



Sun Country Interview Technical Study Guide

- Brief and use Jeppesen charts (approaches, SIDs, STARs, Taxi Charts, Missed approaches: see below)
- Holding Entries and speeds:

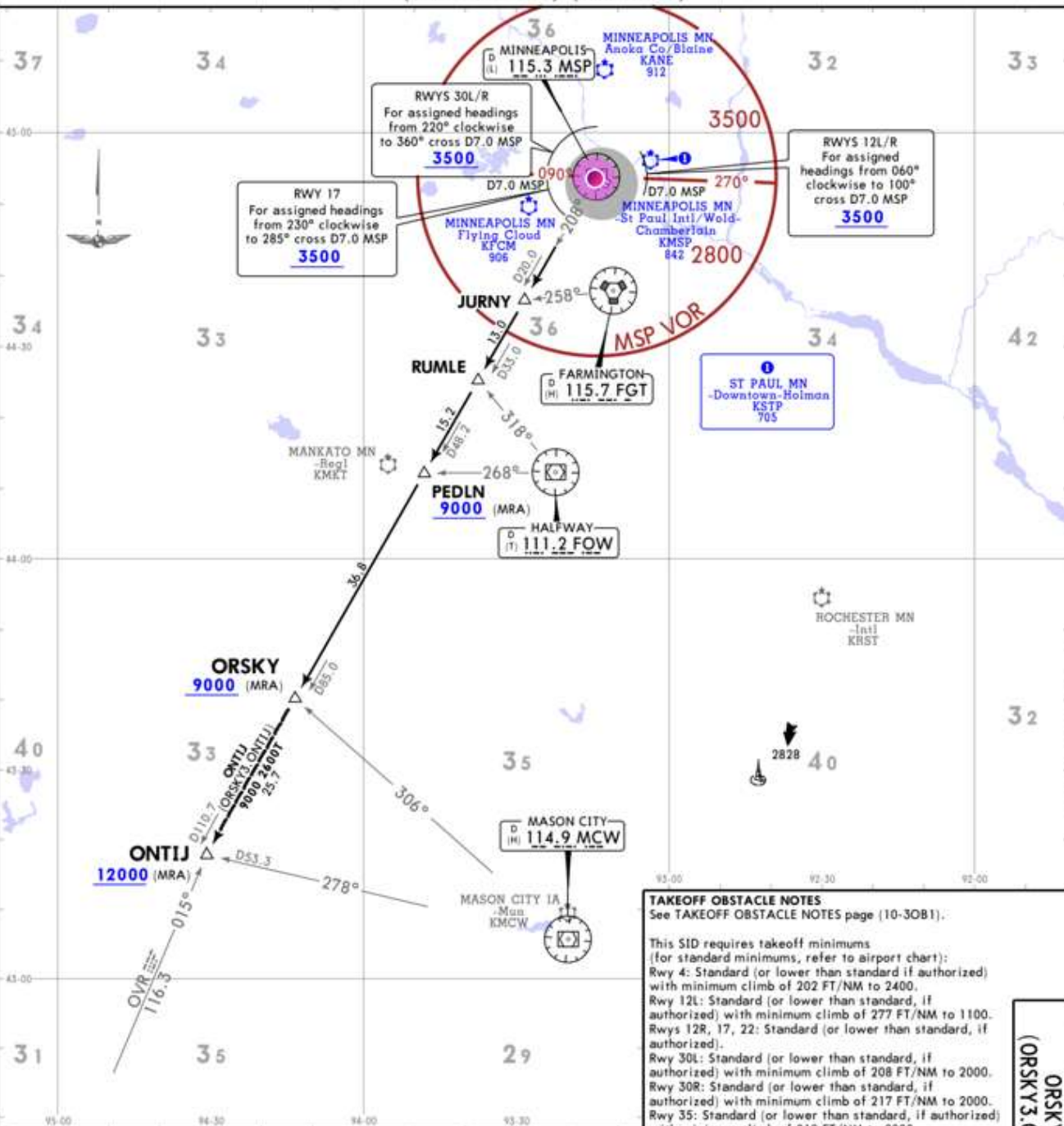
Altitude(MSL)	Airspeed (KIAS)
MHA – 6,000'	200
6,001' – 14,000'	230
14,001' – Above	265

- Read METARS and TAFS
- Use METARS to determine if you can shoot an approach
- When is an alternate required: The 123 Rule, if the weather at your destination isn't at least 3 SM of visibility and 2000' AGL ceilings from 1 hour before to 1 hour after your ETA
- When is a takeoff alternate required: If weather above takeoff minimums but below authorized IFR landing minimums must have an alternate airport within 1 hour's flying time (at normal cruise speed in still air) of the departure airport.
- Contact Approach ceiling and cloud clearance: 1 Mile clear of clouds
- Visual approach ceiling and cloud clearance: the reported ceilings at the airport need to be at or above 1000', and visibility needs to be at or above 3 statute miles.
- Define and Explain V1 and V2 : V1- Takeoff Decision Speed V2 – Takeoff Safety Speed
- Effects of temperature on performance: Higher Temperature worse performance
- Class B airspace. Max speed inside class B and below class B
- Fuel requirements: Enough Fuel to fly to the destination then the most distant alternated then have 45 minutes of reserve fuel
- Max airspeed below 10,000: 250KIAS
- Towered and Non-towered airport procedures with visual approaches
- Effects of a wet runway for takeoff and landing
- Effects of temperature on takeoff and landing
- Effects of a tailwind for takeoff and landing
- What does it mean if your cleared to descend VIA?

