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eAIP

AMDT
01/2025
Effective date
20 FEB 2025
Publication date
20 FEB 2025

wp-AMDT-2025-01

1. Significant information and changes

1.1 Singapore FIR

a. Updated ENR 1.4 ATS Airspace Classification

b. Updated secondary frequency 133.0Mhz in ENR 3.6 Enroute Holding table under HOSBA(HAA) – Low Level.

c. Incorporated AIRAC AIP Supplement 200/2024 – Revision to Restricted Areas WSR9 and WSR16.

1.2 Singapore Changi Airport

a. Updated WSSS AD 2.18 ATS Communication Facilities.

b. Updated AD-2-WSSS-ADC-2 Chart and AD-2-WSSS-ADC-2.1 (Flip-Page)

1.3 Paya Lebar Airport

a. Updated WSAP AD 2.8 – Apron surface and strength from PCN to PCR

b. Updated WSAP AD 2.10 and WSAP AD 2.12

2. This amendment incorporates information contained in the listed AIP Supplements and NOTAMs which are hereby superseded:

AIP Supplements
200/2024 dated 28/11/2024

NOTAM
A0154/2025 dated 14/01/2025
A0161/2025 dated 14/01/2025
A4630/2024 dated 12/12/2024
A4631/2024 dated 12/12/2024
A2926/2023 dated 04/11/2023

Amended Pages

GEN 0.2-3: *: replace.*
GEN 0.3-1/2: *: replace.*
GEN 0.3-3/4: *: replace.*
GEN 0.3-5/6: *: replace.*
GEN 0.3-7: *: remove.*
GEN 0.4-1/2: *: replace.*
GEN 0.4-3: *: replace.*
GEN 0.6-1/2: *: replace.*
GEN 1.1-1/2: *: replace.*

GEN 1.6-1/2:	*: replace.*
GEN 1.6-3/4:	*: replace.*
GEN 1.6-5:	*: remove.*
GEN 1.7-3/4:	*: replace.*
GEN-2.5-3:	*: replace.*
GEN 2.7-1:	*: replace.*
ENR 1.4-1/2:	*: replace.*
ENR-3.5-3:	*: replace.*
ENR 3.6-1/2:	*: replace.*
ENR-3.6-3 to 3.1:	*: replace.*
ENR-3.6-5 to 5.1:	*: replace.*
ENR 5.1-1/2:	*: replace.*
ENR-5.1-9:	*: replace.*
AD 2.WSSS-7/8:	*: replace.*
AD 2.WSSS-9/10:	*: replace.*
AD 2.WSSS-11/12:	*: replace.*
AD 2.WSSS-19/20:	*: replace.*
AD 2.WSSS-23/24:	*: replace.*
AD-2-WSSS-ADC-2 to 2.1:	*: replace.*
AD-2-WSSS-IAC-1:	*: replace.*
AD-2-WSSS-IAC-2:	*: replace.*
AD-2-WSSS-IAC-3:	*: replace.*
AD-2-WSSS-IAC-5:	*: replace.*
AD-2-WSSS-IAC-6:	*: replace.*
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AD-2-WSSS-IAC-9 to 9.1:	*: replace.*
AD-2-WSSS-IAC-10 to 10.1:	*: replace.*
AD-2-WSSS-IAC-11 to 11.1:	*: replace.*
AD-2-WSSS-IAC-12 to 12.1:	*: replace.*
AD-2-WSSS-IAC-13 to 13.1:	*: replace.*
AD-2-WSSS-VAC-1 to 1.1:	*: replace.*
AD-2-WSSL-VDC-1 to 1.1:	*: replace.*
AD-2-WSSL-VDC-2 to 2.1:	*: replace.*
AD 2.WSAP-1/2:	*: replace.*
AD 2.WSAP-5/6:	*: replace.*
AD-2-WSAP-IAC-1:	*: replace.*
AD-2-WSAP-IAC-2:	*: replace.*
AD-2-WSAP-IAC-3:	*: replace.*
AD-2-WSAP-IAC-4:	*: replace.*
AD-2-WSAP-IAC-5:	*: replace.*
AD-2-WSAP-IAC-6:	*: replace.*
AD 2.WIDD-1:	*: replace.*

AIP AMENDMENT

NR/Year	*Publication date*	*Date inserted*	*Inserted by*
02/2023	20 APR 2023	20 APR 2023	
03/2023	15 JUN 2023	15 JUN 2023	
04/2023	10 AUG 2023	10 AUG 2023	
05/2023	05 OCT 2023	05 OCT 2023	
06/2023	30 NOV 2023	30 NOV 2023	
01/2024	25 JAN 2024	25 JAN 2024	
02/2024	21 MAR 2024	21 MAR 2024	
03/2024	16 MAY 2024	16 MAY 2024	
04/2024	11 JUL 2024	11 JUL 2024	
05/2024	05 SEP 2024	05 SEP 2024	
06/2024	31 OCT 2024	31 OCT 2024	
07/2024	26 DEC 2024	26 DEC 2024	
01/2025	20 FEB 2025	20 FEB 2025	

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GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS

NR/Year	*Subject*	*AIP section(s) affected*	*Period of validity (from/to)*	*Cancellation record*
059/2020	Singapore Changi Airport - Long term closure of aircraft stand E20 at Terminal 2, Singapore Changi Airport	AD	*25 AUG 2020 / 30 DEC 2026*	
127/2023	Singapore Changi Airport - Closure of aircraft stand 604 at East Cargo Apron	AD	*02 NOV 2023 / 30 MAY 2025*	
139/2023	Singapore Changi Airport - Steel and Frangible Frames and Frangible Posts	AD	*30 NOV 2023 / 28 FEB 2025*	
141/2023	Singapore Changi Airport - Apply minimum thrust at East Cargo Apron	AD	*23 OCT 2023 / 30 MAY 2025*	
006/2024	Paya Lebar Airport - Cranes	AD	*11 JAN 2024 / 31 DEC 2025*	
007/2024	Paya Lebar Airport - Luffing Cranes	AD	*11 JAN 2024 / 31 DEC 2025*	
017/2024	Singapore Changi Airport - Closure of aircraft stand 504 at West Cargo Apron	AD	*22 FEB 2024 / 31 OCT 2025*	
020/2024	Paya Lebar Airport - Saddle Cranes	AD	*08 FEB 2024 / 31 DEC 2025*	
023/2024	Paya Lebar Airport - Luffing Tower Crane	AD	*08 FEB 2024 / 30 JUN 2025*	
036/2024	Paya Lebar Airport - Cranes	AD	*08 FEB 2024 / 17 JUN 2025*	
038/2024	Paya Lebar Airport - Luffer Cranes	AD	*08 FEB 2024 / 17 JUN 2025*	
044/2024	Paya Lebar Airport - Luffer Cranes	AD	*08 FEB 2024 / 31 AUG 2025*	
047/2024	Paya Lebar Airport - Luffing Cranes	AD	*08 FEB 2024 / 30 DEC 2025*	
048/2024	Paya Lebar Airport - Cranes	AD	*08 FEB 2024 / 31 DEC 2025*	
056/2024	Singapore Changi Airport - Updated closure schedules for Runway 02L/20R and Runway 02C/20C	AD	*31 MAR 2024 / 30 SEP 2025*	
070/2024	Paya Lebar Airport - Crawler Tower Cranes	AD	*21 MAR 2024 / 31 MAR 2025*	
074/2024	Paya Lebar Airport - Cranes	AD	*11 APR 2024 / 25 APR 2025*	
075/2024	Paya Lebar Airport - Mobile Cranes	AD	*11 APR 2024 / 01 APR 2025*	
083/2024	Singapore Changi Airport - Decommissioning of aircraft stands E1 and F30 and temporary closure of taxilanes R1, R2, R3 and aircraft stands E2, E3, E4, F31, F32, F33 and F34 due to construction work activities at Terminal 2	AD	*09 MAY 2024 / 03 JAN 2028*	
086/2024	Paya Lebar Airport - Cranes	AD	*09 MAY 2024 / 01 MAY 2025*	
087/2024	Paya Lebar Airport - Cranes	AD	*09 MAY 2024 / 25 APR 2025*	
089/2024	Paya Lebar Airport - Mobile Cranes	AD	*09 MAY 2024 / 15 APR 2025*	
091/2024	Paya Lebar Airport - Topless Cranes	AD	*09 MAY 2024 / 15 APR 2025*	
093/2024	Paya Lebar Airport - Flat-Top Crane	AD	*09 MAY 2024 / 10 APR 2025*	
094/2024	Paya Lebar Airport - Crawler Crane	AD	*09 MAY 2024 / 30 SEP 2025*	
095/2024	Paya Lebar Airport - Topless Tower Cranes	AD	*06 JUN 2024 / 02 JUN 2025*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
097/2024	Paya Lebar Airport - Cranes	AD	*06 JUN 2024 / 19 MAY 2025*	
099/2024	Paya Lebar Airport - Cranes	AD	*06 JUN 2024 / 14 MAY 2025*	
100/2024	Paya Lebar Airport - Luffer Cranes	AD	*06 JUN 2024 / 15 MAY 2025*	
101/2024	Paya Lebar Airport - Luffing Crane	AD	*06 JUN 2024 / 16 MAY 2025*	
104/2024	Paya Lebar Airport - Mobile Cranes	AD	*25 JUL 2024 / 02 JUL 2025*	
105/2024	Paya Lebar Airport - Mobile Crane	AD	*25 JUL 2024 / 02 JUL 2025*	
106/2024	Paya Lebar Airport - Flat-Top Cranes	AD	*25 JUL 2024 / 01 JUL 2025*	
107/2024	Paya Lebar Airport - Mobile Crane	AD	*25 JUL 2024 / 07 JUL 2025*	
108/2024	Paya Lebar Airport - Mobile Crane	AD	*25 JUL 2024 / 31 JUL 2025*	
109/2024	Paya Lebar Airport - Mobile Crane	AD	*25 JUL 2024 / 09 JUL 2025*	
110/2024	Paya Lebar Airport - Telescopic Crawler Crane	AD	*25 JUL 2024 / 01 JUL 2025*	
111/2024	Paya Lebar Airport - Mobile Crane	AD	*25 JUL 2024 / 31 AUG 2025*	
112/2024	Paya Lebar Airport - Luffing Cranes	AD	*25 JUL 2024 / 17 JUN 2025*	
113/2024	Paya Lebar Airport - Luffer Crane	AD	*25 JUL 2024 / 14 JUN 2025*	
114/2024	Paya Lebar Airport - Tower Crane	AD	*25 JUL 2024 / 16 JUN 2025*	
120/2024	Paya Lebar Airport - Cranes	AD	*15 AUG 2024 / 31 JUL 2025*	
121/2024	Paya Lebar Airport - Topless Cranes	AD	*15 AUG 2024 / 22 JUL 2025*	
122/2024	Paya Lebar Airport - Mobile Crane	AD	*15 AUG 2024 / 03 AUG 2025*	
123/2024	Paya Lebar Airport - Cranes	AD	*15 AUG 2024 / 15 JUL 2025*	
124/2024	Paya Lebar Airport - Luffing Tower Crane	AD	*15 AUG 2024 / 14 JUL 2025*	
125/2024	Paya Lebar Airport - Mobile Crane	AD	*15 AUG 2024 / 30 JUL 2025*	
127/2024	Paya Lebar Airport - Topless Tower Cranes	AD	*15 AUG 2024 / 08 JUL 2025*	
128/2024	Paya Lebar Airport - Mobile Cranes	AD	*15 AUG 2024 / 08 JUL 2025*	
132/2024	Singapore Changi Airport - Updated information and data for Runway 02R/20L	AD	*03 OCT 2024 / 30 SEP 2026*	
134/2024	Singapore Changi Airport - Temporary closure of Taxilane N4 behind aircraft stand 604 and downgrade of aircraft stand 603 to Code C	AD	*30 AUG 2024 / 02 OCT 2025*	
135/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 SEP 2024 / 28 FEB 2025*	
137/2024	Paya Lebar Airport - Mobile Crane	AD	*12 SEP 2024 / 28 SEP 2025*	
138/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 SEP 2024 / 28 FEB 2025*	
139/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 SEP 2024 / 28 FEB 2025*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
140/2024	Paya Lebar Airport - Mobile Crane	AD	*12 SEP 2024 / 11 AUG 2025*	
141/2024	Paya Lebar Airport - Topless Cranes	AD	*12 SEP 2024 / 13 AUG 2025*	
142/2024	Paya Lebar Airport - Luffing Cranes	AD	*12 SEP 2024 / 31 AUG 2025*	
143/2024	Paya Lebar Airport - Crawler Cranes	AD	*12 SEP 2024 / 25 AUG 2025*	
144/2024	Paya Lebar Airport - Topless Tower Cranes	AD	*12 SEP 2024 / 31 AUG 2025*	
145/2024	Paya Lebar Airport - Mobile Crane	AD	*12 SEP 2024 / 19 JUN 2025*	
146/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 SEP 2024 / 20 AUG 2025*	
147/2024	Paya Lebar Airport - Mobile Crane	AD	*12 SEP 2024 / 07 SEP 2025*	
148/2024	Paya Lebar Airport - Cranes	AD	*12 SEP 2024 / 31 AUG 2025*	
149/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 SEP 2024 / 31 JUL 2025*	
153/2024	Singapore Changi Airport - Closure of Taxilane N1 behind aircraft stand 517L	AD	*01 OCT 2024 / 30 APR 2025*	
155/2024	Paya Lebar Airport - Mobile Crane	AD	*17 OCT 2024 / 11 SEP 2025*	
156/2024	Paya Lebar Airport - Topless Cranes	AD	*17 OCT 2024 / 03 SEP 2025*	
157/2024	Paya Lebar Airport - Obstacles	AD	*17 OCT 2024 / 05 SEP 2025*	
158/2024	Paya Lebar Airport - Mobile Crane	AD	*17 OCT 2024 / 17 SEP 2025*	
159/2024	Paya Lebar Airport - Mobile Cranes	AD	*17 OCT 2024 / 31 JUL 2025*	
160/2024	Paya Lebar Airport - Mobile Crane	AD	*17 OCT 2024 / 19 SEP 2025*	
161/2024	Paya Lebar Airport - Mobile Crane	AD	*17 OCT 2024 / 31 OCT 2025*	
162/2024	Paya Lebar Airport - Cranes	AD	*17 OCT 2024 / 31 JUL 2025*	
163/2024	Paya Lebar Airport - Mobile Crane	AD	*17 OCT 2024 / 31 JUL 2025*	
164/2024	Paya Lebar Airport - Cranes	AD	*17 OCT 2024 / 30 SEP 2025*	
170/2024	Paya Lebar Airport - Mobile Cranes	AD	*17 OCT 2024 / 31 MAR 2025*	
171/2024	Paya Lebar Airport - Mobile Crane	AD	*17 OCT 2024 / 10 NOV 2025*	
174/2024	Singapore Changi Airport - Closure of Taxiways associated with Runway 02R/20L	AD	*28 NOV 2024 / 22 DEC 2027*	
176/2024	Singapore Changi Airport - Use of construction lasers, locations of automatic total station and concrete blocks to support construction activities at Terminal 2	AD	*28 OCT 2024 / 05 OCT 2026*	
177/2024	Paya Lebar Airport - Mobile Crane	AD	*14 NOV 2024 / 15 NOV 2025*	
178/2024	Paya Lebar Airport - Cranes	AD	*14 NOV 2024 / 31 DEC 2025*	
180/2024	Paya Lebar Airport - Mobile Crane	AD	*14 NOV 2024 / 30 APR 2025*	
181/2024	Paya Lebar Airport - Mobile Crane	AD	*14 NOV 2024 / 30 NOV 2025*	

