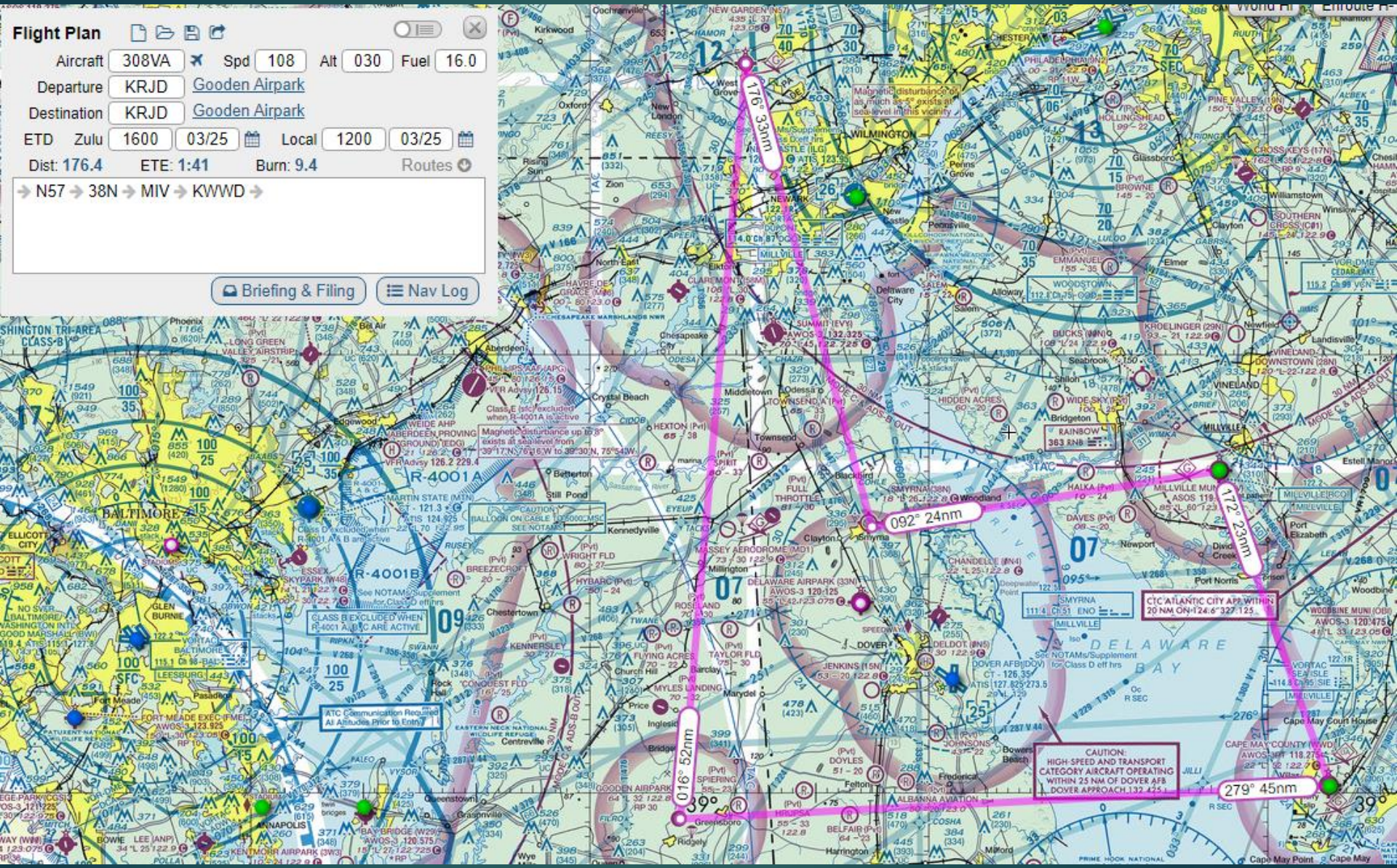
Flight Planning Exercise

Steps for a great flight

- Set up your route
- Review altitudes, airspace
- Prepare navigation log
- Weather Brief
- NOTAMs


Flight Plan
Aircraft 308VA Spd 108 Alt 030 Fuel 16.0
Departure KRJD Gooden Airpark
Destination KRJD Gooden Airpark
ETD Zulu 1600 03/25 Local 1200 03/25
Dist: 176.4 ETE: 1:41 Burn: 9.4 Routes
N57 38N MIV KWWD
Briefing & Filing
Nav Log
176° 33nm
092° 24nm
172° 23nm
016° 52nm
279° 45nm
WILMINGTON
BALTIMORE
DELAWARE BAY
R-4001A
R-4001B
CAUTION: HIGH-SPEED AND TRANSPORT CATEGORY AIRCRAFT OPERATING WITHIN 25 NM OF DOVER AFB DOVER APPROACH 132.425

Steps for a great flight

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- Review altitudes, airspace
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- Weather Brief
- NOTAMs