CHANGES: Procedure revised, renumbered.

MINNEAPOLIS Departure (R)
NORTH or WEST 125.75 SOUTH or EAST 124.7
Apt Elev See graphic
Trans alt: 18000
1. RADAR required. 2. ATC crossing restrictions and climb gradients: If unable to accept crossing restrictions and climb rates advise ATC prior to taxi.

ORSKY 3 DEPARTURE (ORSKY3.ORSKY) (ALL RWYS)



TAKEOFF OBSTACLE NOTES
See TAKEOFF OBSTACLE NOTES page (10-30B1).
This SID requires takeoff minimums (for standard minimums, refer to airport chart):
Rwy 4: Standard (or lower than standard if authorized) with minimum climb of 202 FT/NM to 2400.
Rwy 12L: Standard (or lower than standard, if authorized) with minimum climb of 277 FT/NM to 1100.
Rwys 12R, 17, 22: Standard (or lower than standard, if authorized).
Rwy 30L: Standard (or lower than standard, if authorized) with minimum climb of 208 FT/NM to 2000.
Rwy 30R: Standard (or lower than standard, if authorized) with minimum climb of 217 FT/NM to 2000.
Rwy 35: Standard (or lower than standard, if authorized) with minimum climb of 219 FT/NM to 2000.

INITIAL CLIMB		TOP ALTITUDE
ALL RUNWAYS	Climb on assigned heading for RADAR vectors to assigned fix on MSP R208, then on depicted route to ORSKY, then on transition. MAINTAIN ATC assigned altitude. EXPECT filed altitude 10 minutes after departure.	Assigned by ATC
RWYS 12L/R	For assigned headings from 060° clockwise to 100°, cross D7.0 MSP at or above 3500, Rwy 12L: 540 FT/NM to 3500, 12R: 542 FT/NM to 3500.	
RWY 17	For assigned headings from 230° clockwise to 285°, cross D7.0 MSP at or above 3500, 512 FT/NM to 3500.	
RWYS 30L/R	For assigned headings from 220° clockwise to 360°, cross D7.0 MSP at or above 3500, 380 FT/NM to 3500.	