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183/2024	Paya Lebar Airport - Mobile Cranes	AD	*14 NOV 2024 / 31 JUL 2025*	
184/2024	Paya Lebar Airport - Topless Cranes	AD	*14 NOV 2024 / 31 MAY 2025*	
185/2024	Paya Lebar Airport - Mobile Crane	AD	*14 NOV 2024 / 31 DEC 2025*	
186/2024	Paya Lebar Airport - Mobile Crane	AD	*14 NOV 2024 / 31 DEC 2025*	
187/2024	Paya Lebar Airport - Luffer Cranes	AD	*14 NOV 2024 / 31 DEC 2025*	
188/2024	Paya Lebar Airport - Cranes	AD	*14 NOV 2024 / 31 DEC 2025*	
189/2024	Paya Lebar Airport - Mobile Crane	AD	*14 NOV 2024 / 30 APR 2025*	
190/2024	Paya Lebar Airport - Crawler Crane	AD	*14 NOV 2024 / 20 OCT 2025*	
192/2024	Paya Lebar Airport - Topless Cranes	AD	*14 NOV 2024 / 30 NOV 2025*	
193/2024	Paya Lebar Airport - Crawler Tower Cranes	AD	*14 NOV 2024 / 31 DEC 2025*	
194/2024	Paya Lebar Airport - Tower Cranes	AD	*14 NOV 2024 / 31 DEC 2025*	
195/2024	Paya Lebar Airport - Flat-Top Cranes	AD	*14 NOV 2024 / 31 DEC 2025*	
196/2024	Paya Lebar Airport - Mobile Crane	AD	*14 NOV 2024 / 01 NOV 2025*	
197/2024	Paya Lebar Airport - Cranes	AD	*14 NOV 2024 / 15 DEC 2025*	
198/2024	Paya Lebar Airport - Tower Cranes	AD	*14 NOV 2024 / 15 NOV 2025*	
199/2024	Singapore Changi Airport - Long term closure of aircraft stand E5 at Terminal 2, Singapore Changi Airport	AD	*26 DEC 2024 / 30 OCT 2025*	
201/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 DEC 2024 / 31 OCT 2025*	
202/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 DEC 2024 / 31 OCT 2025*	
203/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 DEC 2024 / 31 OCT 2025*	
204/2024	Paya Lebar Airport - Crawler Crane	AD	*12 DEC 2024 / 30 NOV 2025*	
205/2024	Paya Lebar Airport - Topless Cranes	AD	*12 DEC 2024 / 30 NOV 2025*	
206/2024	Paya Lebar Airport - Mobile Crane	AD	*12 DEC 2024 / 31 JUL 2025*	
207/2024	Paya Lebar Airport - Mobile Cranes	AD	*12 DEC 2024 / 03 JUN 2025*	
208/2024	Paya Lebar Airport - Cranes	AD	*12 DEC 2024 / 30 DEC 2025*	
209/2024	Paya Lebar Airport - Cranes	AD	*12 DEC 2024 / 30 DEC 2025*	
210/2024	Paya Lebar Airport - Mobile Crane	AD	*31 DEC 2024 / 31 MAY 2025*	
211/2024	Paya Lebar Airport - Mobile Crane	AD	*31 DEC 2024 / 30 JUN 2025*	
212/2024	Paya Lebar Airport - Mobile Crane	AD	*31 DEC 2024 / 31 OCT 2025*	
213/2024	Paya Lebar Airport - Mobile Crane	AD	*12 DEC 2024 / 31 MAR 2025*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
216/2024	Paya Lebar Airport - Topless Tower Cranes	AD	*12 DEC 2024 / 28 FEB 2025*	
217/2024	Paya Lebar Airport - Mobile Crane	AD	*12 DEC 2024 / 28 FEB 2025*	
218/2024	Seletar Airport - Closure of helicopter landing area	AD	*30 DEC 2024 / 31 DEC 2025*	
001/2025	Paya Lebar Airport - Mobile Cranes	AD	*24 JAN 2025 / 03 JUN 2025*	
002/2025	Paya Lebar Airport - Mobile Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
003/2025	Paya Lebar Airport - Truck Crane	AD	*24 JAN 2025 / 31 DEC 2025*	
004/2025	Paya Lebar Airport - Luffing Tower Crane	AD	*24 JAN 2025 / 30 DEC 2025*	
005/2025	Paya Lebar Airport - Topless Tower Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
006/2025	Paya Lebar Airport - Tower Crane	AD	*24 JAN 2025 / 31 DEC 2025*	
007/2025	Paya Lebar Airport - Mobile Cranes	AD	*24 JAN 2025 / 31 MAY 2025*	
008/2025	Paya Lebar Airport - Crawler Cranes	AD	*24 JAN 2025 / 30 APR 2025*	
009/2025	Paya Lebar Airport - Mobile Crane	AD	*24 JAN 2025 / 31 DEC 2025*	
010/2025	Paya Lebar Airport - Luffing Crane	AD	*24 JAN 2025 / 31 DEC 2025*	
011/2025	Paya Lebar Airport - Mobile Cranes	AD	*24 JAN 2025 / 31 JUL 2025*	
012/2025	Paya Lebar Airport - Mobile Cranes	AD	*24 JAN 2025 / 30 JUN 2025*	
013/2025	Paya Lebar Airport - Cranes	AD	*24 JAN 2025 / 14 DEC 2025*	
014/2025	Paya Lebar Airport - Mobile Crane	AD	*24 JAN 2025 / 31 DEC 2025*	
015/2025	Paya Lebar Airport - Mobile Crane	AD	*24 JAN 2025 / 31 DEC 2025*	
016/2025	Paya Lebar Airport - Flat Top Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
017/2025	Paya Lebar Airport - Luffing Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
018/2025	Paya Lebar Airport - Flat Top Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
019/2025	Paya Lebar Airport - Tower Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
020/2025	Paya Lebar Airport - Tower Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
021/2025	Paya Lebar Airport - Luffer Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
022/2025	Paya Lebar Airport - Cranes	AD	*24 JAN 2025 / 31 DEC 2025*	
023/2025	Airspace closure Kuala Lumpur and Singapore FIRS Exercise Bersama Shield 2025 120001UTC to 211100UTC April 2025	AD	*12 APR 2025 / 21 APR 2025*	
024/2025	Paya Lebar Airport - Luffing Cranes	AD	*17 FEB 2025 / 01 DEC 2025*	
025/2025	Paya Lebar Airport - Luffer Crane	AD	*17 FEB 2025 / 31 DEC 2025*	
026/2025	Paya Lebar Airport - Tower Crane	AD	*17 FEB 2025 / 31 AUG 2025*	

NR/Year	*Subject*	*AIP section(s) affected*	*Period of validity (from/to)*	*Cancellation record*
027/2025	Paya Lebar Airport - Crawler Cranes	AD	*17 FEB 2025 / 30 DEC 2025*	
028/2025	Paya Lebar Airport - Cranes	AD	*17 FEB 2025 / 31 DEC 2025*	
029/2025	Paya Lebar Airport - Cranes	AD	*17 FEB 2025 / 31 DEC 2025*	
030/2025	Paya Lebar Airport - Topless Cranes	AD	*17 FEB 2025 / 31 DEC 2025*	
031/2025	Paya Lebar Airport - Mobile Crane	AD	*17 FEB 2025 / 30 JUN 2025*	
032/2025	Paya Lebar Airport - Mobile Crane	AD	*17 FEB 2025 / 30 JUN 2025*	
033/2025	Paya Lebar Airport - Mobile Crane	AD	*17 FEB 2025 / 30 JUN 2025*	
034/2025	Paya Lebar Airport - Flat Top Cranes	AD	*17 FEB 2025 / 31 JAN 2026*	

GEN 0.4 CHECKLIST OF AIP PAGES

Part 1 – General (GEN)

GEN 0

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GEN 0.3-1	20 FEB 2025
GEN 0.3-2	20 FEB 2025
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GEN 0.3-4	20 FEB 2025
GEN 0.3-5	20 FEB 2025
GEN 0.3-6	20 FEB 2025
GEN 0.4-1	20 FEB 2025
GEN 0.4-2	20 FEB 2025
GEN 0.4-3	20 FEB 2025
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GEN 1

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GEN 1.1-2	26 DEC 2024
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GEN 1.3-4	31 OCT 2024
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GEN 1.3-6	16 MAY 2024
GEN-1.3/ARR PAX FLOW	25 APR 2019
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GEN 1.4-1	05 SEP 2024
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GEN 1.6-1	20 FEB 2025
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GEN 1.7-1	08 SEP 2022
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GEN 2

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GEN 2.2-1	02 MAR 2017
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GEN 3

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GEN 3.1-2	21 MAR 2024
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AD-2-WSSS-STAR-10 to 10.1	31 OCT 2024
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AD-2-WSSS-IAC-5	20 FEB 2025
AD-2-WSSS-IAC-6	20 FEB 2025
AD-2-WSSS-IAC-7	20 FEB 2025
AD-2-WSSS-IAC-9 to 9.1	20 FEB 2025
AD-2-WSSS-IAC-10 to 10.1	20 FEB 2025
AD-2-WSSS-IAC-11 to 11.1	20 FEB 2025
AD-2-WSSS-IAC-12 to 12.1	20 FEB 2025
AD-2-WSSS-IAC-13 to 13.1	20 FEB 2025
AD-2-WSSS-IAC-14 to 14.1	31 OCT 2024
AD-2-WSSS-VAC-1 to 1.1	20 FEB 2025
AD 2.WSSL-1	10 SEP 2020
AD 2.WSSL-2	30 NOV 2023
AD 2.WSSL-3	26 DEC 2024
AD 2.WSSL-4	05 DEC 2019
AD 2.WSSL-5	30 NOV 2023
AD 2.WSSL-6	25 JAN 2024
AD 2.WSSL-7	26 DEC 2024
AD 2.WSSL-8	26 DEC 2024
AD 2.WSSL-9	25 JAN 2024
AD 2.WSSL-10	05 SEP 2024
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AD-2-WSSL-ADC-3	26 DEC 2024
AD-2-WSSL-AOC-1	16 JUL 2020
AD-2-WSSL-AOC-2	16 JUL 2020
AD-2-WSSL-VAC-1	05 SEP 2024
AD-2-WSSL-VAC-2	05 SEP 2024
AD-2-WSSL-VAC-3	05 SEP 2024
AD-2-WSSL-VAC-4	05 SEP 2024
AD-2-WSSL-VDC-1 to 1.1	20 FEB 2025
AD-2-WSSL-VDC-2 to 2.1	20 FEB 2025
AD-2-WSSL-VFR-1	31 OCT 2024
AD-2-WSSL-IFR-1	31 OCT 2024
AD-2-WSSL-IFR-2	31 OCT 2024
AD 2.WSAP-1	16 JUL 2020
AD 2.WSAP-2	20 FEB 2025
AD 2.WSAP-3	10 OCT 2019
AD 2.WSAP-4	19 JUL 2018
AD 2.WSAP-5	20 FEB 2025
AD 2.WSAP-6	20 FEB 2025
AD 2.WSAP-7	19 JUL 2018
AD 2.WSAP-8	16 MAY 2024
AD 2.WSAP-9	21 MAR 2024
AD 2.WSAP-10	21 MAR 2024
AD 2.WSAP-11	21 MAR 2024
AD-2-WSAP-ADC-1	16 JUL 2020
AD-2-WSAP-ADC-2	16 JUL 2020
AD-2-WSAP-AOC-1	24 MAR 2022
AD-2-WSAP-IAC-1	20 FEB 2025
AD-2-WSAP-IAC-2	20 FEB 2025
AD-2-WSAP-IAC-3	20 FEB 2025
AD-2-WSAP-IAC-4	20 FEB 2025
AD-2-WSAP-IAC-5	20 FEB 2025
AD-2-WSAP-IAC-6	20 FEB 2025
AD 2.WSAT-1	16 JUL 2020
AD 2.WSAT-2	26 MAR 2020
AD 2.WSAT-3	25 FEB 2021
AD 2.WSAT-4	25 FEB 2021
AD 2.WSAT-5	16 MAY 2024
AD 2.WSAT-6	21 MAR 2024
AD 2.WSAT-7	21 MAR 2024
AD-2-WSAT-ADC-1	17 JUN 2021
AD 2.WSAG-1	25 JAN 2024
AD 2.WSAG-2	25 JAN 2024
AD 2.WSAG-3	21 MAR 2024
AD 2.WMKJ-1	12 NOV 2015
AD 2.WIDD-1	20 FEB 2025
AD 2.WIDN-1	21 MAR 2024
AD 2.WIDN-2	21 MAR 2024
AD 2.WIDT-1	21 MAR 2024

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GEN 0.6 TABLE OF CONTENTS TO PART 1

GEN 1 NATIONAL REGULATIONS AND REQUIREMENTS

GEN 1.1 DESIGNATED AUTHORITIES

The authority responsible for civil aviation in Singapore is the Civil Aviation Authority of Singapore under the Ministry of Transport. The addresses of the designated authorities concerned with facilitation of international air navigation are as follows:

1 CIVIL AVIATION

Post:
CIVIL AVIATION AUTHORITY OF SINGAPORE
SINGAPORE CHANGI AIRPORT, P.O. BOX 1
SINGAPORE 918141
Tel: (65) 65421122
Fax: (65) 65421231
AFS: WSSSYAYX
URL: www.caas.gov.sg

2 METEOROLOGY

Post:
DIRECTOR-GENERAL METEOROLOGICAL SERVICE SINGAPORE
Singapore Changi Airport, P.O. Box 8
SINGAPORE 918141
Tel: (65) 65457190
Fax: (65) 65457192
AFS: WSSSYMYX
URL: www.weather.gov.sg

3 CUSTOMS

Post:
SINGAPORE CUSTOMS
55 Newton Road #07-01, Revenue House
SINGAPORE 307987
Tel: (65) 63552000
URL: www.customs.gov.sg

4 IMMIGRATION

Post:
IMMIGRATION & CHECKPOINTS AUTHORITY
10 Kallang Road, #08-00 ICA Building
SINGAPORE 208718
Tel: (65) 63916100
URL: www.ica.gov.sg

5 HEALTH

Post:
MINISTRY OF HEALTH
Director SERD
16 College Road, College of Medicine Building
SINGAPORE 169854

Post:
MINISTRY OF HEALTH
Director DTD
1 Pasir Panjang Road, Labrador Tower
Level 21, #21-01
SINGAPORE 118479
Tel: (65) 63259220
URL: www.moh.gov.sg

←

6 ENROUTE AND AERODROME CHARGES

Post:
CIVIL AVIATION AUTHORITY OF SINGAPORE
Singapore Changi Airport P.O. Box 1
SINGAPORE 918141
Tel: (65) 65421122
Fax: (65) 65421231
AFS: WSSSYAYX

Post:
CHANGI AIRPORT GROUP (S) PTE LTD
SELETAR AIRPORT
21 Seletar Aerospace Road 1 #02-01
SINGAPORE 797405
Tel: (65)64815077 Airside Operations
Fax: (65)64831754

7 AGRICULTURE QUARANTINE

Post:
Head Office: ANIMAL & VETERINARY SERVICE
Singapore Botanic Gardens, 1 Cluny Road
SINGAPORE 259569
Email: animals_feedback@nparks.gov.sg
URL: www.nparks.gov.sg/avs

Post:
CHANGI ANIMAL AND PLANT QUARANTINE STATION
Gate C7, Airport Cargo Road Changi Airfreight Centre
SINGAPORE 918104
Tel: (65) 65457523

8 TRANSPORT SAFETY INVESTIGATION BUREAU

Post:
Director (TSIB)
MINISTRY OF TRANSPORT
c/o Changi Airport Post Office P.O. Box 1005
SINGAPORE 918155
Tel: (65) 65412797
Fax: (65) 65422394
URL: www.mot.gov.sg

GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

1 LIST OF CIVIL AVIATION LEGISLATION, AIR NAVIGATION REGULATIONS AND ORDERS

The following is a list of legislation (Acts and subsidiary legislation) affecting aviation and air navigation in the Republic of Singapore together with the International Agreements/Conventions ratified or acceded to by the Republic of Singapore. It is essential that anyone engaged in air operations be acquainted with the relevant legal documents.