N57
Wilmington
KMIV
38N
Dover
DELAWARE BAY
KWWD
KRJD

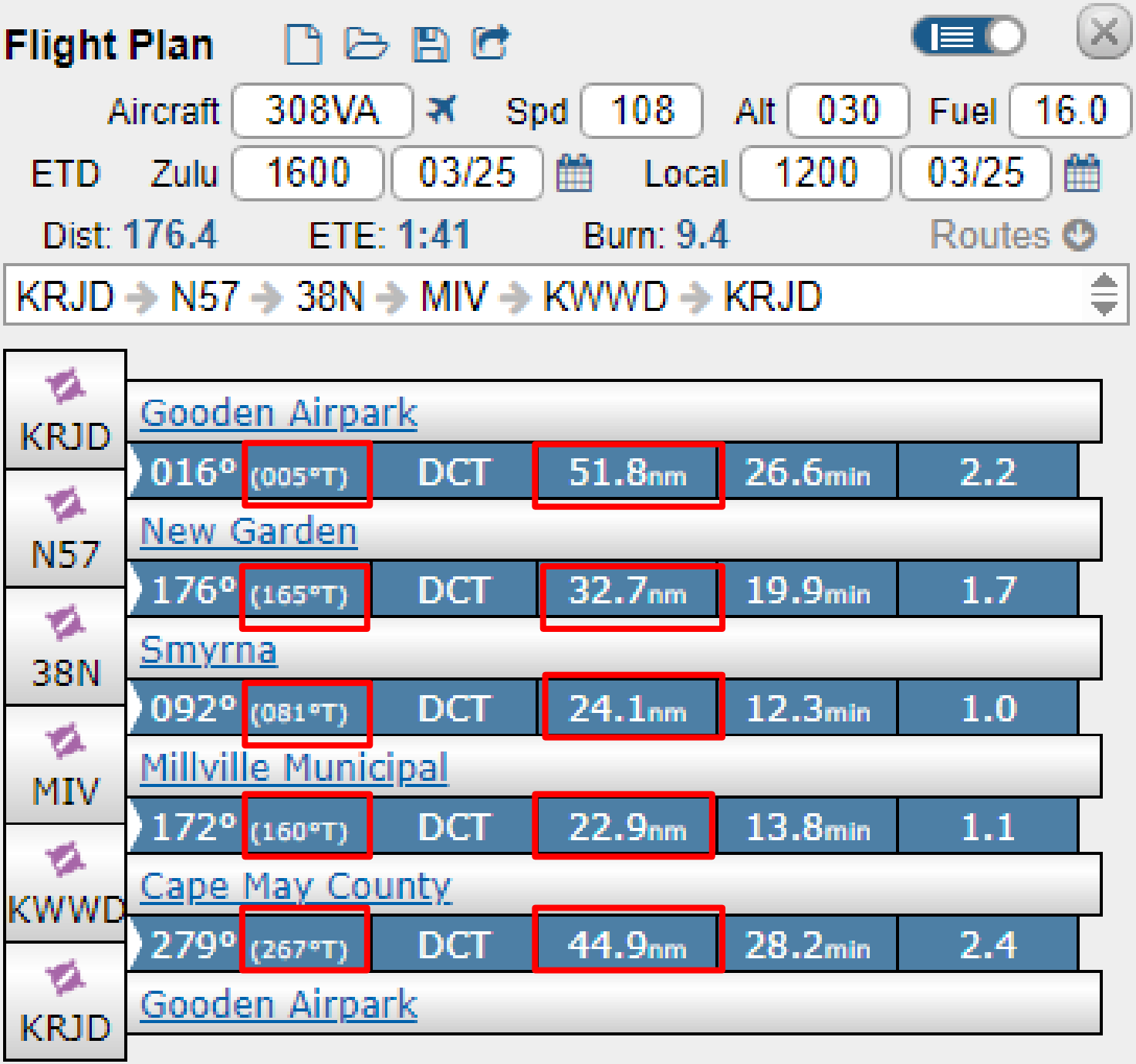
V 184
T-456
FOLEZ
283°
12
MODENA
113.2 CH 79 MXE
712
(335)
10,000
15 NM
MARQI
prison
649
(310)
Media
736
(302)
594
school
560
Lima
804
(409)
prison
267°
TK-502
V 3-408
257°
245°
Unionville
10
T-356-447
725
(417)
institution
tank farm
315
(215)
129°
V 184
Hamorton
golf course
Chatham
HAMOR
V 419
66
653
Kennett Square
177°
711
(316)
tank farm
11,000
726
(228)
PENNSYLVANIA
DELAWARE
814
(370)
666
651
480
(372)
348
(348)
mall
EKSEW
70
30
18
N57
70
40
503
(308)
Avondale
West Grove
NEW GARDEN (N57)
435
123.05
New London
451
24 NM
V 29-170
15
584
(210)
Talleyville
862
(495)
Marcus Hook
337
(303)
refinery
310
(300)
448
(433)
stack
Magnetic disturbance of as much as 5° exists at sea level in this vicinity
TK-504
microwave tower
Hockessin
Hockessin
20 NM
358°
Hoopes Reservoir
T-335
524
(301)
water
053°
V 184
MODE C & ADS-B OUT
30 NM
77
V 469
WILMINGTON
golf course
reservoir
70
15
REESY
Kemblesville
613
(305)
Pedricktown
480
See NOTAMs/Supplement for Class D eff hrs
hospital
Wilmington
222
stacks
V 252
Lewisville
309°
bldg
stack
068°
Penns Grove
302
(298)
257
(250)
484
(475)
stack
080°
golf course
719
(358).UC
tank farm
70
20
653
(294)
NEWARK
NEW CASTLE (ILG)
CT - 126.0
ATIS 123.95
refinery
450
(450)
bridge
Elk Mills
Cherry Hill
T-307-356-447
factory
271°
388
(210)
122.1R
07
245
(228)
110°
(Pvt)
RAINBOW'S END
11 - 22 122.8
V 166-469
14
Sharpto
392
(205)UC
V 166
65
VORTAC
DUPONT
114.0 CH 87 DQO
26
New Castle
Pennsville
504
(302)
APEER
492
KILLCOHOOK NATIONAL WILDLIFE REFUGE
383

Steps for a great flight

- Set up your route
- Review altitudes, airspace
- Prepare navigation log
- Weather Brief
- NOTAMs