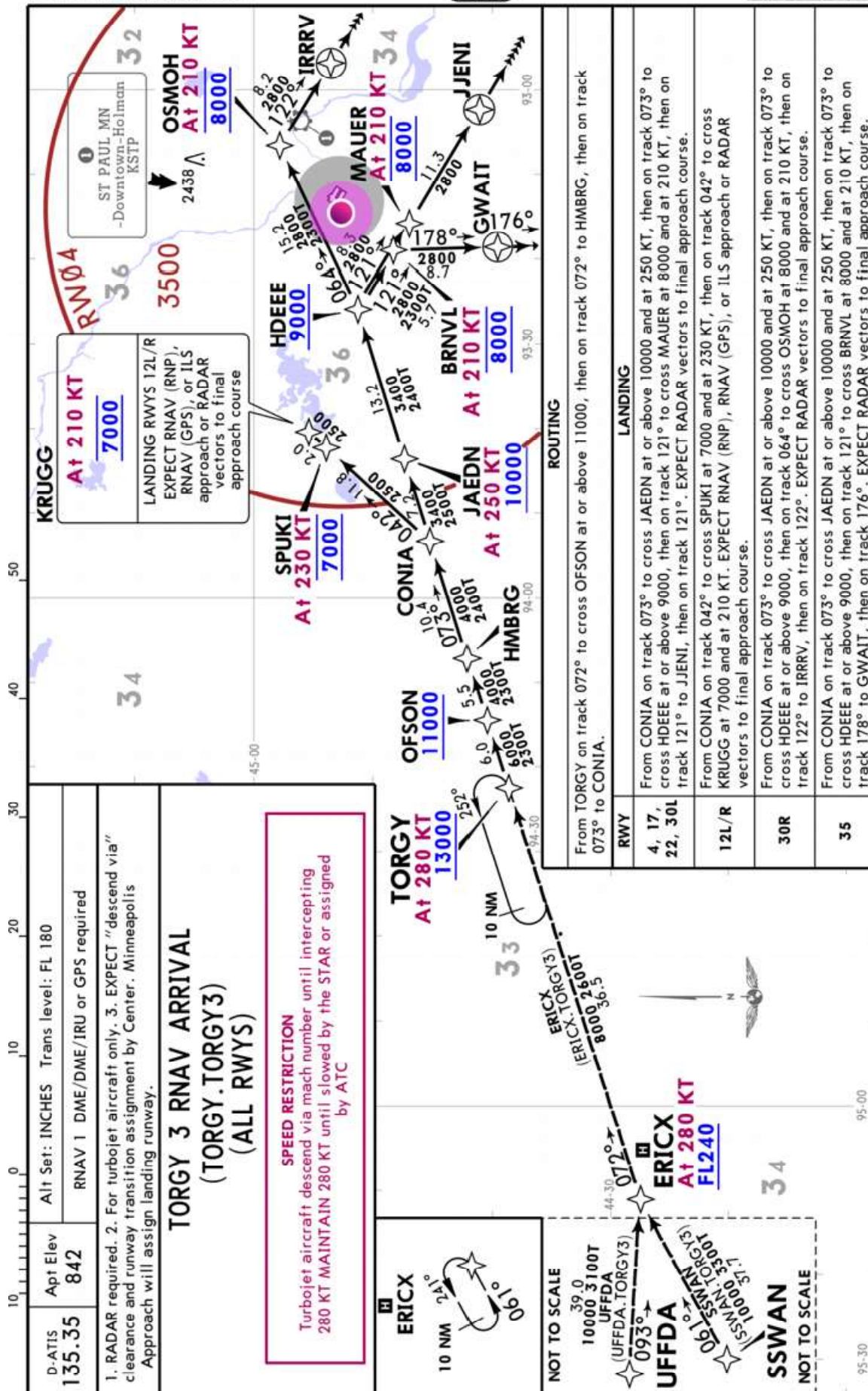
Grnd speed-KT	75	100	150	200	250	300
202 FT/NM	253	337	505	673	842	1010
208 FT/NM	260	347	520	693	867	1040
217 FT/NM	271	362	543	723	904	1085
219 FT/NM	274	365	548	730	913	1095
277 FT/NM	346	462	692	923	1154	1385
380 FT/NM	475	633	950	1267	1583	1900
512 FT/NM	640	853	1280	1707	2133	2560
540 FT/NM	675	900	1350	1800	2250	2700
542 FT/NM	678	903	1355	1807	2258	2710

KMSP/MSP
MINNEAPOLIS-ST PAUL INTL/
WOLD-CHAMBERLAIN

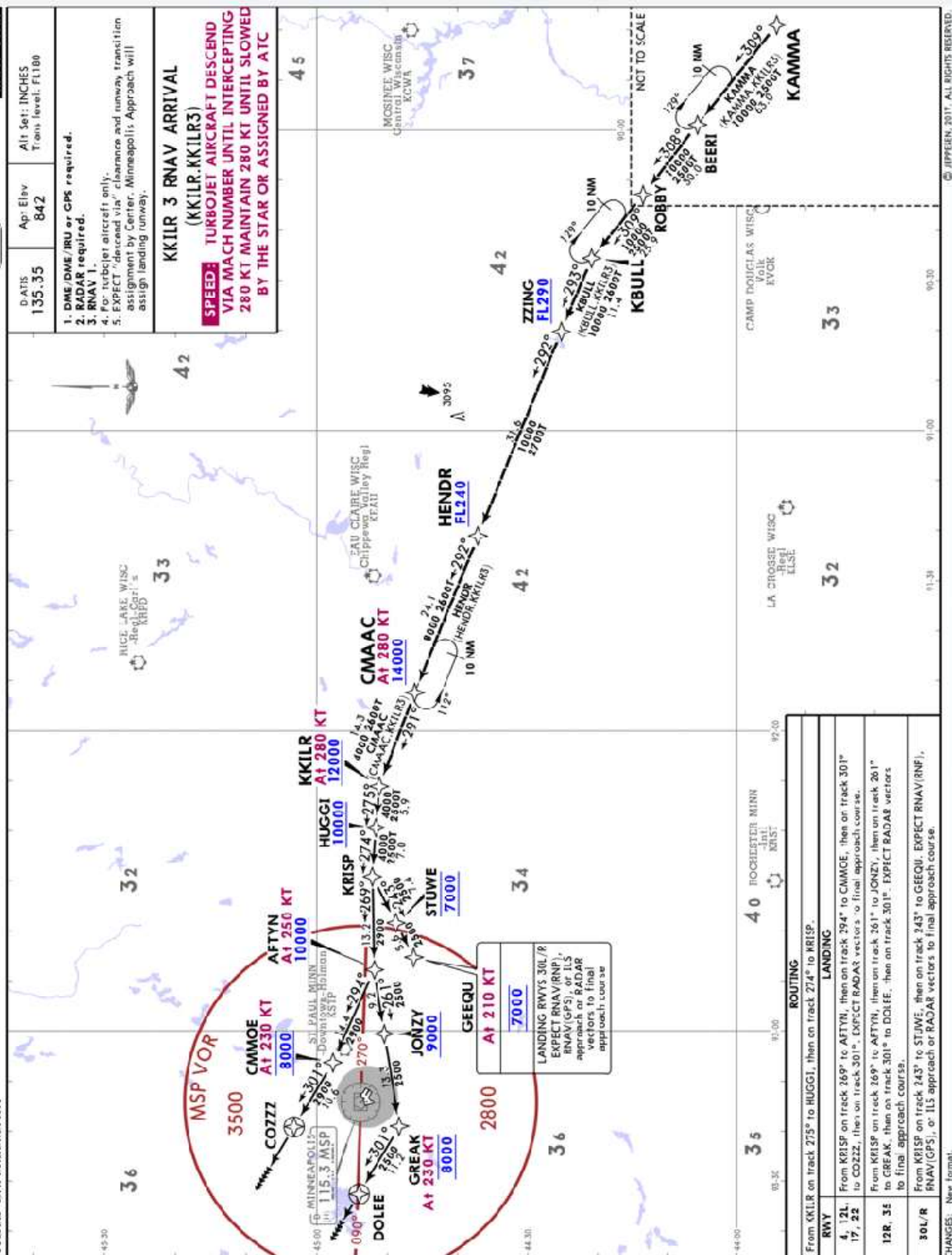
JEPPESSEN MINNEAPOLIS, MINN
2 SEP 22 (10-30) EFF 8 Sep
ORSKY 3 DEPARTURE
(ORSKY3.ORSKY) (ALL RWYS)
SID