Copies of the legislation may be obtained as follows:

Electronic versions of the legislation may be freely accessed at
https://sso.agc.gov.sg
https://www.caas.gov.sg/legislation-regulations/legislation

Electronic versions of all Singapore legislation may be accessed via subscription to Lawnet at
https://www.lawnet.sg

Print copies of all the legislation may be purchased (by post) from:

Post:
Toppan Leefung Pte. Ltd.,
No. 1 Kim Seng Promenade, #18-01,
Great World City, East Lobby
Singapore 237994.
Tel: (65) 68269600
Fax: (65) 68203341
URL: www.toppanleefung.com

1.1 CIVIL AVIATION LEGISLATION

No	Legislation	Citation
Civil Aviation Authority of Singapore Act & related legislation		
1	Civil Aviation Authority of Singapore Act 2009	
← 2	Civil Aviation Authority of Singapore (Airport Development Levy) Order 2018	S 437/2018
← 3	Civil Aviation Authority of Singapore (Aviation Levy) Order 2018	S 522/2018
← 4	Civil Aviation Authority of Singapore (Changi Airport) By-laws 2009	S 313/2009
← 5	Civil Aviation Authority of Singapore (Changi Airport) Notification 2009	S 293/2009
← 6	Civil Aviation Authority of Singapore (Composition of Offences) Regulations 2009	S 315/2009
← 7	Civil Aviation Authority of Singapore (Seletar Airport) By-laws 2009	S 314/2009
← 8	Civil Aviation Authority of Singapore (Seletar Airport) Notification 2009	S 294/2009
← ***Air Navigation Act & related legislation***		
← 9	Air Navigation Act 1966	
← 10	Air Navigation Order	O 2
← 11	Air Navigation (101 - Unmanned Aircraft Operations) Regulations 2019	S 833/2019
← 12	Air Navigation (119 – Air Operator Certification) Regulations 2018	S 443/2018
← 13	Air Navigation (121 – Commercial Air Transport by Large Aeroplanes) Regulations 2018	S 444/2018
← 14	Air Navigation (125 – Complex General Aviation) Regulations 2018	S 501/2018
← 15	Air Navigation (135 – Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018	S 445/2018
← 16	Air Navigation (137 – Aerial Work) Regulations 2018	S 502/2018
← 17	Air Navigation (139 – Aerodromes) Regulations 2023	S 10/2023
← 18	Air Navigation (91 – General Operating Rules) Regulations 2018	S 441/2018
← 19	Air Navigation (92 – Carriage of Dangerous Goods) Regulations 2022	S 998/2022
← 20	Air Navigation (98 – Special Operations) Regulations 2018	S 442/2018

No	Legislation	Citation
21	Air Navigation (99 - Breath Testing for Alcohol) Regulations 2019	S 177/2019
22	Air Navigation (Aviation Security) Order	O 5
23	Air Navigation (Carbon Emissions and Reporting) Regulations 2022	S 997/2022
24	Air Navigation (Composition of Offences) Rules 2017	S 667/2017
25	Air Navigation (Licensing of Air Services) Regulations	RG 2
26	Air Navigation (Paya Lebar and Tengah Aerodrome Fees) Order	O 1
27	Air Navigation (Prohibited Flights) Order	O 6
28	Air Navigation (Protected Areas – Army Division Facilities) Order 2024	S 341/2024
29	Air Navigation (Protected Areas – Army Headquarters and Formation Facilities) Order 2024	S 340/2024
30	Air Navigation (Protected Areas – Catchment and Waterways Facilities) Order 2024	S 124/2024
31	Air Navigation (Protected Areas – Military Offshore Facilities) Order 2024	S 344/2024
32	Air Navigation (Protected Areas – Military Training-1 Facilities) Order 2024	S 345/2024
33	Air Navigation (Protected Areas – Military Training-2 Facilities) Order 2024	S 346/2024
34	Air Navigation (Protected Areas – Military Training-3 Facilities) Order 2024	S 347/2024
35	Air Navigation (Protected Areas – Non-Military Places) Order 2024	S 126/2024
36	Air Navigation (Protected Areas – Public Hospitals) Order 2024	S 122/2024
37	Air Navigation (Telecommunication Facilities) Order 2024	S 123/2024
38	Air Navigation (Protected Areas – Republic of Singapore Air Force Facilities) Order 2024	S 342/2024
39	Air Navigation (Protected Areas – Republic of Singapore Navy Facilities) Order 2024	S 343/2024
40	Air Navigation (Protected Areas – Water Supply and Water Reclamation Plants) Order 2024	S 125/2024
41	Air Navigation (Protected Areas) Order 2015	S 350/2015
42	Air Navigation (Regulated Air Cargo Agents and Known Consignors) Regulations 2017	S 166/2017
43	Air Navigation (Voluntary Reporting) Rules 2020	S 592/2020
44	Air Navigation (Wreck and Salvage of Aircraft) Regulations	RG 1
45	Designation of Authorised Persons	N 2
46	Use of Seletar Aerodrome	N 1
Other Acts & related legislation		
47	Carriage by Air Act 1988	
48	Carriage by Air (Parties to Conventions) Order	O 1
49	Carriage by Air (Singapore Currency Equivalents) Order	O 2
50	Carriage by Air (Montreal Convention, 1999) Act 2007	
51	Carriage by Air (Montreal Convention, 1999) (Exclusion from Convention) Order	O 1
52	Tokyo Convention Act 1971	
53	Tokyo Convention (Convention Countries) Notification	N 1
54	Tokyo Convention (Protocol Countries) Notification 2019	S 893/2019
55	Hijacking of Aircraft and Protection of Aircraft and International Airports Act 1978	
56	Infrastructure Protection Act 2017	
57	Infrastructure Protection (Protected Areas) Order 2020	S 291/2020
58	Infrastructure Protection (Protected Places) (No. 10) Order 2020	S 293/2020
59	Infrastructure Protection (Protected Places) (No. 9) Order 2021	S 519/2021
60	Infrastructure Protection (Protected Places) (No. 20) Order 2024	S 790/2024
61	International Interests in Aircraft Equipment Act 2009	
62	Immigration Act 1959	
63	Immigration (Authorised Places of Entry and Departure, and Rates) Notification 2012	S 627/2012

No	Legislation	Citation
64	Immigration Regulations	RG 1
65	Arms and Explosives Act 1913	
66	Arms and Explosives (Aircraft Exemption) Rules	R 3
67	Arms and Explosives (Explosives) Rules	R 2
68	Arms and Explosives (Movement Control) Rules	R 4
69	International Organisations (Immunities and Privileges) Act 1948	
70	International Organisations (Immunities and Privileges) (International Civil Aviation Organisation) Order	O 4
71	Transport Safety Investigations Act 2018	
72	Transport Safety Investigations (Aviation Occurrences) Regulations 2023	S 870/2023
73	Transport Safety Investigations (Responsible Persons – Exemption) Order 2023	S 874/2023

1.2 OTHER RELEVANT LEGISLATION

No	Legislation	Citation
1	Infectious Diseases Act 1976	
2	Infectious Diseases (Certificates of Vaccination or Other Prophylaxis) Regulations 2008	S 611/2008
3	Infectious Diseases (Quarantine) Regulations	RG 1
4	Arms and Explosives (Arms) Rules	R 1
5	Inspector of Explosives	N 1
6	Arms Offences Act 1973	

1.3 INTERNATIONAL CONVENTIONS AND PROTOCOLS

No	Legislation
1	Convention on International Civil Aviation, done at Chicago on 7 December 1944
2	Protocol Relating to an Amendment to the Convention on International Civil Aviation [Article 83 bis], signed at Montreal on 6 October 1980
3	International Air Services Transit Agreement, signed at Chicago on 7 December 1944
4	Convention on Offences and Certain Other Acts Committed on Board Aircraft, signed at Tokyo on 14 September 1963
5	Protocol to Amend the Convention on Offences and Certain Other Acts Committed on Board Aircraft, done at Montreal on 4 April 2014
6	Convention for the Suppression of Unlawful Seizure of Aircraft, signed at The Hague on 16 December 1970
7	Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, signed at Montreal on 23 September 1971
8	Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, done at Montreal on 23 September 1971, signed at Montreal on 24 February 1988
9	Convention on the Marking of Plastic Explosives for the Purpose of Detection, signed at Montreal on 1 March 1991
10	Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Warsaw on 12 October 1929
11	Protocol to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air signed at Warsaw on 12 October 1929, done at The Hague on 28 September 1955
12	Montreal Protocol No. 4 to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Warsaw on 12 October 1929, signed at Montreal on 25 September 1975
13	Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal on 28 May 1999
14	Convention on International interests in Mobile Equipment, signed at Cape Town on 16 November 2001
15	Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment, signed at Cape Town on 16 November 2001
16	Protocol for the Amendment Agreement on the Joint Financing of Certain Air Navigation Services in Iceland (1956) as amended in 1982 and 2008
17	Protocol for the Amendment Agreement on the Joint Financing of Certain Air Navigation Services in Greenland (1956) as amended in 1982 and 2008

No	Legislation
18	The International COSPAS-SARSAT Programme Agreement, done at Paris on 1 July 1988
19	Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft, done at Beijing on 10 September 2010
20	Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation, done at Beijing on 10 September 2010

2 TAXATION IN THE FIELD OF INTERNATIONAL AIR TRANSPORT

2.1 Petroleum exemptions and income tax

a. Petroleum for aircraft is granted Goods and Services Tax (GST) relief under item 11 of the Schedule to the GST (Imports Relief) Order (O 3).

b. The matter of income tax on air transport is contained within Section 12(2) and 12(2A) of the Income Tax Act 1947.

(2) Where a non-resident person carries on:

i. the business of shipowner or charterer, or
ii. the business of air transport,

and any ship or aircraft owned or chartered by the non-resident person calls at a port, an aerodrome or an airport in Singapore, the non-resident person's full profits arising from the carriage of passengers, mail, livestock or goods shipped, or loaded into an aircraft, in Singapore are deemed to accrue in Singapore.

(2A) Subsection 2 shall not apply to passengers, mail, livestock or goods which are brought to Singapore solely for transhipment, or for transfer from one aircraft to another or from an aircraft to a ship or from a ship to an aircraft.

2.2 Capital gains tax, or income on wealth, etc.

There is no capital gains tax, or income on wealth, etc., which are chargeable on the sale or use of international air transport.

ANNEX 10 Aeronautical Telecommunications

Volume I	(Radio Navigation Aids) - 7th Edition
Volume II	(Communication Procedures including those with PANS status) - 7th Edition
Volume III	(Communication Systems) - 2nd Edition
	Part I - Digital Data Communication Systems
	Part II - Voice Communication Systems
Volume IV	(Surveillance and Collision Avoidance Systems) - 5th Edition
Volume V	(Aeronautical Radio Frequency Spectrum Utilization) - 3rd Edition

- NIL Difference

ANNEX 11 Air Traffic Services,15th Edition

- NIL Difference

ANNEX 12 Search and Rescue, 8th Edition

- NIL Difference

← **ANNEX 13 Aircraft Accident and Incident Investigation**, 13th Edition

← - NIL Difference

ANNEX 14 Aerodromes

Volume I	(Aerodrome Design and Operations) - 8th Edition
Chapter 3	
3.4.3	The words “wherever practicable” in Annex 14 paragraph 3.4.3 have been removed in our national regulations. Without exception, the width of the runway strip shall be 140m where the code number is 3 or 4; and 70m where the code number is 1 or 2.
Chapter 4	
4.2.14	For a precision approach runway category I, the inner approach surface; inner transitional surfaces; and balked landing surface shall be established, in addition to the conical surface; inner horizontal surface; approach surface and transitional surfaces.
Chapter 6	
6.1.1.6	Annex 14 paragraph 6.1.1.6(c) which states that the marking may be omitted when the obstacle is lighted by high-intensity obstacle lights by day has been removed from our national regulations.

Chapter 7

7.4.1	Relating to the display of unserviceability markers, our national regulations require additionally that “unserviceability markers shall also be displayed at the entrances to a permanently or temporarily closed runway or taxiway, or part thereof”.

Chapter 9

9.2.3	Relating to the level of rescue and fire fighting protection to be provided, the remission factor has been removed from our national regulations.