Items to gather

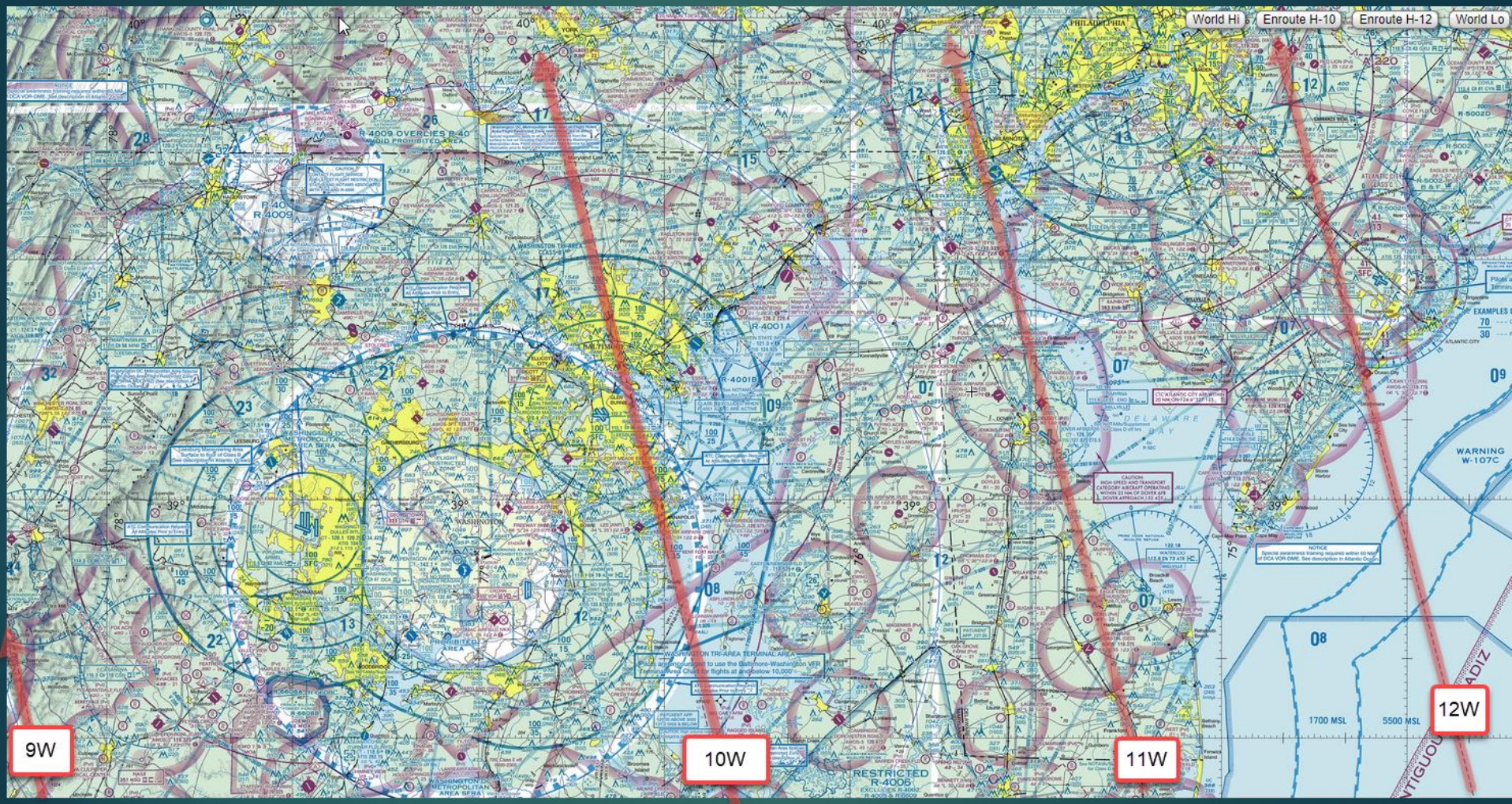
- True heading
- Leg distances
- Magnetic variation
- Wind speed and direction
- Communications frequencies
- AWOS/ATIS frequencies
- Runway length(s)
- Services (especially fuel)


Flight Plan
Aircraft 308VA
Spd 108
Alt 030
Fuel 16.0
ETD Zulu 1600 03/25
Local 1200 03/25
Dist: 176.4
ETE: 1:41
Burn: 9.4
Routes
KRJD → N57 → 38N → MIV → KWWD → KRJD
KRJD
Gooden Airpark
016° (005°T) DCT 51.8nm 26.6min 2.2
N57
New Garden
176° (165°T) DCT 32.7nm 19.9min 1.7
38N
Smyrna
092° (081°T) DCT 24.1nm 12.3min 1.0
MIV
Millville Municipal
172° (160°T) DCT 22.9nm 13.8min 1.1
KWWD
Cape May County
279° (267°T) DCT 44.9nm 28.2min 2.4
KRJD
Gooden Airpark

Aircraft	308RV		Blue: User Entry								Starting Fuel:	
			Green: Calculated								Gals/hr	
Frequency	Waypoint	Wind	Wind	Air	True Crs	True Hdg	Mag Hdg	Gd Spd	Distance	Est Time Leg (0.0 hrs)	Act Time Leg	Est fuel used
Runway(s)		Direction	Speed	Speed	WCA	Var		(kt)	(nm)	Est Time Remain	Act Time Remain	Est fuel remain
	KRJD											
	>				005°				52			
	N57											
	>				165°				33			
	38N											
	>				081°				24			
	KMIV											
	>				160°				23			
	KWWD											
	>				267°				45			
	KRJD											
								Total Distance				
								Total Time				

Items to gather

- True heading
- Leg distances
- Magnetic variation
- Wind speed and direction
- Communications frequencies
- AWOS/ATIS frequencies
- Runway length(s)
- Services (especially fuel)


World Hi
Enroute H-10
Enroute H-12
World Lo
9W
10W
11W
12W
R-4009 OVERLIES R-40
AVOID PROHIBITED AREA
R-4001A
R-4001B
WASHINGTON TRI-AREA TERMINAL AREA
RESTRICTED
R-4006
WARNING
W-107C
1700 MSL
5500 MSL

Aircraft	308RV		Blue: User Entry								Starting Fuel:	
			Green: Calculated								Gals/hr	

Frequency Runway(s)	Waypoint	Wind Direction	Wind Speed	Air Speed	True Crs WCA	True Hdg Var	Mag Hdg	Gd Spd (kt)	Distance (nm)	Est Time Leg (0.0 hrs) Est Time Remain	Act Time Leg Act Time Remain	Est fuel used Est fuel remain
	KRJD											
	>				005°				52			
	N57					011°						
	>				165°				33			
	38N					011°						
	>				081°				24			
	KMIV					012°						
	>				160°				23			
	KWWD					012°						
	>				267°				45			
	KRJD					011°						
								Total Distance				
								Total Time				