INITIAL CLIMB		TOP ALTITUDE
ALL RUNWAYS	Fly assigned heading for RADAR vectors to GEP R072 to WLSTN. Turbojet aircraft MAINTAIN 7000 or lower assigned altitude, all other aircraft MAINTAIN 5000 or lower assigned altitude.	
RWYS 4, 22, 35	Initially assigned heading.	
DME EQUIPPED AIRCRAFT RWYS 12L/R	For assigned headings from 060° clockwise to 100°, cross D7.0 MSP at or above 3500. MAINTAIN assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.	
NON-DME EQUIPPED AIRCRAFT RWYS 12L/R	For assigned headings from 060° clockwise to 100°, cross FGT R010 at or above 3500. MAINTAIN assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.	JETS 7000 PROPS 5000
RWY 17	For assigned headings from 230° clockwise to 285°, cross D7.0 MSP at or above 3500. MAINTAIN assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.	
RWYS 30L/R	For assigned headings from 220° clockwise to 360°, cross D7.0 MSP at or above 3500. MAINTAIN assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.	
ROUTING		
On assigned transition or assigned route. EXPECT clearance to filed altitude/flight level 10 minutes after departure.		



22 SEP 17 (10-2E)



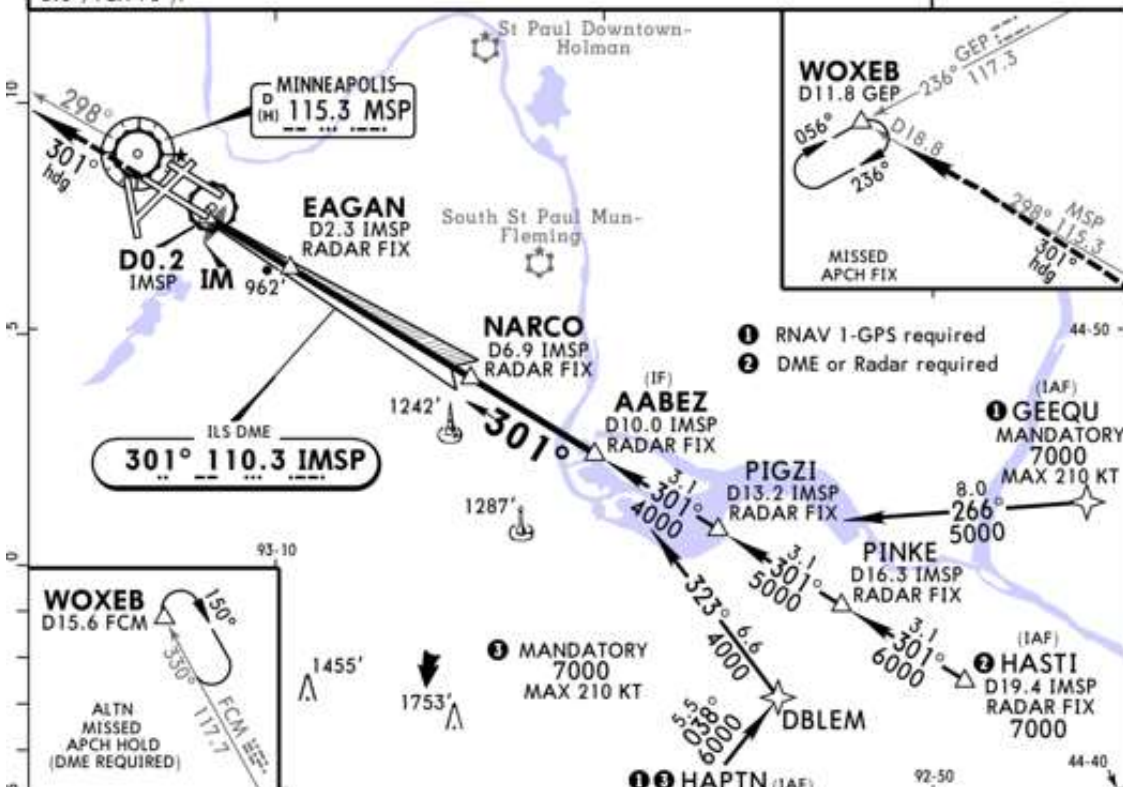
KMSP/MSP
MINNEAPOLIS-ST PAUL INTL/
WOLD-CHAMBERLAIN