Volume II (Heliports) - 5th Edition

- Not applicable

ANNEX 15 Aeronautical Information Services, 16th Edition

- NIL Difference

ANNEX 16 Environmental Protection

Volume I (Aircraft Noise) - 8th Edition

Volume II (Aircraft Engine Emissions) - 4th Edition

Volume III (Aeroplane CO_2 Emissions) - 1st Edition

- NIL Difference

ANNEX 17 Aviation Security - Safeguarding International Civil Aviation Against Acts of Unlawful Interference, 12th Edition

- NIL Difference

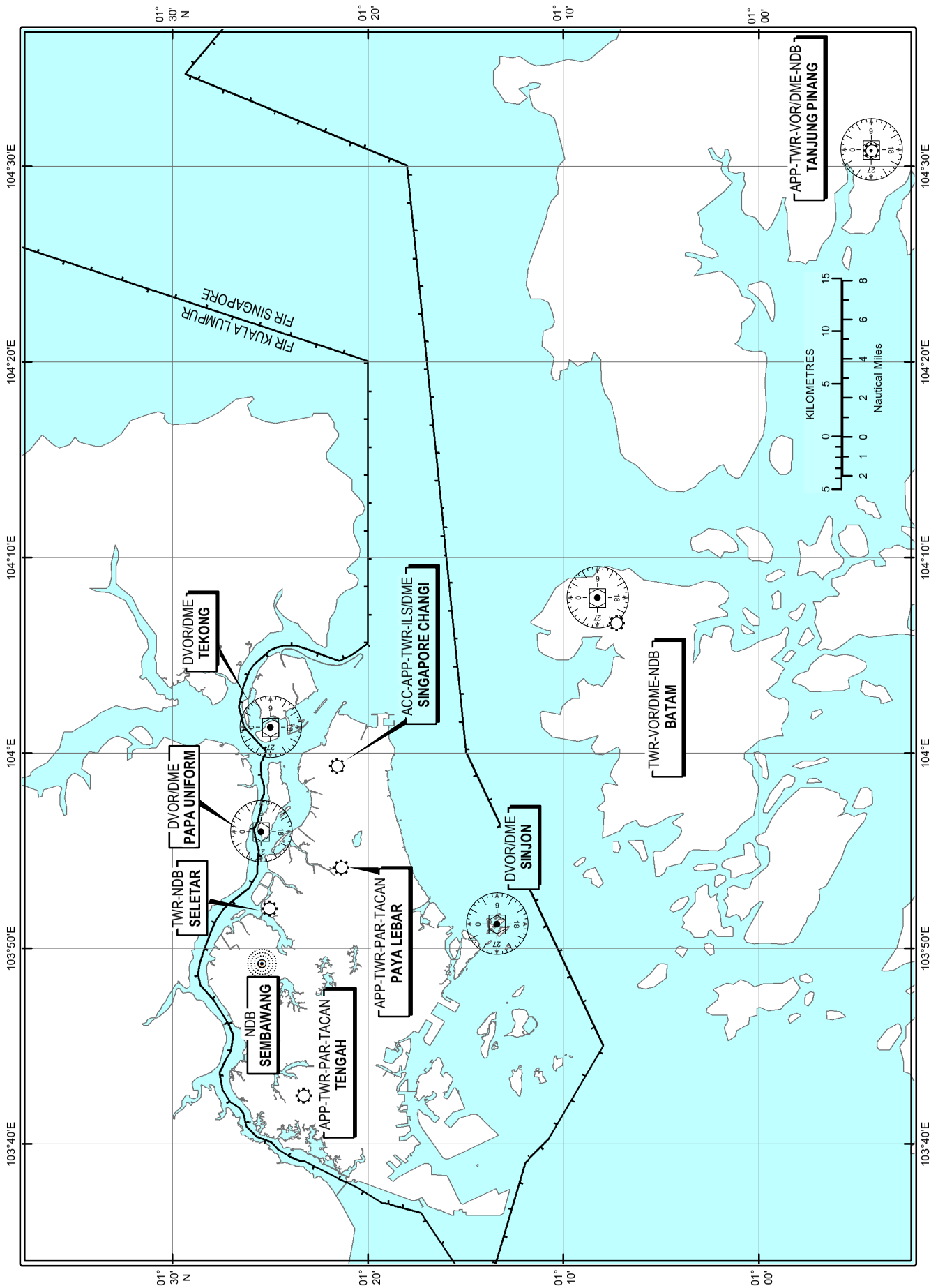
ANNEX 18 The Safe Transport of Dangerous Goods by Air, 4th Edition

- NIL Difference

ANNEX 19 Safety Management, 2nd Edition

- NIL Difference

SINGAPORE
RADIO FACILITY INDEX CHART



CHANGES : Remove duplicate symbol for Sembawang NDB

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GEN 2.7 SUNRISE/SUNSET TABLES

1 The sunrise/sunset table is prepared by the Meteorological Service Singapore of the National Environment Agency and is reproduced here with their permission. The table includes all the airports and aerodromes being served by the Singapore air traffic services.

← 1.1 The times in the Sunrise-Sunset table is in UTC for sunrise (SR) and sunset (SS) for Year 2024 to Year 2029.

← 1.2 The times shown in the Sunrise-Sunset table, calculated for the year 2027, is an “average year” for the years from 2025 to 2029. In this period, the times on an arbitrary date and place will deviate less than 2 minutes from the times on the same date and place in the “average year”.

2 SUNRISE-SUNSET TABLES

Latitude : (012200N) Longitude: (1035900E)

MONTH/DAY		SR	SS	MONTH/DAY		SR	SS	MONTH/DAY		SR	SS
JAN	01 – 05	2308	1110	**MAY**	01 - 06	2256	1106	**SEP**	01 - 05	2259	1107
	06 – 11	2310	1112		07 - 23	2255	1106		06 - 11	2258	1105
	12 – 16	2312	1114		24 - 31	2256	1107		12 - 14	2256	1104
	17 – 22	2314	1116						15 - 20	2255	1102
	23 - 31	2315	1118						21 - 26	2253	1100
									27 - 30	2251	1058
FEB	01 - 18	2316	1120	**JUN**	01 - 09	2257	1108	**OCT**	01 – 04	2250	1056
	19 - 28	2315	1120		10 - 14	2258	1110		05 – 10	2249	1054
					15 - 19	2259	1111		11 – 14	2248	1053
					20 - 23	2300	1112		15 – 24	2246	1051
					24 - 30	2301	1113		25 - 31	2246	1050
MAR	01 - 05	2313	1119	**JUL**	01 - 08	2303	1114	**NOV**	01-15	2246	1050
	06 - 12	2311	1117		09 - 15	2304	1115		12 – 15	2247	1050
	13 - 18	2309	1116		16 - 31	2305	1116		16 – 20	2248	1051
	19 - 24	2307	1114						21 – 24	2249	1052
	25 - 31	2305	1112						25 – 27	2250	1053
									28 – 30	2251	1054
APR	01 - 05	2303	1111	**AUG**	01 - 09	2305	1115	**DEC**	01 - 04	2253	1055
	06 - 14	2301	1109		10 - 16	2304	1114		05 - 07	2254	1057
	15 - 23	2259	1108		17 - 21	2303	1112		08 - 11	2256	1058
	24 - 30	2257	1106		22 - 25	2302	1111		12 - 15	2258	1100
					26 - 31	2301	1109		16 - 19	2300	1102
									20 - 23	2302	1104
									24 - 27	2304	1106
									28 - 31	2306	1108

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ENR 1.4 ATS AIRSPACE CLASSIFICATION

1 INTRODUCTION

1.1 The airspace in the Singapore FIR has been classified in accordance with Appendix 4 of ICAO Annex 11.

2 AIRSPACE CLASSIFICATION

2.1 Within the Singapore FIR, the airspace is divided into 5 classes as shown in the table below:

AIRSPACE CLASSIFICATION IN THE SINGAPORE FIR			
Airspace		*Flight Levels*	*Classification*
Controlled Airspace		FL150 to FL460	A
		Surface to FL150	B
Controlled Airspace more than 100NM seaward from the shoreline		Lower Limit to FL460	A
Control Zones (CTRs)	CHANGI CTR	Surface to Upper Limit	C
	PAYA LEBAR CTR		D
	SELETAR CTR		C
ATZs		Surface to Upper Limit	D
Uncontrolled Airspace			G

2.1.1 The services provided and requirements for flights within each class of airspace in Singapore FIR are shown in the table below:

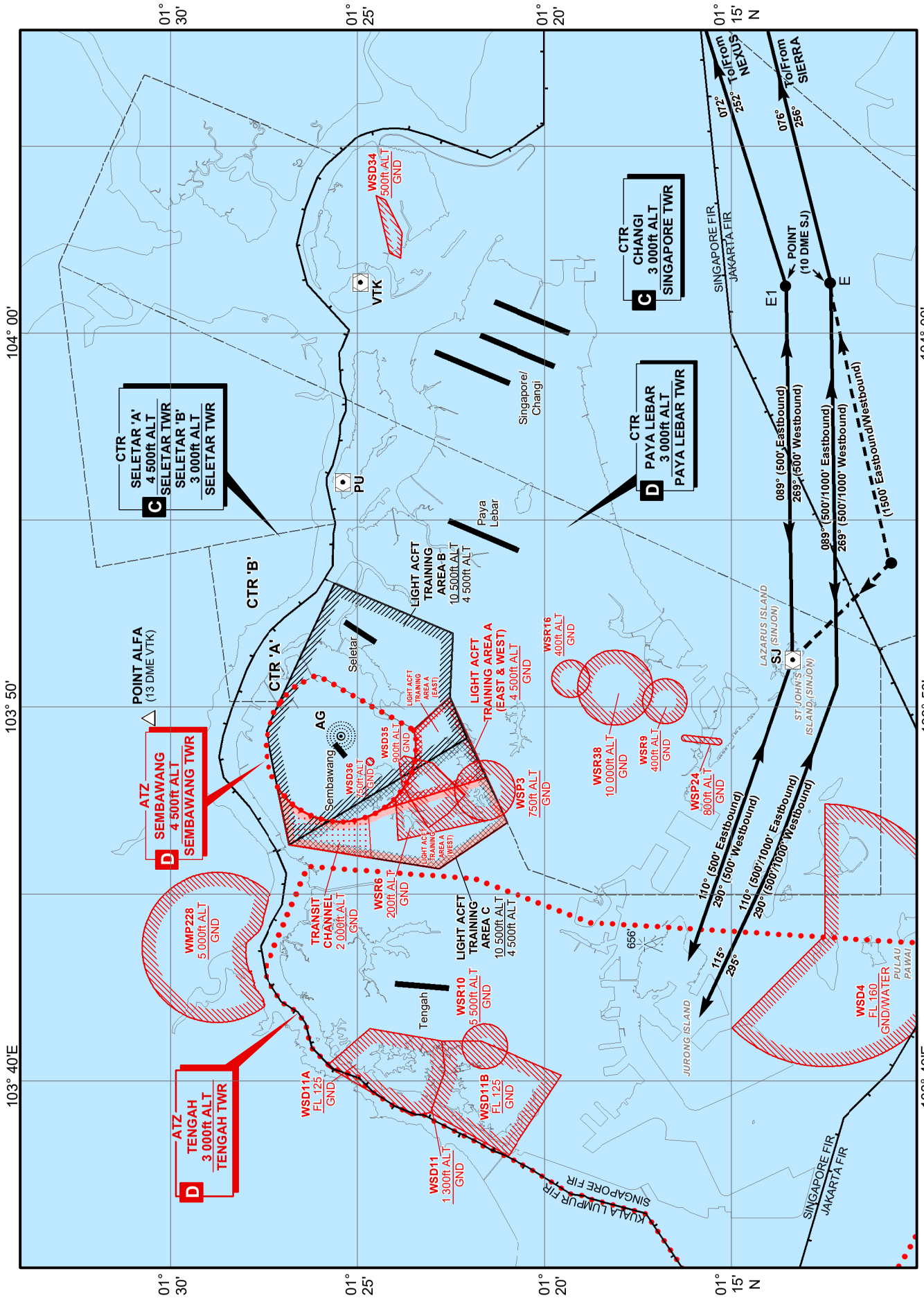
Class	Type of flight	Separation provided	Service provided	Speed limitation[1]	Radio Communication requirement	Subject to ATC clearance
A	IFR only	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
B	IFR	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
	VFR	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Continuous two-way	Yes
	VFR	VFR from IFR	1) Air traffic control service for separation from IFR; 2) VFR/VFR traffic information (and traffic avoidance advice on request)	250 kt IAS below 3050 m (10 000 ft) AMSL	Continuous two-way	Yes
D	IFR	IFR from IFR	Air traffic control service, traffic information about VFR flights (and traffic avoidance advice on request)	250 kt IAS below 3050 m (10 000 ft) AMSL	Continuous two-way	Yes
	VFR	Nil	IFR/VFR and VFR/VFR traffic information (and traffic avoidance advice on request)	250 kt IAS below 3050 m (10 000 ft) AMSL	Continuous two-way	Yes
G	IFR	Nil	Flight information service	250 kt IAS below 3050 m (10 000 ft) AMSL	Continuous two-way	Yes
	VFR	Nil	Flight information service	250 kt IAS below 3050 m (10 000 ft) AMSL	Continuous two-way[2]	Yes

[1]All arriving turbo-propeller and turbo-jet aircraft are to fly at not faster than the indicated air speed of 250 knots when within 40NM from Singapore Changi Airport or when at or below 10,000ft except all arriving aircraft into Singapore Changi Airport shall comply with the speed restrictions depicted on the transitions and RNAV STARs. Further speed reductions will be regulated by ATC as necessary. Pilots who may not be able to comply with the speed limits specified above for reasons of flight safety and/or weather should inform ATC and state the speed(s) acceptable.

[2]Aircraft operating in Light Aircraft Training Areas A, B and C (refer to page ENR 5.2-1) are required to have continuous two-way communications with the appropriate ATS authority.

← 2.2 For the airspace within the Jakarta FIR where ATS is provided by Singapore (see ENR 2.1), Class A airspace is established above FL150 and Class B airspace is established for controlled airspace from surface to FL150.