N57 New Garden Airport
Toughkenamon, Pennsylvania, USA

FAA INFORMATION EFFECTIVE 19 FEBRUARY 2026

Location

https://www.airnav.com/airport/

FAA Identifier: N57
Elevation: 435.2 ft. / 132.6 m (surveyed)
Variation: 09W (1965)

Airport Communications

CTAF/UNICOM: 123.05

Airport Services

Fuel available: 100LL

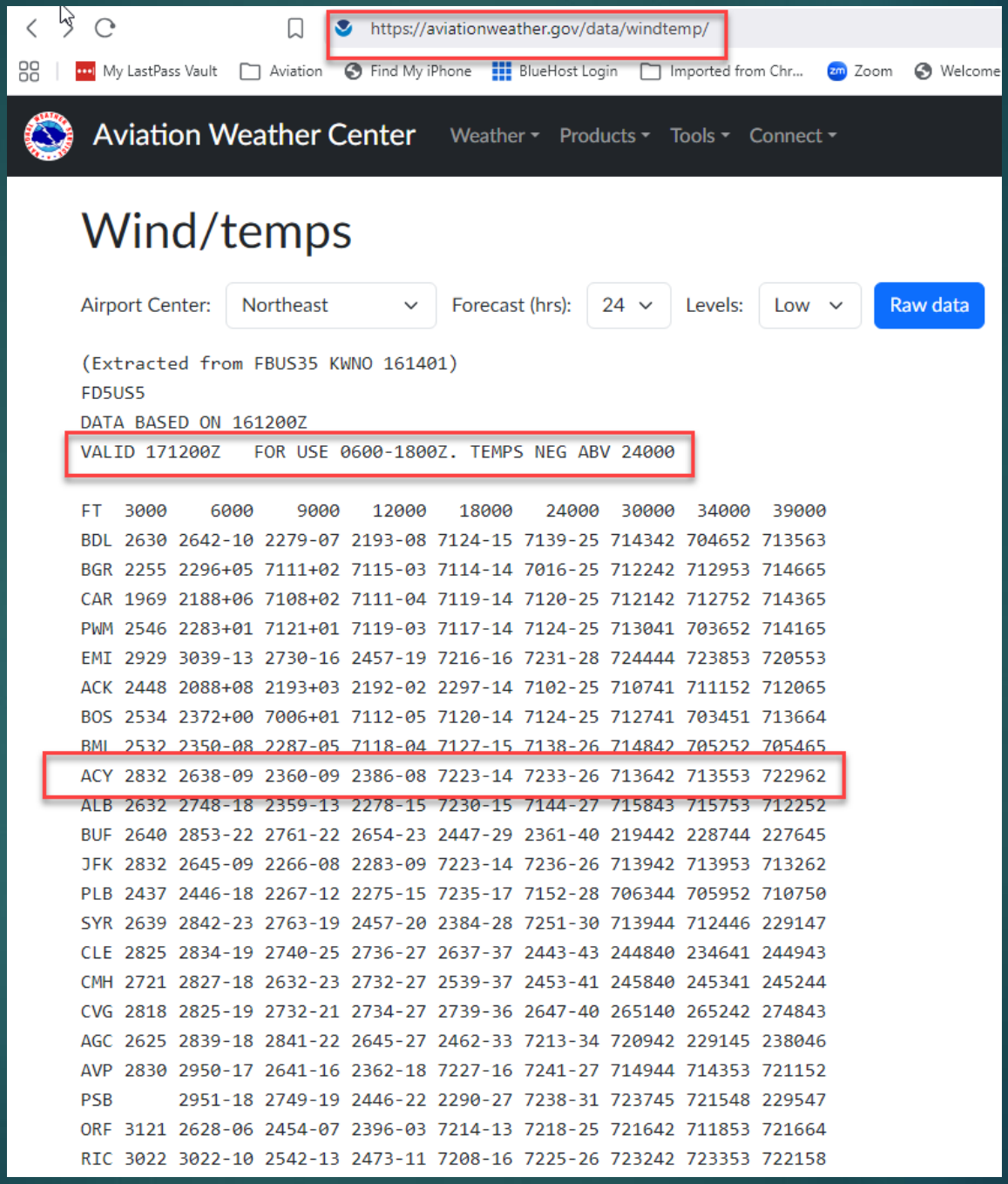
Runway Information

Runway 6/24

Dimensions: 3693 x 60 ft. / 1126 x 18 m
Surface: asphalt, in excellent condition
TURF SFC SOUTH OF RWY FOR GLIDER RECOVERY ONLY.

Items to gather

- True heading
- Leg distances
- Magnetic variation
- Wind speed and direction
- Communications frequencies
- AWOS/ATIS frequencies
- Runway length(s)
- Services (especially fuel)


https://aviationweather.gov/data/windtemp/
My LastPass Vault
Aviation
Find My iPhone
BlueHost Login
Imported from Chr...
Zoom
Welcome
Aviation Weather Center
Weather
Products
Tools
Connect
Wind/temps
Airport Center:
Northeast
Forecast (hrs):
24
Levels:
Low
Raw data
(Extracted from FBUS35 KWNO 161401)
FD5US5
DATA BASED ON 161200Z
VALID 171200Z FOR USE 0600-1800Z. TEMPS NEG ABV 24000
FT 3000 6000 9000 12000 18000 24000 30000 34000 39000
BDL 2630 2642-10 2279-07 2193-08 7124-15 7139-25 714342 704652 713563
BGR 2255 2296+05 7111+02 7115-03 7114-14 7016-25 712242 712953 714665
CAR 1969 2188+06 7108+02 7111-04 7119-14 7120-25 712142 712752 714365
PWM 2546 2283+01 7121+01 7119-03 7117-14 7124-25 713041 703652 714165
EMI 2929 3039-13 2730-16 2457-19 7216-16 7231-28 724444 723853 720553
ACK 2448 2088+08 2193+03 2192-02 2297-14 7102-25 710741 711152 712065
BOS 2534 2372+00 7006+01 7112-05 7120-14 7124-25 712741 703451 713664
BML 2532 2350-08 2287-05 7118-04 7127-15 7138-26 714842 705252 705465
ACY 2832 2638-09 2360-09 2386-08 7223-14 7233-26 713642 713553 722962
ALB 2632 2748-18 2359-13 2278-15 7230-15 7144-27 715843 715753 712252
BUF 2640 2853-22 2761-22 2654-23 2447-29 2361-40 219442 228744 227645
JFK 2832 2645-09 2266-08 2283-09 7223-14 7236-26 713942 713953 713262
PLB 2437 2446-18 2267-12 2275-15 7235-17 7152-28 706344 705952 710750
SYR 2639 2842-23 2763-19 2457-20 2384-28 7251-30 713944 712446 229147
CLE 2825 2834-19 2740-25 2736-27 2637-37 2443-43 244840 234641 244943
CMH 2721 2827-18 2632-23 2732-27 2539-37 2453-41 245840 245341 245244
CVG 2818 2825-19 2732-21 2734-27 2739-36 2647-40 265140 265242 274843
AGC 2625 2839-18 2841-22 2645-27 2462-33 7213-34 720942 229145 238046
AVP 2830 2950-17 2641-16 2362-18 7227-16 7241-27 714944 714353 721152
PSB 2951-18 2749-19 2446-22 2290-27 7238-31 723745 721548 229547
ORF 3121 2628-06 2454-07 2396-03 7214-13 7218-25 721642 711853 721664
RIC 3022 3022-10 2542-13 2473-11 7208-16 7225-26 723242 723353 722158