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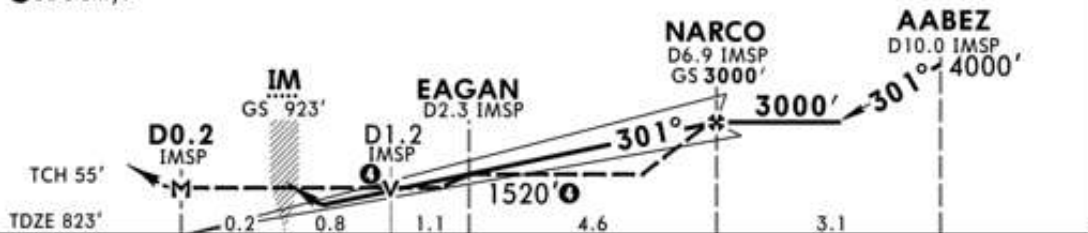
30 DEC 16
Eff 5 Jan 11-6

MINNEAPOLIS, MINN
ILS or LOC Rwy 30L

D-ATIS	MINNEAPOLIS Approach (R)	MINNEAPOLIS Tower	North	Ground	West
135.35	126.95	Rwys 4/22, 12R/30L Rwy 12L/30R Rwy 17/35	121.8	South	127.92
LOC IMSP	Final Apch Crs	GS NARCO	ILS DA(H)	Apt Elev 842'	
110.3	301°	3000' (2177')	1023' (200')	TDZE 823'	
MISSED APCH: Climb to 1300', then climb to 3000' on heading 301° and outbound on MSP VOR R-298 to WOXEB INT/D11.8 GEP and hold.					
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. DME or Radar required. 2. Simultaneous approaches authorized with Rwy 30R and ILS V Rwy 35 (CONVERGING). 3. VGSI and ILS glidepath not coincident (VGSI angle 3.0°/TCH 78').					



1 LOC only.



Gnd speed-Kts	70	90	100	120	140	160
GS	3.00°	372	478	531	637	743
MAP at D0.2 IMSP or NARCO to MAP	6.7	5:45	4:28	4:01	3:21	2:52

TERPS			STRAIGHT-IN LANDING RWY30L		CIRCLE-TO-LAND	
ILS			LOC (GS out)			
DA(H) 1023' (200')			MDA(H) 1220' (397')			
FULL	TDZ/CL out	ALS out	ALS out		Max Kts	MDA(H)
A					90	1360' (518') -1
B	RVR 18 or 1/2	RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2	120	1460' (618') -1 3/4
C				RVR 35 or 3/4	140	1660' (818') -2 3/4
D					165	

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: Procedure.