VMC CROSSING BY MILITARY AIRCRAFT



CHANGES : Revision to Restricted Areas WSR9 and WSR16

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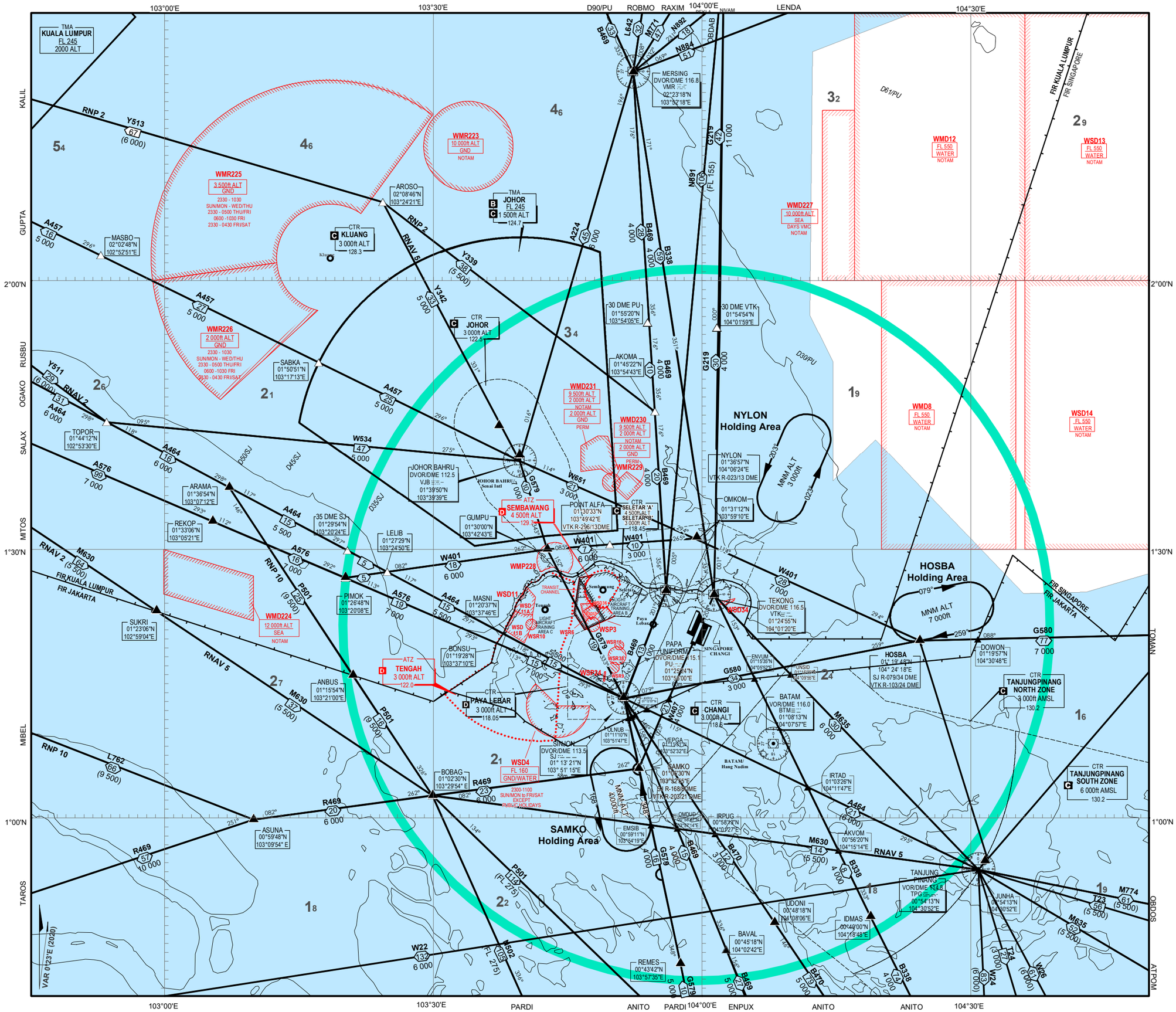
ENR 3.6 ENROUTE HOLDING

HLDG ID/FIX/WPT Coordinates	*INBD TR (°Mag)*	*Direction of Procedure Turn*	*MAX IAS*	*MNM-MAX HLDG Level*	*Time (min)*	*Controlling Unit and Frequency*
1	2	3	4	5	6	7
BOBAG - Low Level 38.6 DME VTK R-234.7 24.0 DME SJ R-243.2 010230N 1032954E	082	Right	220kt*	FL 140 6000 FT ALT	1	Singapore APP 124.6 MHz (PRI) 132.15 MHz (SRY)
BOBAG - High Level 38.6 DME VTK R-234.7 24.0 DME SJ R-243.2 010230N 1032954E	082	Right	250kt*	FL 180 FL 150	1	Singapore ACC 133.25 MHz (PRI) 135.8 MHz (SRY)
ELALO 041240N 1043329E	174	Left	300kt	FL 350 FL 280	1.5	Singapore ACC 123.7 MHz (PRI) 127.3 MHz (SRY)
HOSBA (HHA) - Low Level 34 DME SJ R-079 24 DME VTK R-103 011948N 1042418E	259	Right	230kt*	FL 140 7000 FT ALT	1	Singapore APP 120.3 MHz (PRI) 133.0 Mhz (SRY) 132.15 Mhz (SRY)
HOSBA (HHA) - High Level 34 DME SJ R-079 24 DME VTK R-103 011948N 1042418E	259	Right	265kt*	FL 250 FL 150	1.5	Singapore ACC 134.4 MHz (PRI) 128.1 MHz (SRY) 255.4 MHz
KARTO 93.5 DME VTK R-098.3 102.6 DME SJ R-091.1 011124N 1053343E	268	Left	250kt*	FL 310 FL 170	1.5	Singapore ACC 134.2 MHz (PRI) 133.35 MHz (SRY)
KEXAS 49.2 DME VTK R-107.2 011019N 1044818E	268	Left	220kt*	FL 160 11000 FT ALT	1	Singapore APP 124.05 MHz (PRI) 132.15 MHz (SRY)
KILOT 030217N 1044023E	227	Left	250kt	FL 270 FL 220	1.5	Singapore ACC 134.7 MHz (PRI) 134.15 MHz (SRY)
LAMA 7 DME PU R-024 013150N 1035850E	204	Right	230kt*	FL 140 2500 FT ALT	1	Singapore APP 126.025 MHz (PRI) 132.15 MHz (SRY)
MABAL 142.1 DME VTK R-030.1 157.2 DME SJ R-031.2 032826N 1051236E	231	Left	300kt*	FL 350 FL 280	1.5	Singapore ACC 123.7 MHz (PRI) 127.3 MHz (SRY)
NYLON (NHA) - Low Level 13 DME VTK R-023 013657N 1040624E	203	Left	220kt*	FL 140 3000 FT ALT	1	Singapore APP 124.05 MHz (PRI) 132.15 MHz (SRY)
NYLON (NHA) - High Level 13 DME VTK R-023 013657N 1040624E	203	Left	265kt*	FL 250 FL 150	1.5	Singapore ACC 124.6 MHz (PRI) 132.15 MHz (SRY)
REMES 30 DME SJ R-168 004342N 1035735E	348	Left	220kt	FL 140 6000 FT ALT	1	Singapore APP 124.6 MHz (PRI) 132.15 MHz (SRY)
REPOV 68.2 DME VTK R-178.6 57.9 DME SJ R-168.3 001623N 1040300E	348	Left	250kt*	FL 250 FL 150	1.5	Singapore ACC 134.4 MHz (PRI) 128.1 MHz (SRY)
SAMKO (SHA) - Low Level 8 DME SJ R-168 21 DME VTKR-203.5 010530N 1035255E	348	Left	220kt*	FL 140 4000 FT ALT	1	Singapore APP 120.3 MHz (PRI) 124.6 MHz (SRY)

HLDG ID/FIX/WPT Coordinates	*INBD TR (˚Mag)*	*Direction of Procedure Turn*	*MAX IAS*	*MNM-MAX HLDG Level*	*Time (min)*	*Controlling Unit and Frequency*
1	2	3	4	5	6	7
SAMKO (SHA) - High Level 8 DME SJ R-168 21 DME VTK R-203.5 010530N 1035255E	348	Left	265kt*	FL 250 FL 150	1.5	Singapore ACC 133.25 MHz (PRI) 135.8 MHz (SRY)
SINJON SJ DVOR/DME 011321N1035115E	348	Right	230kt*	FL 140 4500 FT ALT	1	Singapore APP 120.3 MHz (PRI) 124.6 MHz (SRY)
TUSPI 003301N 1040959E	350	Right	220kt	10000 FT ALT 4000 FT ALT	1	Singapore APP 124.6 MHz (PRI) 132.15 MHz (SRY)
UGEBO 003813N 1052432E	310	Left	250kt*	FL 310 FL 170	1.5	Singapore ACC 134.2 MHz (PRI) 133.35 MHz (SRY)
VAMPO 44.5 DME VTK R233.9 005833N 1032525E	149	Right	220kt*	FL 180 6000 FT ALT	1	Singapore APP 124.6 MHz (PRI) 132.15 MHz (SRY)

* Maximum speed of 280kt in conditions of turbulence subject to ATC clearance.

AREA CHART - ICAO



LOW LEVEL HOLDING AREAS

LEGEND

Terminal Control Area (TMA)	Name of TMA; Airspace Classification; Upper Limit; Lower Limit; Radio frequency(ies) — TMA JOHOR B FL 145 C 1 500ft 124.7
Control Zone (CTR)	Name of CTR; Airspace Classification; Upper Limit; Radio frequency(ies) — CTR C CHANGI 3 000ft 118.6m
Aerodrome Traffic Zone (ATZ)	Name of ATZ; Airspace Classification; Upper Limit; Radio frequency(ies) — ATZ D TENGAH 3 000ft 122.0
ATS Routes	Route designator; Distance in nautical miles; Minimum flight altitude (ft)/flight level; Lower limit (ft)/flight level — B469 / 20 / 4 000/FL 160 / (4 000)/(FL 160)
Reporting Point	Compulsory ▲; On request △
DME distance from SJ Navaid	*D35/SJ*
Radio Navigation Aid	Name; Identification and frequency; Geographical Coordinates; Elevation of DME site — SINJON DVOR/DME 113.5 SJ 01° 13' 21"N 103° 51' 15"E 58m
Collocated VOR and DME Radio Navigation Aids	Compass rose orientated on the chart to Magnetic North
Restricted Airspace (P - Prohibited, R - Restricted, D - Danger)	Identification of area; Nationality letter; Vertical limits; Activation by NOTAM — WSD13 FL 400 WATER NOTAM
NOTE :- See flip side for details of designated areas	

Area Minimum Altitude (AMA)

Each quadrilateral contains an area minimum altitude (AMA) which represents the lowest altitude which may be used under instrument meteorological conditions (IMC). The AMA provides a minimum clearance of 1 000 feet (300m) above all terrains and obstacles in the quadrilateral. It is represented in thousands and hundreds of feet above mean sea level.

Example : 3 400 feet **34**

NOTE :- In computing the area minimum altitude, a margin of 200 feet (60m) for vegetation has been added for spot elevations.

Speed Control Procedures

Speed control procedures are in force unless notified otherwise by ATC or ATIS.

All arriving turbo-propeller and turbo-jet aircraft are to fly at not faster than indicated air speed 250 knots when within 40nm from Singapore Changi Airport or when at or below 10,000ft except all arriving aircraft into Singapore Changi Airport shall comply with the speed restrictions depicted on the transitions and RNAV STARS. Further speed reductions will be regulated by ATC as necessary.

Pilots who may not be able to comply with the speed limits specified above for reasons of flight safety and/or weather should inform ATC and state the speed(s) acceptable.

AIRSPACE CLASSIFICATION IN THE SINGAPORE FIR

Airspace		Levels	Classification
Controlled airspace		FL150 to FL460	A
		Surface to FL150	B
Controlled airspace more than 100 nm seaward from the shoreline		Lower limit to FL460	A
Control Zone (CTRs)	Changi CTR	Surface to upper limit	C
	Paya Lebar CTR		D
	Seletar CTR		C
ATZs		Surface to upper limit	D
Uncontrolled airspace			G*

* Aircraft operating in the Light Aircraft Training Areas A, B and C (please refer to page ENR 5.2-1) are required to have continuous two-way communications with the appropriate ATS authority.

SINGAPORE	D-ATIS	DEP	128.6
		ARR	128.025
	APP	DEP	120.3
		ARR	119.3
		APP	124.05
	TWR		118.6
			118.25

Note :

FOR DEPARTURE AND ARRIVAL ROUTES REFER TO AD-2-WSSS-SID-1 TO AD-2-WSSS-SID-64 AND AD-2-WSSS-STAR-1 TO AD-2-WSSS-STAR-19

CHANGES : Revision to Restricted Areas WSR9 and WSR16

PROHIBITED, RESTRICTED AND DANGER AREAS

	ACTIVITY	UPPER LIMIT / LOWER LIMIT	REMARKS
WSP3	-	750ft ALT / GND	Permanently Active as in ENR 5
WSD4	A/G and G/G Firing Range	FL 160 / GND/WATER	Permanently Active as in ENR 5
WMD8	Naval Air/Air Firing Range	FL 550 / WATER	Activation by NOTAM
WSD11	Small Arm Firing	1 300ft ALT / GND	Permanently Active as in ENR 5
WSD11A	Artillery Firing	FL 125 / GND	Activation by NOTAM
WSD11B	Artillery Firing	FL 125 / GND	Activation by NOTAM
WMD12	Naval Anti-aircraft Firing	FL 550 / WATER	Activation by NOTAM
WSD13	Naval Anti-aircraft Firing	FL 550 / WATER	Activation by NOTAM
WSD14	Naval Anti-aircraft Firing & Live Air/Air Firing	FL 550 / WATER	Activation by NOTAM
WSP24	-	800ft ALT / GND/WATER	Permanently Active as in ENR 5
WSR6	Helicopter Operations	200ft ALT / GND	Permanently Active as in ENR 5
WSR9	Helicopter Operations	400ft ALT / GND	Permanently Active as in ENR 5
WSR16	Helicopter Operations	400ft ALT / GND	Permanently Active as in ENR 5
WSD34	Rifle Range	500ft ALT / GND	Permanently Active as in ENR 5
WSD35	Rifle Range	900ft ALT / GND	Permanently Active as in ENR 5
WSD36	Rifle Range	750ft ALT / GND	Permanently Active as in ENR 5
WSR10	-	5 500ft ALT / GND	Permanently Active as in ENR 5
WSR38	-	10 000ft ALT / GND	Permanently Active as in ENR 5
	Transit Channel	2 000ft ALT / GND	Activated only for Military acft crossing
*	Light Aircraft Training Area A	4 500ft ALT / GND/*2 000ft	Training & Local Flts in VMC only
*	Light Aircraft Training Area B	10 500ft ALT / 4 500ft ALT	High Flying Training Ops in VMC only
*	Light Aircraft Training Area C	10 500ft ALT / 4 500ft ALT	High Flying Training Ops in VMC only
WMR223	Parachute Dropping	10 000ft ALT / GND	Permanently Active as in ENR 5
WMD224	Firing Range	12 000ft ALT / SEA	Activation by NOTAM
WMR225	RMAF Helicopter Training Area	3 500ft ALT / GND	Permanently Active as in ENR 5
WMR226	RMAF Helicopter Training Area	2 000ft ALT / GND	Permanently Active as in ENR 5
WMD227	Radar Bombing Range	10 000ft ALT / SEA	Activation by NOTAM
WMP228	Sultan's Palace	5 000ft ALT / GND	Permanently Active as in ENR 5
WMR229	Helicopter Operations	1 500ft ALT / GND	Permanently Active as in ENR 5
WMD230	Artillery Firing Range	2 000ft ALT / GND	Permanently Active as in ENR 5
WMD231	Artillery Firing Range	2 000ft ALT / GND	Permanently Active as in ENR 5

* In Transit Channel

* **AEROBATICS IS PROHIBITED IN LIGHT AIRCRAFT TRAINING AREAS A, B and C.**

SPECIAL NOTE :-

1. WEATHER BALLOONS

BALLOONS WILL BE RELEASED FOR MET OBSERVATION AT THE CENTRE FOR CLIMATE RESEARCH SINGAPORE, UPPER AIR OBSERVATORY (012025N 1035317E), BEARING 244° MAG AND DISTANCE 1.5NM FROM SOUTHERN END OF PAYA LEBAR RWY 02.