Aircraft	308RV		Blue: User Entry								Starting Fuel:	
			Green: Calculated								Gals/hr	

Frequency Runway(s)	Waypoint	Wind Direction	Wind Speed	Air Speed	True Crs WCA	True Hdg Var	Mag Hdg	Gd Spd (kt)	Distance (nm)	Est Time Leg (0.0 hrs) Est Time Remain	Act Time Leg Act Time Remain	Est fuel used Est fuel remain
	KRJD											
	>	280°	32		005°				52			
	N57					011°						
	>	280°	32		165°				33			
	38N					011°						
	>	280°	32		081°				24			
	KMIV					012°						
	>	280°	32		160°				23			
	KWWD					012°						
	>	280°	32		267°				45			
	KRJD					011°						
								Total Distance				
								Total Time				

- Three more variables and we can calculate everything else in the table
  - Aircraft airspeed
  - Fuel on board
  - Fuel burn (gallons/hour)

Aircraft	308RV		Blue: User Entry								Starting Fuel:	16
			Green: Calculated								Gals/hr	5

Frequency Runway(s)	Waypoint	Wind Direction	Wind Speed	Air Speed	True Crs WCA	True Hdg Var	Mag Hdg	Gd Spd (kt)	Distance (nm)	Est Time Leg (0.0 hrs) Est Time Remain	Act Time Leg Act Time Remain	Est fuel used Est fuel remain
	KRJD											
	>	280°	32	108	005°				52			
	N57					011°						
	>	280°	32	108	165°				33			
	38N					011°						
	>	280°	32	108	081°				24			
	KMIV					012°						
	>	280°	32	108	160°				23			
	KWWD					012°						
	>	280°	32	108	267°				45			
	KRJD					011°						
								Total Distance				
								Total Time				

And through the magic of Excel

Aircraft	308RV		Blue: User Entry								Starting Fuel:	16
			Green: Calculated								Gals/hr	5

Frequency Runway(s)	Waypoint	Wind Direction	Wind Speed	Air Speed	True Crs WCA	True Hdg Var	Mag Hdg	Gd Spd (kt)	Distance (nm)	Est Time Leg (0.0 hrs) Est Time Remain	Act Time Leg Act Time Remain	Est fuel used Est fuel remain
	KRJD											
	>	280°	32	108	005°	348°	359°	100	52	0.5		2.6
	N57				-017°	011°				1.2		13.4
	>	280°	32	108	165°	181°	192°	118	33	0.3		1.4
	38N				016°	011°				0.9		12.0
	>	280°	32	108	081°	075°	087°	138	24	0.2		0.9
	KMIV				-006°	012°				0.8		11.1
	>	280°	32	108	160°	175°	187°	120	23	0.2		1.0
	KWWD				015°	012°				0.6		10.2
	>	280°	32	108	267°	271°	282°	77	45	0.6		2.9
	KRJD				004°	011°				0.0		7.3
								Total Distance		177		
								Total Time		1.7		

Items to gather

- True heading
- Leg distances
- Magnetic variation
- Wind speed and direction
- Communications frequencies
- AWOS/ATIS frequencies
- Runway length(s)
- Services (especially fuel)

Steps for a great flight

- Set up your route
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- NOTAMs

1800WXBRIEF.COM

1800wxbrief.com/Website/home?desktop=true#!/

FlightService

Home Dashboard Map Wx Charts Plan & Brief Airports Account Features Links Help Logout

Welcome KATHY A HARKNESS

Mon Mar 16 17:16:22 EDT | 21:16:22 Z

Featured Capabilities

NextGen Briefing

Interactive Map

Automated Voice Service

just ask | alexa

SMS Text Message Service

Latest Features & Enhancements

Resources

- Service Provider Integration
- How-To Videos
- Student Pilot Journey Poster

News & Announcements

March 3, 2026

What's New: A More Powerful Interactive Map

A More Capable Interactive Map

READ MORE >

February 24, 2026

Airshow Season Is Around the Corner; Let's Make Weather Your Wingman

As airshow season approaches, pilots across the country are gearing up for fly-ins, formation flights, and busy airspace filled with excitement and energy. Whether you're heading to a major event like Oshkosh or a smaller local show, one thing remains constant: the success of your trip depends heavily on weather awareness and sound decision-making.

READ MORE >

January 27, 2026

Upcoming Events

There are no upcoming events.