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TERPS AMEND 47 5 JAN 2017

KMSP/MSP
MINNEAPOLIS-ST PAUL INTL/
WOLD-CHAMBERLAIN

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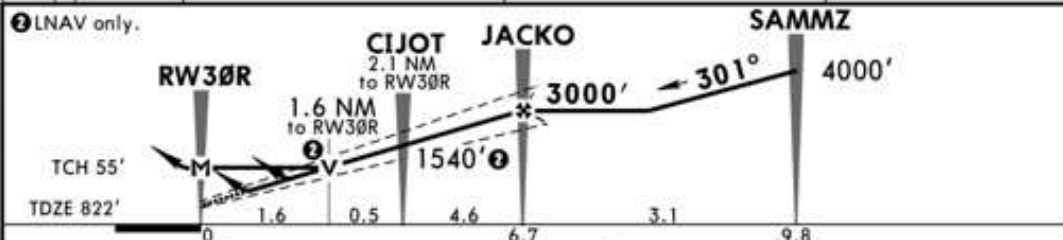
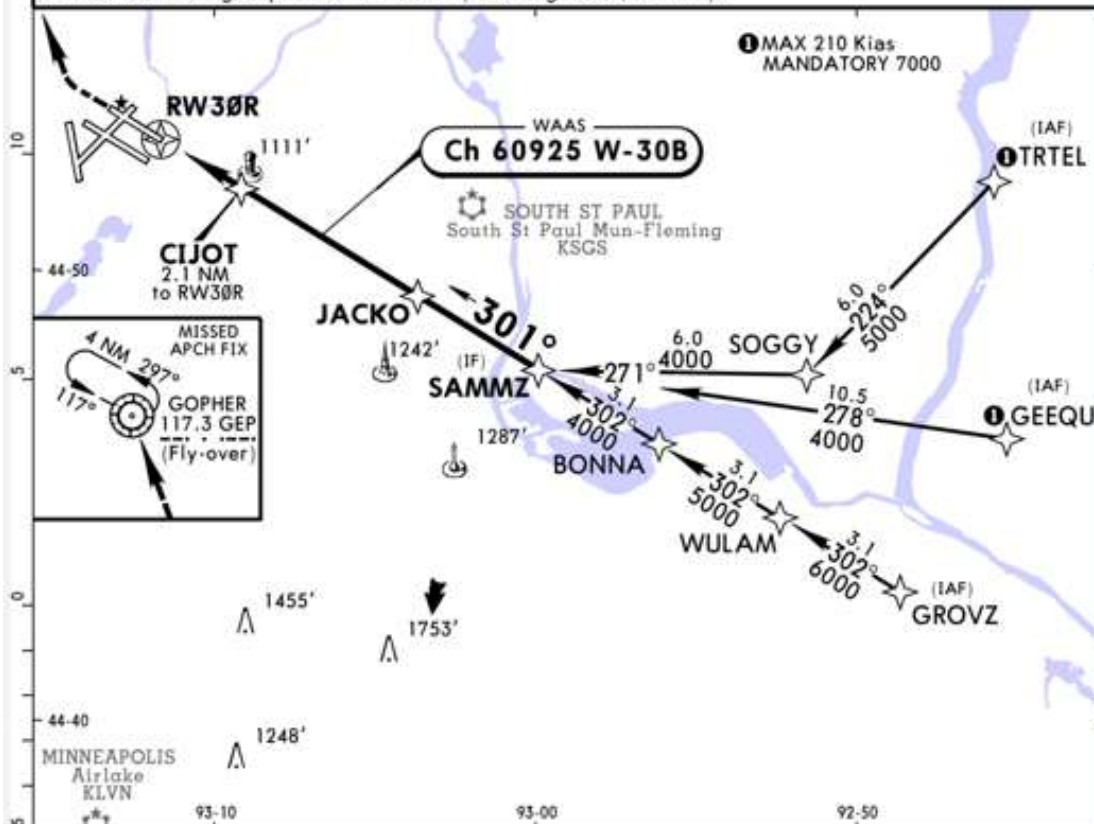
11 AUG 17 (12-6)

MINNEAPOLIS, MINN
RNAV (GPS) Z Rwy 30R

D-ATIS	MINNEAPOLIS Approach (R)	MINNEAPOLIS Tower	Rwy 12L/30R	Rwys 4/22, 12R/30L	Rwy 17/35	North	Ground South	West
135.35	119.3	123.95	126.7	123.67	121.8	121.9	127.92	
WAAS Ch 60925 W-30B	Final Apch Crs 301°	Minimum Alt JACKO 3000' (2178')	LPV DA(H) 1072' (250')	Apt Elev 842'	TDZE 822'	3500		
MISSED APCH: Climb to 1300', then climbing RIGHT turn to 3000' direct GEP VOR and hold.							MSA RW30R	

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'

1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -19°C (-2°F) or above 54°C (130°F). 2. Simultaneous approaches authorized with Rwy 30L and ILS V Rwy 35 (CONVERGING). 3. Use of Flight Director or Autopilot providing RNAV track guidance required during simultaneous operations. 4. LNAV procedure not authorized during simultaneous operations. 5. DME/DME RNP-0.30 not authorized. 6. VGSI and RNAV glidepath not coincident (VGSI angle 3.0°/TCH 71').



Gnd speed-Kts	70	90	100	120	140	160	MALSF	1300'	3000'	GEP
Glide Path Angle	3.00°	372	478	531	637	743	849	PAPI	↑	117.3
LPV, LNAV/VNAV: MAP at DA										
LNAV: MAP at RW30R										

TERPS				STRAIGHT-IN LANDING RWY 30R		CIRCLE-TO-LAND	
LPV		LNAV/VNAV		LNAV		CIRCLE-TO-LAND	
DA(H)	1072' (250')	DA(H)	1316' (494')	MDA(H)	1400' (578')	Max Kts	MDA(H)
ALS out		ALS out		ALS out		90	1400' (558') -1
RVR 40 or 3/4		1 3/8	1 5/8	RVR 40 or 3/4	RVR 50 or 1	120	1460' (618') -1 3/4
				1 3/8	1 5/8	140	1660' (818') -2 3/4
						165	

CHANGES: None.