(I) BALLOONS WILL BE RELEASED DAILY AT 2330UTC AND 1040UTC. CUT-OFF TIMINGS FOR THE RELEASE ARE AT 0030UTC AND 1230UTC RESPECTIVLEY. RATE OF ASCENT IS 320M PER MIN. MAX HGT OF BALLOON 115 000FT (35 000M). THE BALLOON, UNCOLOURED AND 162CM IN DIAMETER, IS ATTACHED WITH RADIOSONDE EQUIPMENT. IT WILL BURST 1.5 TO 2HRS AFTER RELEASE AND RADIOSONDE EQUIPMENT WILL DECSEND WITHIN 60NM RADIUS.

(II) A BALLOON WILL BE RELEASED BETWEEN 2330UTC AND 0030UTC ON EITHER THE 3rd OR 4th WEEK OF THE MONTH. RATE OF ASCENT IS 320M PER MIN. MAX HGT OF BALLOONS IS 115 000FT (35 000M). THE BALLOON, UNCOLOURED AND 191CM IN DIAMETER, IS ATTACHED WITH OZONESONDE/RADIOSONDE EQUIPMENT AND PARACHUTE. IT WILL BURST 1.5 TO 2HR AFTER RELEASE.

2. AEROMODELLING AND KITE FLYING

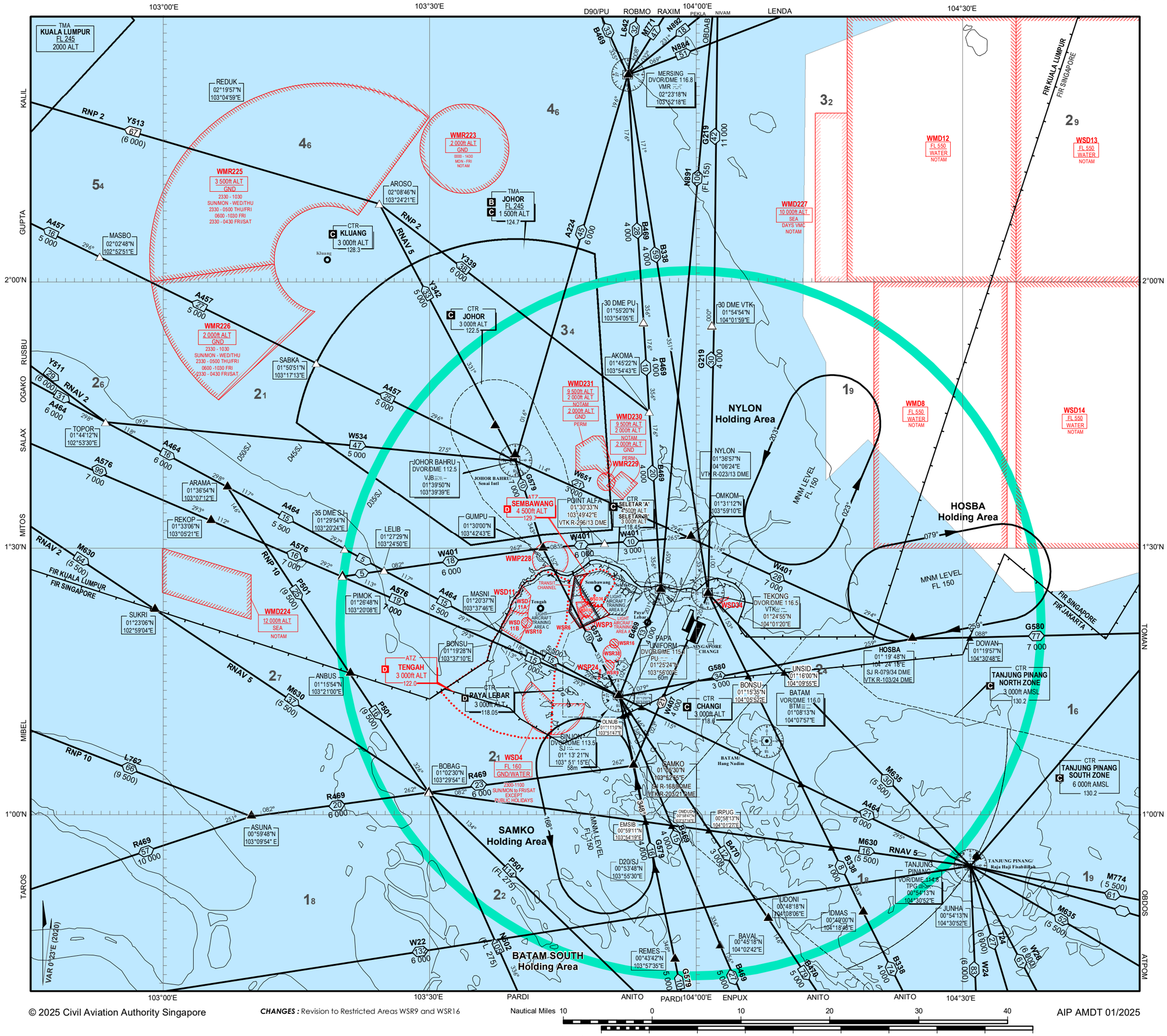
(A) GENERAL WARNING

i) PILOTS FLYING AT LOW ALTITUDES SHOULD WATCH OUT FOR POSSIBLE HAZARDS SUCH AS MODEL AIRCRAFT AND KITES, ESPECIALLY WHEN FLYING NEAR PARKS AND OPEN GROUND.

ii) THE LOCATION OF SOME OF THE PARKS IN SINGAPORE WHERE KITE AND AERO MODEL FLYING MAY OCCUR ARE SHOWN ON ENR 3.4-5. PILOTS SHOULD NOTE THAT THE CHART AT ENR 3.4-5 DOES NOT SHOW ALL THE PARKS IN SINGAPORE AND THAT HAZARDS SUCH AS KITE FLYING AND AERO MODEL FLYING MAY TAKE PLACE AT PARKS AND OPEN GROUND NOT INDICATED IN ENR 3.4-5.

iii) ACCORDING TO THE SINGAPORE AIR NAVIGATION ORDER, 1985, KITE FLYING AND AERO MODEL FLYING ARE NOT PERMITTED ABOVE 200ft OR WITHIN 5km OF AN AERODROME. HOWEVER, PILOTS ARE ADVISED TO LOOK OUT FOR SUCH HAZARDS AT ALL TIMES AS MEMBERS OF THE PUBLIC MAY INADVERTENTLY FLY KITES OR AERO MODELS ABOVE THE HGT OF 200ft OR WITHIN 5km OF AN AERODROME.

AREA CHART - ICAO



LEGEND

Terminal Control Area (TMA)
Name of TMA
Airspace Classification
Upper Limit
Lower Limit
Radio frequency(ies)
Example: TMA JOHOR B FL 145 C 1 500ft 124.7

Control Zone (CTR)
Name of CTR
Airspace Classification
Upper Limit
Radio frequency(ies)
Example: CTR C CHANGI 3 000ft 118.6m

Aerodrome Traffic Zone (ATZ)
Name of ATZ
Airspace Classification
Upper Limit
Radio frequency(ies)
Example: ATZ D TENGAH 3 000ft 122.0

ATS Routes
Route designator
Distance in nautical miles
Minimum flight altitude (ft)/flight level
Lower limit (ft)/flight level
Example: B469 20 4 000/FL 160 (4 000)/(FL 160)

Oceanic Control Area (OCA)

Reporting Point
Compulsory
On request

DME distance from SJ Navaid — *D35/SJ*

Radio Navigation Aid
Name
Identification and frequency
Geographical Coordinates
Elevation of DME site
Example: SINJON DVOR/DME 113.5 SJ 01° 13' 21"N 103° 51' 15"E 58m

Collocated VOR and DME Radio Navigation Aids
Compass rose orientated on the chart to Magnetic North

Restricted Airspace
(P - Prohibited, R - Restricted, D - Danger)
Identification of area
Nationality letter
Vertical limits
Activation by NOTAM
Example: WSD13 FL 400 WATER NOTAM

NOTE :- See flip side for details of designated areas

Area Minimum Altitude (AMA)

Each quadrilateral contains an area minimum altitude (AMA) which represents the lowest altitude which may be used under instrument meteorological conditions (IMC). The AMA provides a minimum clearance of 1 000 feet (300m) above all terrains and obstacles in the quadrilateral. It is represented in thousands and hundreds of feet above mean sea level.

Example : 3 400 feet **3 4**

NOTE :- In computing the area minimum altitude, a margin of 200 feet (60m) for vegetation has been added for spot elevations.

Speed Control Procedures

Speed control procedures are in force unless notified otherwise by ATC or ATIS.

All arriving turbo-propeller and turbo-jet aircraft are to fly at not faster than indicated air speed 250 knots when within 40nm from Singapore Changi Airport or when at or below 10,000ft except all arriving aircraft into Singapore Changi Airport shall comply with the speed restrictions depicted on the transitions and RNAV STARS. Further speed reductions will be regulated by ATC as necessary.

Pilots who may not be able to comply with the speed limits specified above for reasons of flight safety and/or weather should inform ATC and state the speed(s) acceptable.

AIRSPACE CLASSIFICATION IN THE SINGAPORE FIR

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		Surface to FL150	B
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	Paya Lebar CTR		D
	Seletar CTR		C
ATZs		Surface to upper limit	D
Uncontrolled airspace			G*

* Aircraft operating in the Light Aircraft Training Areas A, B and C (please refer to page ENR 5.2-1) are required to have continuous two-way communications with the appropriate ATS authority.

SINGAPORE	D-ATIS	DEP	128.6
		ARR	128.025
	APP	DEP	120.3
		ARR	119.3
		APP	124.05
	TWR		118.6
			118.25

Note :

FOR DEPARTURE AND ARRIVAL ROUTES REFER TO AD-2-WSSS-SID-1 TO AD-2-WSSS-SID-64 AND AD-2-WSSS-STAR-1 TO AD-2-WSSS-STAR-19

PROHIBITED, RESTRICTED AND DANGER AREAS

	ACTIVITY	UPPER LIMIT / LOWER LIMIT	REMARKS
WSP3	-	750ft ALT / GND	Permanently Active as in ENR 5
WSD4	A/G and G/G Firing Range	FL 160 / GND/WATER	Permanently Active as in ENR 5
WMD8	Naval Air/Air Firing Range	FL 550 / WATER	Activation by NOTAM
WSD11	Small Arm Firing	1 300ft ALT / GND	Permanently Active as in ENR 5
WSD11A	Artillery Firing	FL 125 / GND	Activation by NOTAM
WSD11B	Artillery Firing	FL 125 / GND	Activation by NOTAM
WMD12	Naval Anti-aircraft Firing	FL 550 / WATER	Activation by NOTAM
WSD13	Naval Anti-aircraft Firing	FL 550 / WATER	Activation by NOTAM
WSD14	Naval Anti-aircraft Firing & Live Air/Air Firing	FL 550 / WATER	Activation by NOTAM
WSP24	-	800ft ALT / GND/WATER	Permanently Active as in ENR 5
WSR6	Helicopter Operations	200ft ALT / GND	Permanently Active as in ENR 5
WSR9	Helicopter Operations	400ft ALT / GND	Permanently Active as in ENR 5
WSR16	Helicopter Operations	400ft ALT / GND	Permanently Active as in ENR 5
WSD34	Rifle Range	500ft ALT / GND	Permanently Active as in ENR 5
WSD35	Rifle Range	900ft ALT / GND	Permanently Active as in ENR 5
WSD36	Rifle Range	750ft ALT / GND	Permanently Active as in ENR 5
WSR10	-	5 500ft ALT / GND	Permanently Active as in ENR 5
WSR38	-	10 000ft ALT / GND	Permanently Active as in ENR 5
	Transit Channel	2 000ft ALT / GND	Activated only for Military acft crossing
*	Light Aircraft Training Area A	4 500ft ALT / GND/*2 000ft	Training & Local Flts in VMC only
*	Light Aircraft Training Area B	10 500ft ALT / 4 500ft ALT	High Flying Training Ops in VMC only
*	Light Aircraft Training Area C	10 500ft ALT / 4 500ft ALT	High Flying Training Ops in VMC only
WMR223	Parachute Dropping	10 000ft ALT / GND	Permanently Active as in ENR 5
WMD224	Firing Range	12 000ft ALT / SEA	Activation by NOTAM
WMR225	RMAF Helicopter Training Area	3 500ft ALT / GND	Permanently Active as in ENR 5
WMR226	RMAF Helicopter Training Area	2 000ft ALT / GND	Permanently Active as in ENR 5
WMD227	Radar Bombing Range	10 000ft ALT / SEA	Activation by NOTAM
WMP228	Sultan's Palace	5 000ft ALT / GND	Permanently Active as in ENR 5
WMR229	Helicopter Operations	1 500ft ALT / GND	Permanently Active as in ENR 5
WMD230	Artillery Firing Range	2 000ft ALT / GND	Permanently Active as in ENR 5
WMD231	Artillery Firing Range	2 000ft ALT / GND	Permanently Active as in ENR 5

* In Transit Channel

* **AEROBATICS IS PROHIBITED IN LIGHT AIRCRAFT TRAINING AREAS A, B and C.**

SPECIAL NOTE :-

1. WEATHER BALLOONS

BALLOONS WILL BE RELEASED FOR MET OBSERVATION AT THE CENTRE FOR CLIMATE RESEARCH SINGAPORE, UPPER AIR OBSERVATORY (012025N 1035317E), BEARING 244° MAG AND DISTANCE 1.5NM FROM SOUTHERN END OF PAYA LEBAR RWY 02.

(I) BALLOONS WILL BE RELEASED DAILY AT 2330UTC AND 1040UTC. CUT-OFF TIMINGS FOR THE RELEASE ARE AT 0030UTC AND 1230UTC RESPECTIVLEY. RATE OF ASCENT IS 320M PER MIN. MAX HGT OF BALLOON 115 000FT (35 000M). THE BALLOON, UNCOLOURED AND 162CM IN DIAMETER, IS ATTACHED WITH RADIOSONDE EQUIPMENT. IT WILL BURST 1.5 TO 2HRS AFTER RELEASE AND RADIOSONDE EQUIPMENT WILL DECSEND WITHIN 60NM RADIUS.

(II) A BALLOON WILL BE RELEASED BETWEEN 2330UTC AND 0030UTC ON EITHER THE 3rd OR 4th WEEK OF THE MONTH. RATE OF ASCENT IS 320M PER MIN. MAX HGT OF BALLOONS IS 115 000FT (35 000M). THE BALLOON, UNCOLOURED AND 191CM IN DIAMETER, IS ATTACHED WITH OZONESONDE/RADIOSONDE EQUIPMENT AND PARACHUTE. IT WILL BURST 1.5 TO 2HR AFTER RELEASE.