Featured Video

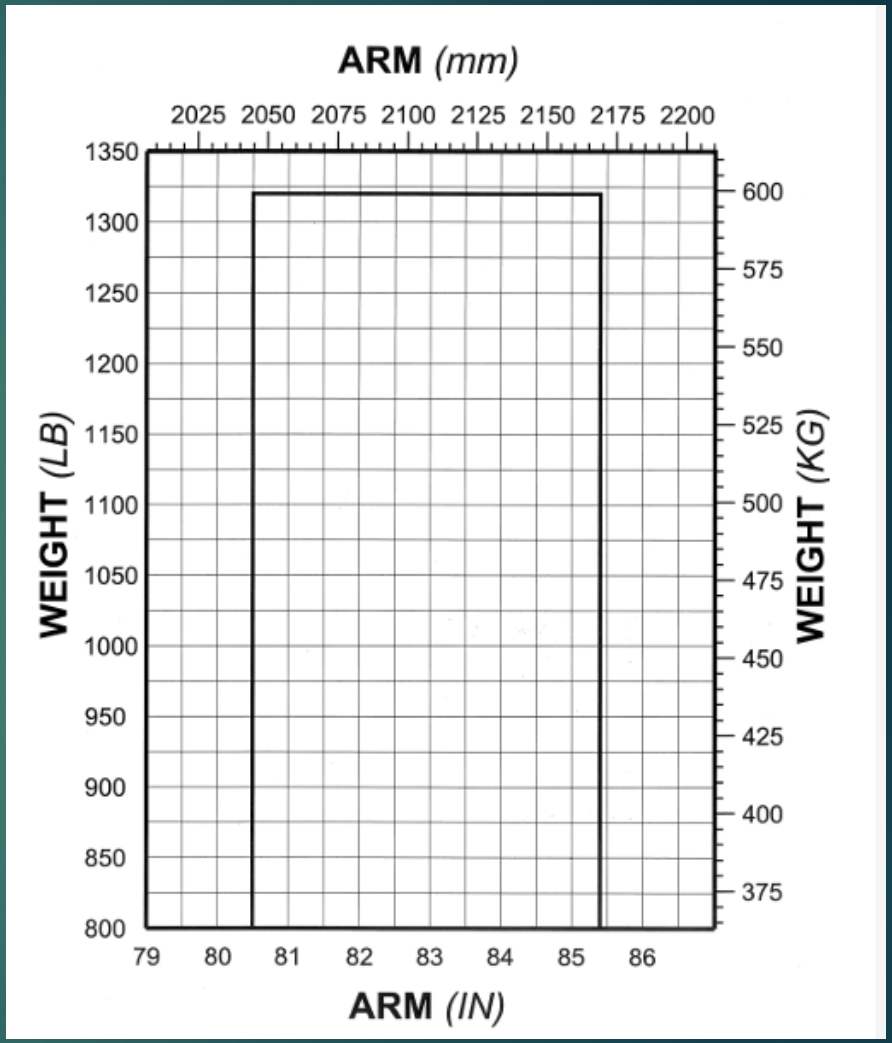
Steps for a great flight

- Check weight and balance
- Review takeoff and landing distances
- File a flight plan if desired

YOUR AIRPLANE

ITEM	ARM (IN.) (LIMITS 80.49-85.39)	WEIGHT (LB)	MOMENT (IN-LB)
EMPTY WEIGHT WITH OIL & COOLANT			
PILOT	78.85		
PASSENGER	78.85		
BAGGAGE	110.81		
FUEL (6 LB/GAL)	110.28		
TAKEOFF WEIGHT & MOMENT			

CG = TOTAL MOMENT / WEIGHT



Item	Weight	Arm	Moment		Maximum
Empty Weight (lbs)	785.5	80.54	63264.17		
Pilot (lbs)	170	78.85	13404.5	<-----	300 lbs
Passenger (lbs)	220	78.85	17347	<-----	300 lbs
Baggage (lbs)	30	110.81	3324.3	<-----	50 lbs
Fuel (gals)	18	110.28	11910.24	<-----	22 gals
Total Weight	1313.5			<-----	1320 lb
Total Moment	109250.2				
CG	83.17488			forward limit	80.49
				aft limit	85.39

Steps for a great flight

- Check weight and balance
- Review takeoff and landing distances
- File a flight plan if desired

TAKE-OFF & CLIMB PERFORMANCE @ 1320lb

PRESS ALTITUDE (FT)	TEMP (°F)	TAKE-OFF DISTANCE (FT)		MAX RATE OF CLIMB (FT/MIN)
		GROUND ROLL	50 FT OBSTCL	
SEA LEVEL	0	589	1091	1156
	20	641	1188	1069
	40	696	1291	985
	60	750	1397	906
	80	812	1519	831
	100	873	1647	758
2000	0	681	1263	1007
	20	742	1380	921
	40	805	1505	839
	60	871	1642	761
	80	939	1790	687
	100	1010	1954	616
4000	0	790	1474	858
	20	860	1619	774
	40	933	1777	693
	60	1010	1952	617
	80	1089	2150	544
	100	1171	2379	474
6000	0	917	1742	710
	20	999	1927	627
	40	1084	2138	548
	60	1173	2384	473
	80	1265	2680	401
	100	1360	3060	333
8000	0	1068	2097	562
	20	1163	2355	481
	40	1262	2671	403
	60	1365	3082	330
	80	1472	3678	259
	100	1583	4720	192

LANDING PERFORMANCE – ZERO WIND

DENSITY ALTITUDE (FT)	APPROACH SPEED (KIAS)	LANDING DISTANCE (FT)	
		GROUND ROLL	50 FT OBSTCL
0	55	525	1550
2500	55	565	1615
5000	55	610	1695
7500	55	660	1770

NOTES:

1) Decrease the distances shown by 10% for each 5 kts of headwind.
2) The data given is with flaps fully extended.