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TERPS AMEND 4 22 JUN 2017

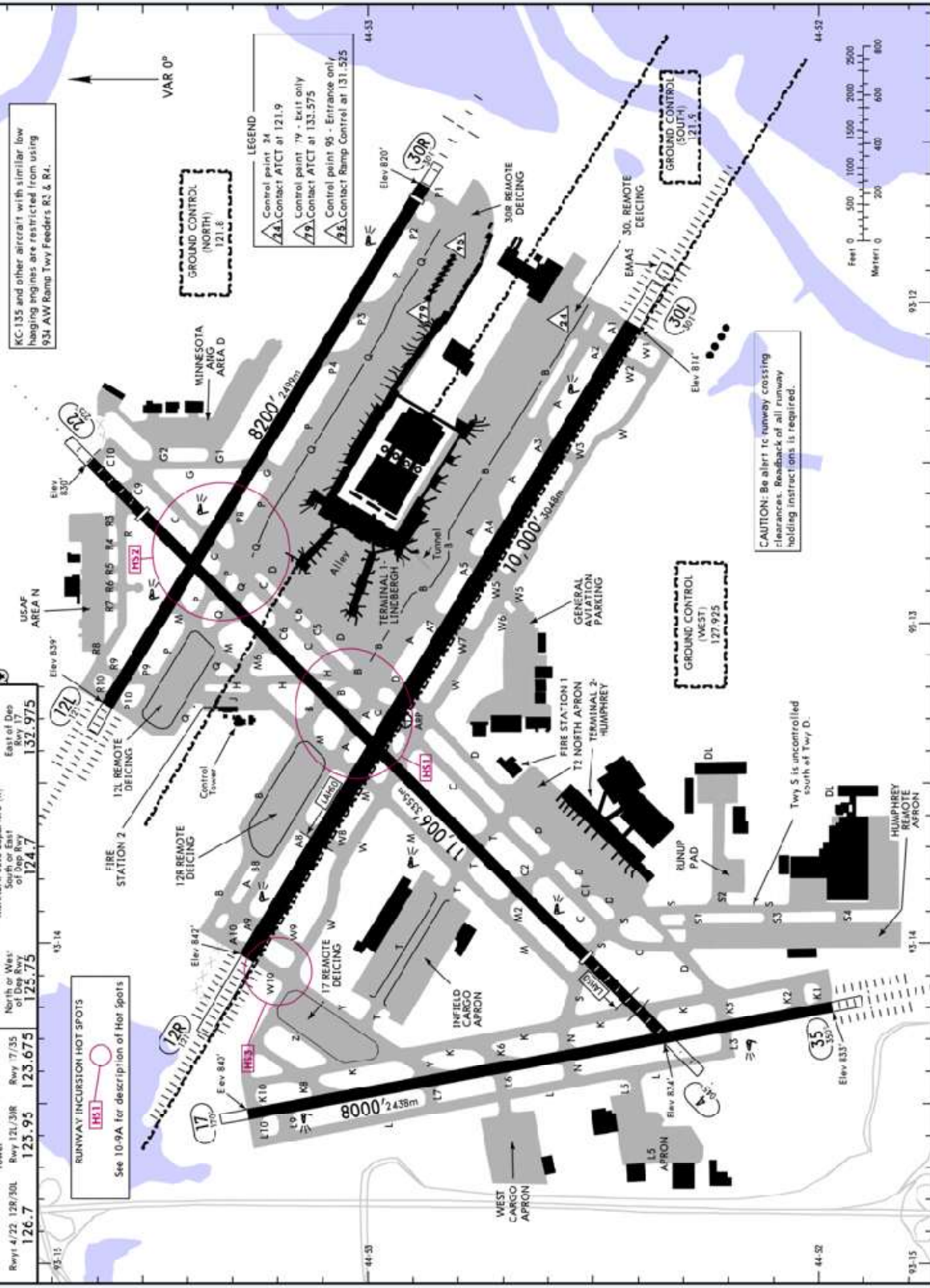
MINNEAPOLIS, MINN
MINNEAPOLIS-ST PAUL INTL/
WOLD-CHAMBERLAIN

24 JUN 22 (10-9)

[illegible]

RUNWAY INCURSION HOT SPOTS

See 10-9A for description of Hot Spots



CHANGES: Control point 79 communications revised.