2. AEROMODELLING AND KITE FLYING

(A) GENERAL WARNING

i) PILOTS FLYING AT LOW ALTITUDES SHOULD WATCH OUT FOR POSSIBLE HAZARDS SUCH AS MODEL AIRCRAFT AND KITES, ESPECIALLY WHEN FLYING NEAR PARKS AND OPEN GROUND.

ii) THE LOCATION OF SOME OF THE PARKS IN SINGAPORE WHERE KITE AND AERO MODEL FLYING MAY OCCUR ARE SHOWN ON ENR 3.4-5. PILOTS SHOULD NOTE THAT THE CHART AT ENR 3.4-5 DOES NOT SHOW ALL THE PARKS IN SINGAPORE AND THAT HAZARDS SUCH AS KITE FLYING AND AERO MODEL FLYING MAY TAKE PLACE AT PARKS AND OPEN GROUND NOT INDICATED IN ENR 3.4-5.

iii) ACCORDING TO THE SINGAPORE AIR NAVIGATION ORDER, 1985, KITE FLYING AND AERO MODEL FLYING ARE NOT PERMITTED ABOVE 200ft OR WITHIN 5km OF AN AERODROME. HOWEVER, PILOTS ARE ADVISED TO LOOK OUT FOR SUCH HAZARDS AT ALL TIMES AS MEMBERS OF THE PUBLIC MAY INADVERTENTLY FLY KITES OR AERO MODELS ABOVE THE HGT OF 200ft OR WITHIN 5km OF AN AERODROME.

ENR 5 NAVIGATION WARNINGS

ENR 5.1 PROHIBITED, RESTRICTED AND DANGER AREAS

1 INTRODUCTION

1.1 All airspace in which a potential hazard to aircraft operations may exist and all areas over which the operation of civil aircraft may, for one reason or another be restricted either temporarily or permanently, are classified according to three types of areas as defined by ICAO.

1.2 Each area is described in the tabulation found in pages ENR 5.1-2 to 5.1-5 which indicates its lateral and vertical limits, the type of restriction or hazard involved, the times at which it applies and other pertinent information.

2 DANGER AREA

2.1 An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times. This term is used only when the potential danger to aircraft has not led to the designation of the airspace as restricted or prohibited. The effect of the creation of the danger area is to caution operators or pilots of aircraft that it is necessary for them to assess the dangers in relation to their responsibility for the safety of their aircraft.

3 PROHIBITED AREA

3.1 An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited. This term is used only when the flight of civil aircraft within the designated airspace is not permitted at any time under any circumstances.

4 RESTRICTED AREA

4.1 An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions. This term is used whenever the flight of civil aircraft within the designated airspace is not absolutely prohibited but may be made only if specified conditions are complied with. Thus, prohibition of flight except at certain meteorological conditions. Similarly, prohibition of flight unless special permission had been obtained, leads to the designation of restricted area. However, conditions of flight imposed as a result of application of rules of the air or air traffic service practice or procedures (for example, compliance with minimum safe heights or with rules stemming from the establishment of controlled airspace) do not constitute conditions calling for designation as a restricted area.

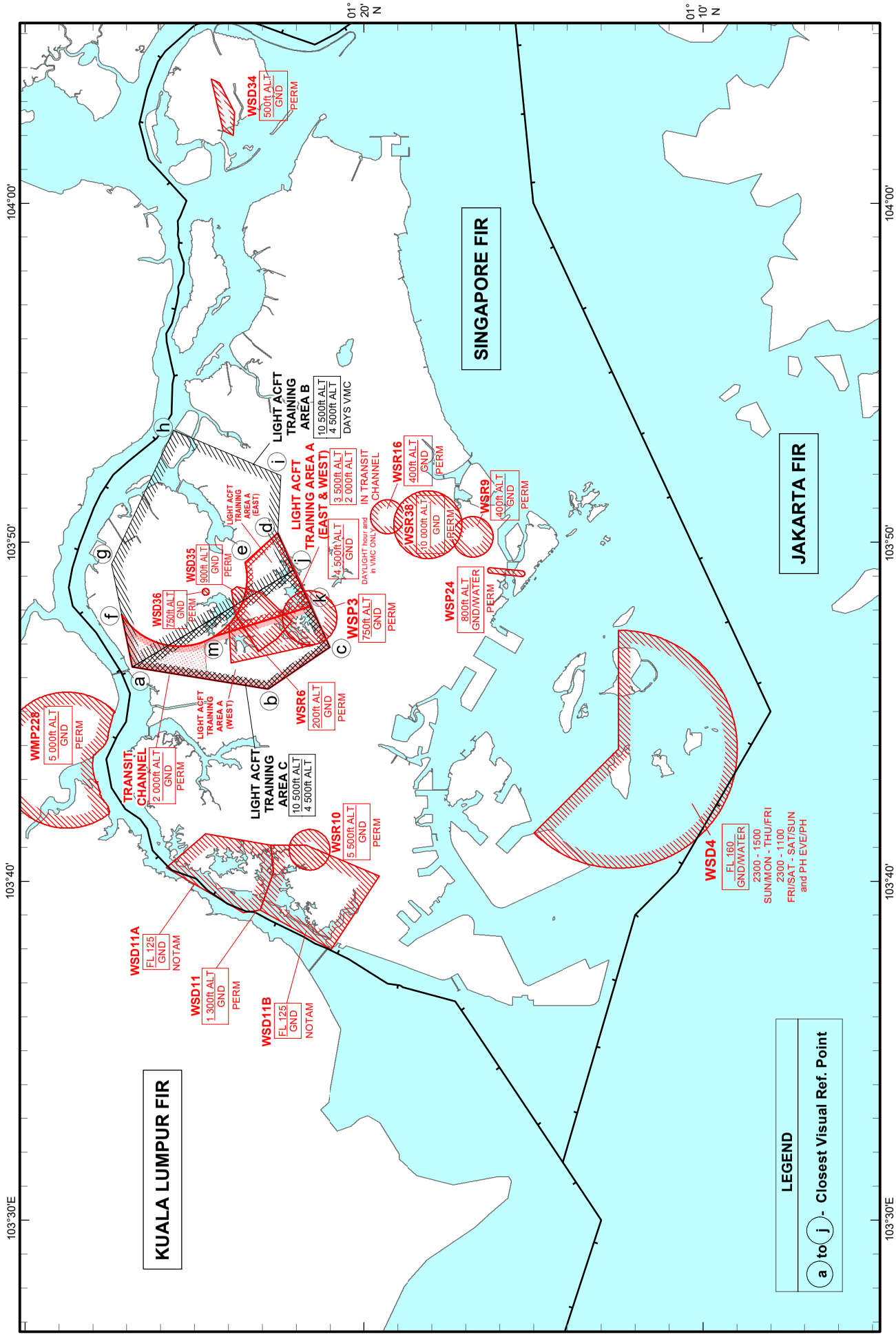
5 DESIGNATION OF AREA

5.1 Each area is numbered and single series of numbers is used for all areas, regardless of type, to ensure that a number is never duplicated.

5.2 The type of area involved is indicated by the letter “P” for Prohibited, “R” for Restricted and “D” for Danger, preceded by the Nationality letters “WS”. For example, areas are assigned numbers and letters in the following manner - WSP3, WSR6 and WSD4.

Identification, Name and Lateral Limits	*Upper limit* *Lower limit*	*Remarks* *(time of activity, type of restriction, nature of hazard, risk of interception)*
1	2	3
PROHIBITED AREAS		
WSP3 A circle, 0.8NM radius centred at 012136N 1034746E	750 FT GND	Active: Permanent. Under no circumstances shall a forced landing be permitted within the area. Rotary wing aircraft shall avoid overflying the area.
WSP24 Area within two circles, 150m radius, centred at Mt. Faber (011616N 1034910E) and Sentosa Island (011520N 1034904E) and the tangential lines joining these circles.	800 FT ALT GND/WATER	Active: Permanent.
WMP228 BUKIT SERENE Area within 2NM centred at 012845N 1034334E with the southern border of the Prohibited Area coinciding with the coastline of South Johor.	5000 FT ALT GND	Sultan's Palace. Active: Permanent. (refer to AIP Malaysia)
RESTRICTED AREAS		
WSR6 Area bounded by 012355N 1034626E to 012359.0N 1034734.1E then along the boundaries of Sembawang ATZ, WSD35, WSP3 and 012130.00N 1034658.37E to 012355N 1034626E.	200 FT ALT GND	Helicopter Operations. Active: Permanent.
WSR9 A circle, 0.6NM radius centred at 011647N 1035009E.	400 FT ALT GND	Helicopter Operations. Active: Permanent.
WSR10 A circle, 0.6NM radius centred at 012136N 1034055.02E.	5500 FT ALT GND	Active: Permanent.
WSR16 A circle, 0.5NM radius centred at 011918N 1035045E.	400 FT ALT GND	Helicopter Operations. Active: Permanent.
WSR38 A circle, 1NM radius centred at 011807N 1035031E	10000 FT ALT GND	Istana. Active: Permanent. All FLT BTN SJ/GUMPU on AWY G579 are to avoid at all times the area which overlaps the eastern edge of G579 .
WMR104 032859N 1030254E 023959N 1023454E 022300N 1025954E 022300N 1034554E 032059N 1032054E 031859N 1031554E 032559N 1031254E 032859N 1030254E.	10000 FT ALT 3000 FT ALT	Training. Active: 2230-1030 SUN-MON to FRI-SAT (refer to AIP Malaysia)

PROHIBITED, RESTRICTED AND DANGER AREAS - CHART 2



CHANGES : Revision to Restricted Areas WSR9 and WSR16

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1 ADB SAFEGATE AIRCRAFT DOCKING GUIDANCE SYSTEM - SAFEDOCK

1.1 INTRODUCTION

1.1.1 The ADB Safegate Aircraft Docking Guidance System (ADGS) - SAFEDOCK is a fully automatic aircraft docking guidance system installed at the contact aircraft stands at Terminals 1, 2, 3 and 4, and at the remote aircraft stands at South Apron and North Remote Apron (951 to 954) of Singapore Changi Airport.

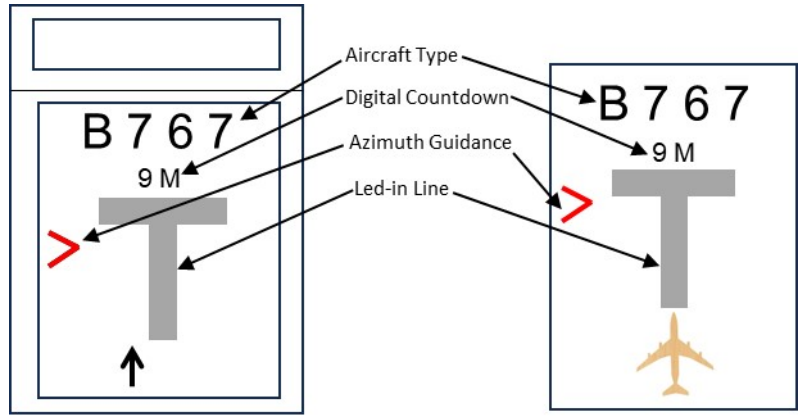
1.2 DESCRIPTION OF SYSTEM

1.2.1 The system is based on a laser scanning technique and it tracks both the lateral and longitudinal position of the aircraft. This 3D technique allows the system to identify the incoming aircraft and check it against the one selected by the operator to ensure that the pilot is provided with the correct stop indication for the aircraft.

1.2.2 The system is operated only in the Automatic Mode. When the system fails, the aircraft is to be marshalled into the stand manually.

1.2.3 Azimuth guidance, continuous closing rate information, aircraft type, etc., are shown to the pilot on a single display clearly visible for both pilot and co-pilots. Figure A and Figure B shows the Display and Laser Scanning Unit mounted on the terminal in front of the aircraft stand.

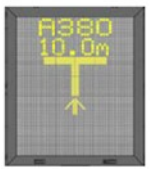
LED DISPLAY AND LASER SCANNING UNIT



Safedock Type 1
Figure A

Safedock FleX
Figure B

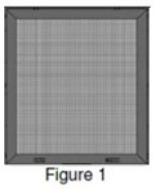
1.3 DOCKING PROCEDURES

Description	Display on ADGS
Checking of Aircraft Type • Check that the correct aircraft type is displayed. The scrolling arrows indicate that the system is activated. • Follow the lead-in line.	Safedock Type 1  Safedock FleX 
Capture of Correct Aircraft Type • When the aircraft has been caught by the scanning unit, the scanning unit checks that the aircraft is the correct type and the display provides azimuth guidance information. When the solid yellow closing rate bar appears, the aircraft is being tracked by the system.	Safedock Type 1  Safedock FleX 
Steering and Alignment of Aircraft • Look for the flashing red arrow and solid yellow arrow which provide azimuth guidance information. The flashing red arrow shows which direction to steer, while the solid yellow arrow gives an indication of how far the aircraft is off the centreline.	Safedock Type 1  Safedock FleX 
Distance of Aircraft from STOP Position • When the aircraft is 15m from the stop position, closing rate information is given. “Distance to go” is indicated by turning off one row of LEDs (Laser Electronic Displays) for every half metre that the aircraft advances towards the stop position. From 15m to the stop position, the display will indicate the distance from the stop position for every 1m. At 3m from the stop position, the display will indicate the distance from the stop position for every 0.2m.	Safedock Type 1  Safedock FleX 
STOP Position • When the correct stop position is reached, all of the LEDs for the closing rate bar will be off, the word “STOP” in red with red border will appear in the display.	Safedock Type 1  Safedock FleX 

Description	Display on ADGS
Checking of STOP Position • If the aircraft stops at the correct position, "OK" will be displayed after a few seconds.	Safedock Type 1  Safedock FleX 
Overshooting of STOP Position • If the aircraft has gone past the correct stop position, the display will show "TOO FAR" after the aircraft comes to a complete stop.	Safedock Type 1  Safedock FleX 
Object Blocking the View • If some object is blocking the view towards the approaching aircraft or the detected aircraft is lost before 12m to the correct stop position, the system will show "WAIT".	Safedock Type 1  Safedock FleX 
Identification of Aircraft • The aircraft must be identified at least 12m before the correct stop position. Otherwise, the display will show "WAIT", "STOP" and "ID FAIL".	Safedock Type 1    Safedock FleX   