Steps for a great flight

- Check weight and balance
- Review takeoff and landing distances
- Review preferred runways
- File a flight plan if desired

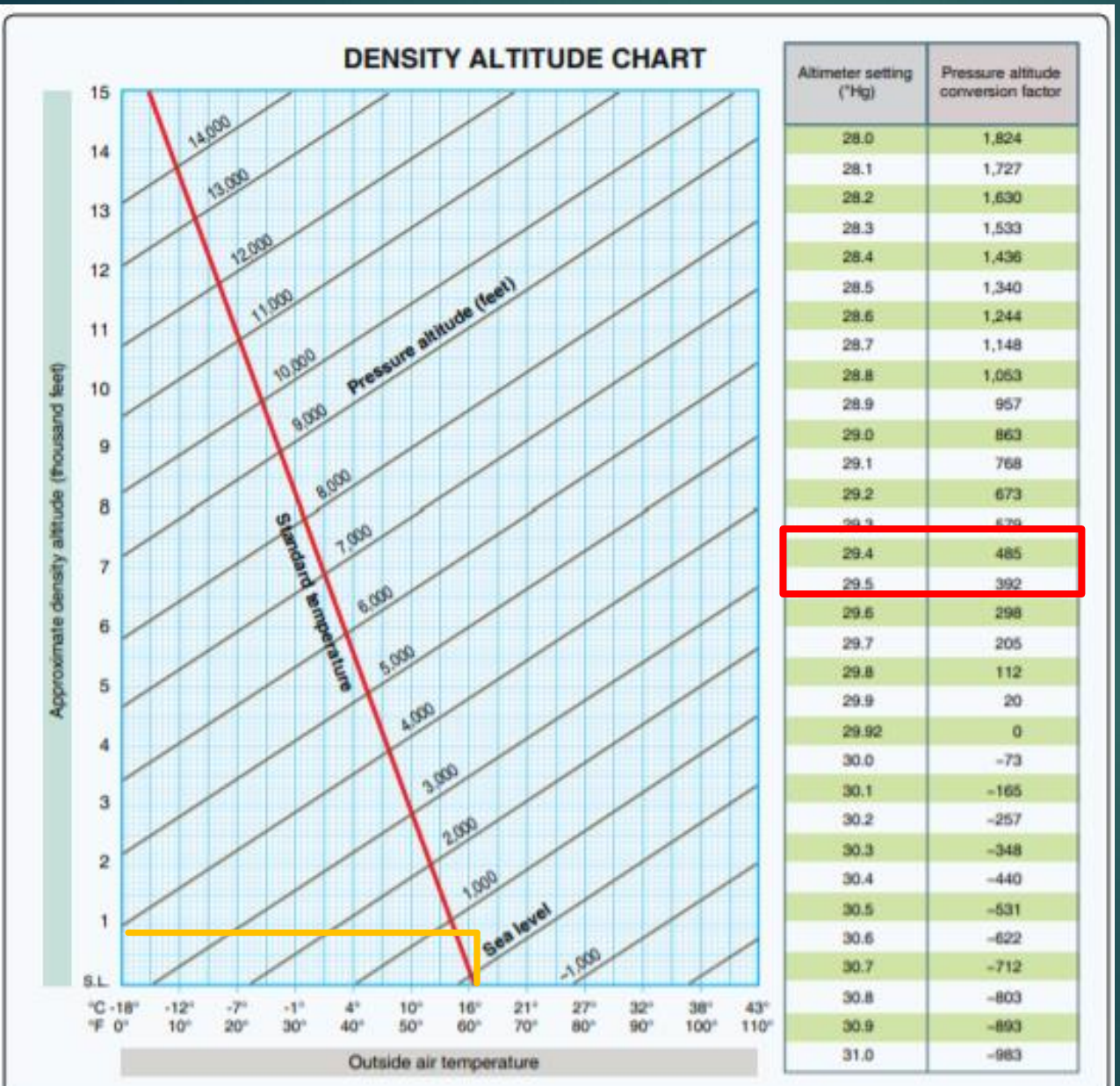
Current conditions

- Temperature: 17 C°
- Pressure: 29.45 “ Hg
- Wind direction 280° true
- Wind velocity: 18 gusting 32

Aircraft	308RV		Blue: User Entry								Starting Fuel:	16
			Green: Calculated								Gals/hr	5

Frequency Runway(s)	Waypoint Runway Length	Wind Direction	Wind Speed	Air Speed	True Crs WCA	True Hdg Var	Mag Hdg	Gd Spd (kt)	Distance (nm)	Est Time Leg (0.0 hrs) Est Time Remain	Act Time Leg Act Time Remain	Est fuel used Est fuel remain
122.8	KRJD											
12 / 30	3200	280°	32	108	005°	348°	359°	100	52	0.5		2.6
123.05	N57				-017°	011°				1.2		13.4
06 / 24	3700	280°	32	108	165°	181°	192°	118	33	0.3		1.4
122.8	38N				016°	011°				0.9		12.0
10 / 28	2600 turf	280°	32	108	081°	075°	087°	138	24	0.2		0.9
123.0 / 119.6	KMIV				-006°	012°				0.8		11.1
10 / 28	6000											
14 / 32	5000	280°	32	108	160°	175°	187°	120	23	0.2		1.0
122.7 / 118.275	KWWD				015°	012°				0.6		10.2
01 / 19	5200											
10 / 28	5000	280°	32	108	267°	271°	282°	77	45	0.6		2.9
122.8	KRJD				004°	011°				0.0		7.3
								Total Distance		177		
								Total Time		1.7		

Pressure and density altitudes



Altimeter setting ("Hg)	Pressure altitude conversion factor
28.0	1,824
28.1	1,727
28.2	1,630
28.3	1,533
28.4	1,436
28.5	1,340
28.6	1,244
28.7	1,148
28.8	1,053
28.9	957
29.0	863
29.1	768
29.2	673
29.3	579
29.4	485
29.5	392
29.6	298
29.7	205
29.8	112
29.9	20
29.92	0
30.0	-73
30.1	-165
30.2	-257
30.3	-348
30.4	-440
30.5	-531
30.6	-622
30.7	-712
30.8	-803
30.9	-893
31.0	-983

PA conversion factor for 29.45:

(485-392)/2 = 11.5

392 + 11.5 = 404

Add 404 to field elevation at 38N:

404 + 18 = 422

Read DA from chart: ~ 800 ft.