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22027

AIRPORT DIAGRAM

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

AL-264 (FAA)

MINNEAPOLIS, MINNESOTA

D-ATIS ARR 135.35 239.275
DEP 120.8

MINNEAPOLIS TOWER

123.95 273.55 (Rwy 12L-30R)

126.7 273.55 (Rwys 12R-30L, 04-22)

123.675 273.55 (Rwy 17-35)

GND CON

N 121.8 348.6

S 121.9 348.6

W 127.925 348.6

CLINC DEL

133.2

GND METERING

133.57

CPDLC

PDC

D

RWYS 04-22, 12L-30R

PCN 105 R/B/W/T

S-100, D-200, 2D-400, 2D/2D2-850

RWY 12R-30L

PCN 106 R/B/W/T

S-100, D-200, 2D-400, 2D/2D2-850

RWY 17-35

PCN 118 R/B/W/T

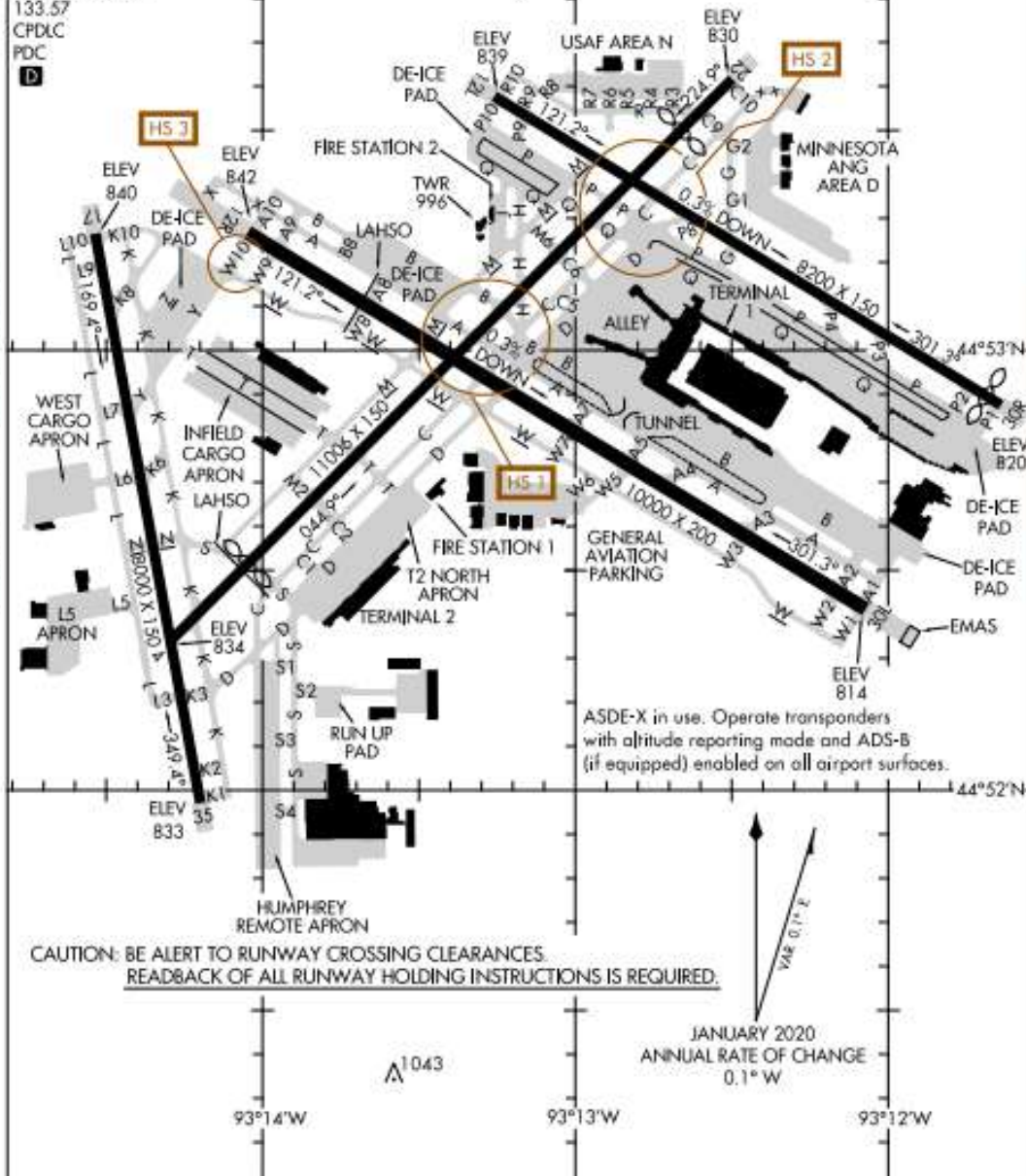
S-100, D-200, 2D-400, 2D/2D2-850

FIELD
ELEV
842

Runway Status Lights in operation.

NC-1, 06 OCT 2022 to 03 NOV 2022

NC-1, 06 OCT 2022 to 03 NOV 2022



AIRPORT DIAGRAM

22027

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

MINNEAPOLIS, MINNESOTA