TAKE-OFF & CLIMB PERFORMANCE @ 1320lb

PRESS ALTITUDE (FT)	TEMP (°F)	TAKE-OFF DISTANCE (FT)		MAX RATE OF CLIMB (FT/MIN)
		GROUND ROLL	50 FT OBSTCL	
SEA LEVEL	0	589	1091	1156
	20	641	1188	1069
	40	696	1291	985
	60	750	1397	906
	80	812	1519	831
	100	873	1647	758
2000	0	681	1263	1007
	20	742	1380	921
	40	805	1505	839
	60	871	1642	761
	80	939	1790	687
	100	1010	1954	616
4000	0	790	1474	858
	20	860	1619	774
	40	933	1777	693
	60	1010	1952	617
	80	1089	2150	544
	100	1171	2379	474
6000	0	917	1742	710
	20	999	1927	627
	40	1084	2138	548
	60	1173	2384	473
	80	1265	2680	401
	100	1360	3060	333
8000	0	1068	2097	562
	20	1163	2355	481
	40	1262	2671	403
	60	1365	3082	330
	80	1472	3678	259
	100	1583	4720	192

Even at the most pessimistic limit (PA 2000 ft, 50 ft obstacle)

The 2,600 ft runway at Smyrna is long enough.

LANDING PERFORMANCE – ZERO WIND

DENSITY ALTITUDE (FT)	APPROACH SPEED (KIAS)	LANDING DISTANCE (FT)	
		GROUND ROLL	50 FT OBSTCL
0	55	525	1550
2500	55	565	1615
5000	55	610	1695
7500	55	660	1770

NOTES:

1) Decrease the distances shown by 10% for each 5 kts of headwind.
2) The data given is with flaps fully extended.

Least favorable runway: 24 at New Garden (N57)

280 true = 292 magnetic.

29 – 24 = 50 degree angle

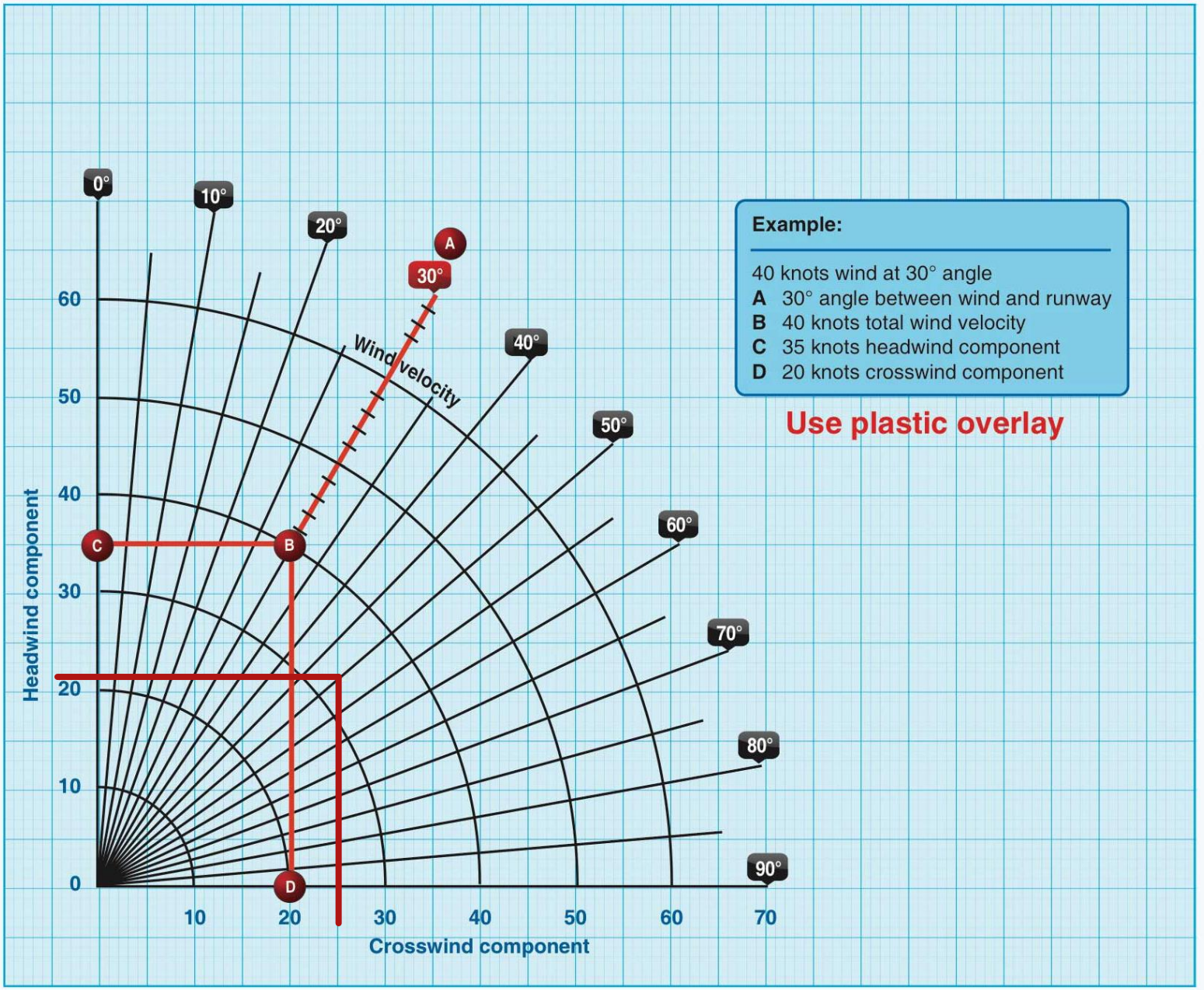


FIGURE 36.—Crosswind Component Graph.

Steps for a great flight

- Check weight and balance
- Review takeoff and landing distances
- Review preferred runways
- File a flight plan if desired

After you launch

- Execute ded reckoning per navlog
- Evaluate with pilotage and crosschecks at checkpoints
- Alter nav log as needed to account for unexpected conditions
- Listen to weather from nearby AWOS/ATIS
- Monitor 121.5 (Guard)

After you land

- Note total time en route
- If refueling, note fuel added
- Alter nav log as needed to account for unexpected conditions

- Thursday March 19:

- Engines and electrical systems

- Machado Chapters 3 & 4
- Pilot's Handbook Chapter 7