1.4 SAFETY MEASURES

Description	Display on ADGS
ADGS Blank / Wrong Aircraft Type • Pilot should not turn an aircraft into the aircraft stand if the docking system is not activated or on seeing a wrong aircraft type displayed on the system.	Safedock Type 1  Safedock FleX 
Proceeding beyond Passenger Loading Bridges • Pilot should not proceed beyond the passenger loading bridges unless the scrolling arrows (see figure 1) have been superseded by the solid yellow closing rate bar (see figure 2).	Safedock Type 1  Figure 1  Figure 2 Safedock FleX  Figure 1  Figure 2
Minimum Speed • When using the docking system, pilots are to taxi into the aircraft stand at minimum speed. The system will display “SLOW” to inform the pilot if the aircraft’s taxiing speed exceeded 1.2m/s.	Safedock Type 1  Safedock FleX 
Slow Down (In Abnormal Situations) • In bad weather conditions, the docking system may go into downgrade mode. The display will show the aircraft type and “SLOW” and the scrolling arrows are disabled (See Figure 1). When the system has detected the aircraft, the solid yellow closing rate bar appears. Docking process is allowed to continue but pilot should exercise caution.	Safedock Type 1  Figure 1 Safedock FleX  Figure 1
Overshooting • To avoid overshooting, pilots are advised to approach the stop position slowly and observe the closing rate information displayed. Pilots should stop the aircraft immediately when seeing the “STOP” or “WAIT” display or when given the stop sign by the aircraft marshaller or is unsure of the information displayed during the docking process.	Safedock Type 1   Safedock FleX  

Description	Display on ADGS
No Display • Pilot should stop the aircraft immediately if the display goes black, for power failure (see figure 1) or system failure (see figure 2), during the docking process. The aircraft is to be manually marshalled into the aircraft stand.	Safedock Type 1  Figure 1  Figure 2 Safedock FleX  Figure 1  Figure 2
Safety Backup (SBU) Stop • When a non-recoverable error has occurred during the docking due to either 1. Hardware failure; 2. Aircraft more than +/- 0.5meters off the centerline when two (2) meters or less to the stop-position; or 3. System Failure Pilot are to stop the aircraft immediately when seeing the "SBU Stop" display or when given the stop sign by the aircraft marshaller or is unsure of the information displayed during the docking process	Safedock Type 1  Safedock FleX 
View Blocked • When the view towards the aircraft is hindered, the display will show "WAIT VIEW BLOCK". Pilot are to stop the aircraft immediately or when given the stop sign by the aircraft marshaller or is unsure of the information displayed during the docking process.	Safedock Type 1  Safedock FleX 
Gate Block • When an object is found to be blocking the view from the ADGS toward the aircraft, the display will show "WAIT GATE BLOCK". Pilot are to stop the aircraft immediately or when the stop sign by the aircraft marshaller or is unsure of the information displayed during the docking process.	Safedock Type 1  Safedock FleX 

2 PROCEDURES FOR START-UP AND PUSHBACK OF AIRCRAFT

2.1 Ground crew shall ensure that the area behind an aircraft is clear of vehicles, equipment and other obstructions before the start-up or pushback of aircraft commences.

2.2 When it becomes necessary to vary a procedure to expedite aircraft movements, Ground Movement Controller ("Singapore Ground") shall issue specific instructions to the pilot.

2.3 When the pilot is ready for start-up and pushback, he shall seek confirmation from the ground crew that there is no hazard to his aircraft starting up. He shall then notify Singapore Ground that he is ready for pushback. On being told by Singapore Ground that pushback is approved, he shall co-ordinate with the ground crew for the start-up and pushback of the aircraft.

2.4 The lead-in lines are for aircraft nose-in guidance. For aircraft stands without dedicated pushback lines, ground crew may use the lead-in lines for pushback guidance.

2.5 For more information, refer to Airport Operations Centre System (AOCS) at https://aoc.changiairport.com/ for detailed pushback procedures.

3 ADVANCED MULTILATERATION SYSTEM

3.1 INTRODUCTION

3.1.1 The Multilateration System is a new surveillance system which is able to detect and identify all Mode S equipped aircraft and vehicles moving on the airport surface even during bad weather conditions such as heavy rain. It will integrate with the current radar-based ground surveillance system as part of the Advanced-Surface Movement Guidance and Control System (A-SMGCS) at Singapore Changi Airport. This will enhance the efficiency and safety at the airport.

3.2 CARRIAGE OF MODE-S SSR TRANSPONDER

3.2.1 Carriage and operation of Mode-S transponder is required for all civil aircraft operating at Singapore Changi Airport. The Mode-S transponder shall comply, at least, to the requirements of Level 2 as prescribed in ICAO Annex 10 Volume IV (Amendment 77 or later) Standards and Recommended Practices.

3.3 MULTILATERATION SYSTEM OUTLINE

3.3.1 The Multilateration System uses multiple receivers to pick up "squitters" transmitted by aircraft or vehicle Mode S transponders. It calculates the position of an aircraft or a vehicle by comparing the time its "squitter" arrives at each receiver.

3.3.2 The System will derive the identity of an aircraft by selectively interrogating its transponder to receive its assigned Mode A code or extracting its aircraft identification [that is, the ICAO callsign used in flight and inserted in the Flight Management System (FMS) or the Transponder Control Panel], if available, from its squitter. For transponder equipped vehicles, the system will derive their respective identities from the unique Mode S addresses contained in their squitters.

3.4 AIRCRAFT REQUIREMENTS

3.4.1 The Multilateration System is essentially passive. It relies on aircraft transponders squittering at all times when moving on the airfield. At present, some aircraft checklist procedures instruct pilots to turn off the transponder shortly after leaving the runway on arrival and, not to switch it on until reaching the runway holding point for departure. This is in line with the requirement that Mode A/C transponders should not transmit on the ground, which does not apply to Mode S transmissions.

3.4.2 For the Multilateration System to work effectively, all aircraft Mode S transponders need to transmit Mode S squitters at all times when moving on the airfield, starting immediately prior to pushback, and for arrival aircraft until they are stationary at the aircraft stands. The Mode S transponders should not respond to All-Call interrogations, but should respond to addressed interrogations.

3.5 PROCEDURES/ACTIONS REQUIRED BY PILOTS

3.5.1 The Multilateration System needs to receive squitters and to acquire the Mode A code of a Mode S equipped aircraft at all times when it is on the ground. This is to enable detection and identification of the aircraft (from its Mode A code or ICAO callsign) as soon as it pushes back. Hence, the following actions from pilots are required.

WSSS AD 2.13 DECLARED DISTANCES

RWY Designator	Intersection Departures	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6	7
20R	Not applicable	4000	4270	4060	3260	THR displaced by 740m southwards
	W2	3842	4112	3902	Not applicable	
	W3	3026	3296	3086	Not applicable	
02L	Not applicable	4000	4270	4060	4000	NIL
	W8	3842	4112	3902	Not applicable	
	W7	3026	3296	3086	Not applicable	
20C	Not applicable	4000	4060	4060	4000	NIL
	T3	3808	3868	3868	Not applicable	
	T4	3421	3481	3481	Not applicable	
	T5	2721	2781	2781	Not applicable	
	D3	3842	3902	3902	Not applicable	
	D4	3502	3562	3562	Not applicable	
	D5	3027	3087	3087	Not applicable	
	D6	2552	2612	2612	Not applicable	
02C	Not applicable	4000	4060	4060	4000	NIL
	T11	3842	3902	3902	Not applicable	
	T10	3329	3389	3389	Not applicable	
	T9	3197	3257	3257	Not applicable	
	T8	2551	2611	2611	Not applicable	
	D12	3842	3902	3902	Not applicable	
	D11	3480	3540	3540	Not applicable	
	D10	2877	2937	2937	Not applicable	
	D9	2402	2462	2462	Not applicable	
20L	Not applicable	4000	4060	4060	4000	NIL
	A3	3842	3902	3902	Not applicable	
	A4	3027	3087	3087	Not applicable	
	A5	2552	2612	2612	Not applicable	
02R	Not applicable	4000	4060	4060	4000	NIL
	A10	3842	3902	3902	Not applicable	
	A9	2877	2937	2937	Not applicable	
	A8	2402	2462	2462	Not applicable	

Note: Intersection departures are allowed subject to the following:

a. initiated by pilot and approved by ATC, traffic permitting.
b. ATC is able to keep aircraft visual at all times

WSSS AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	APCH LGT Type, LEN, Intensity	THR LGT colour WBAR	PAPI (MEHT)	TDZ LGT LEN	RWY Centreline LGT, LEN, spacing, colour, INTST	RWY Edge LGT, LEN, spacing, colour, INTST	RWY End LGT colour	SWY LGT colour
1	2	3	4	5	6	7	8	9
02L	CAT II High Intensity approach lighting (900m) consisting of extended centreline and Red row barrettes, 2 crossbars, 2 approach beacons and sequenced flashing lights.	Green supplemented by Green wing-bar and 2 THR ident lights.	PAPI 003° located either side of RWY, 422m behind RWY THR. 2 White LGT and 2 Red LGT (20.0m), 3 White LGT and 1 Red LGT (24.0m), 4 White LGT (26.4m). ACFT with eye-to-wheel height greater than 8m are advised to fly with 2 White and 2 Red LGT visible so as to achieve sufficient wheel clearance.	White	Inset High Intensity centreline lights (longitudinal spacing at 30m apart) as follows: From THR to 900m from RWY end: White, 300m to 900m from RWY end: ALTN Red/ White, 300m to RWY end: Red.	Bi-directional White/Amber edge lights (longitudinal spacing at 60m apart) as follows: From THR to 600m from RWY end: White, 600m to RWY end: Amber.	Red	Red
20R	CAT I High Intensity approach lighting (900m) distance coded centreline lights showing variable White and crossbars at 150m, 300m, 450m, 600m and 750m.	Green supplemented by Green wing-bar and 2 THR ident lights.	PAPI 003° located either side of RWY, 410m from THR. 2 White LGT and 2 Red LGT (20.0m), 3 White LGT and 1 Red LGT (22.6m), 4 White LGT (25.0m). ACFT with eye-to-wheel height greater than 8m are advised to fly with 2 White and 2 Red LGT visible so as to achieve sufficient wheel clearance.	NIL	Inset High Intensity centreline lights (longitudinal spacing at 30m apart) as follows: From THR to 900m from RWY end: White, 300m to 900m from RWY end: ALTN Red/ White, 300m to RWY end: Red.	Red RWY edge lights (longitudinal spacing at 60m apart) in the direction of RWY 20R before the displaced THR. Bi-directional raised White/Amber edge lights (longitudinal spacing at 60m apart) after the displaced THR.	Red	Elevated Red
02C	CAT II High Intensity approach lighting (900m) consisting of extended centreline and Red row barrettes, 2 crossbars, 2 approach beacons and sequenced flashing lights.	Green supplemented by green wing-bar and 2 THR ident lights.	PAPI 003° located either side of RWY, 418m from THR. 2 White LGT and 2 Red LGT (19.8m), 3 White LGT and 1 Red LGT (23.7m), 4 White LGT (26.2m). ACFT with eye-to-wheel height greater than 8m are advised to fly with 2 White and 2 Red LGT visible so as to achieve sufficient wheel clearance.	White. 900m (From THR) TDZ. Every 60m from THR.	Inset High Intensity centreline lights as follows: From THR to 900m from RWY end: White, 300m to 900m from RWY end: ALTN Red/ White, 300m to RWY end: Red.	Bi-directional White/Amber edge lights as follows: From THR to 600m from RWY end: White, 600m to RWY end: Amber.	Red	Red

WSSS AD 2.18 ATS COMMUNICATION FACILITIES

Service Designation	Call sign	*Frequency (P-Pri, S-Sec)*	Hours of operation	Remarks
APP	Singapore Departure	P120.3 MHz S133.0 Mhz S132.15 Mhz	H24	DEP from all airports in Singapore.
	Singapore Arrival	P119.3 MHz S119.4 MHz S119.55 MHz		TAR - Intermediate and final approach to Singapore Changi AP.
	Singapore Approach	P124.05 MHz S124.6 MHz S126.3 MHz	2100-1700	TAR - flow control service provided for ARR/DEP ACFT. Intermediate approach to Singapore Changi AP and other airports in Singapore.
TWR	Singapore Tower	118.6 MHz	H24	for TKOF/LDG. for ACFT operating on RWY 02L/20R for vehicular movements on RWY 02L/20R
		118.25 MHz		for ACFT operating on RWY 02C/20C for vehicular movements on RWY 02C/20C for ground movement of ACFT (including ACFT on tow) north and south of RWY 02C/20C
		131.4 MHz		for ACFT operating on RWY 02R/20L for vehicular movements on RWY 02R/20L
	Singapore Ground	124.3 MHz	0000-1800 2100-0000	for push-back / taxiing of all ACFT, including ACFT on tow, west of Terminal 3
		121.725 MHz	0000-1700 2100-0000	for push-back / taxiing of all ACFT (including ACFT on tow) east of Terminal 2 and west of TWY B (excluding TWY J8, J9, J10 and J12)
		121.85 MHz	0000-1600	for push-back / taxiing of all ACFT including ACFT on tow, north of Terminal 1
			1600-0000	for push-back/ taxiing of all ACFT
		121.00 MHz	H24	for ground emergency
		122.55 MHz		for push-back / taxiing of all ACFT (including ACFT on tow) east of Terminal 4
		125.65 MHz		for push-back / taxiing of all ACFT (including ACFT on tow) west of Terminal 4
		127.275 MHz		for taxiing of all ACFT (including ACFT on tow) west of RWY 02R/20L
	Singapore Delivery	121.65 MHz	H24	for Pre-flight check/ATC clearance
		119.6 MHz	0030-0230 1200-1300	for issuance of ATC clearance

Service Designation	Call sign	*Frequency (P-Pri, S-Sec)*	Hours of operation	Remarks
TWR	Changi Tower / Changi Apron	121.9 MHz	H24	Requests for engine runs on aprons and taxiways, excluding runways, would be regulated by Changi Apron. All towing request to contact Changi Apron followed by instruction to contact respective Singapore Ground frequency for towing clearance. Request for vehicular movements on taxiways, excluding runways, would be regulated by Changi Tower. For ACFT on tow and vehicular movements on the runway when the runway is closed for maintenance. All personnel operating the radio station on board an ACFT that is on the ground in Changi Airport should possess the Aircraft Radio Operator Approval (AROA) or other equivalent certification.
	Changi East Tower	119.675 MHz	H24	Request for vehicular movements on taxiways, excluding runway, west of RWY 02R/20L and east of TWY C will be regulated by Changi East Tower. For ACFT on tow and vehicular movements on RWY 02R/20L when the runway is closed for maintenance. All personnel operating the radio station on board an ACFT that is on the ground in Changi Airport should possess the Aircraft Radio Operator Approval (AROA) or other equivalent certification.
	Changi East Ground	120.95 MHz	Not for use, unless with prior coordination	For start-up / taxiing of all aircraft
D-ATIS	Changi Airport Departure Information	128.6 MHz	H24	(broadcasting with half hourly updated MET INFO) Data Link Service available. AP IDENT WSSS Messages comply with ARINC 623 Standards. Updating of data: H+00 to H+10 and H+30 to H+40
	Changi Airport Arrival Information	128.025 MHz	H24	
ATIS	Changi East Information (02R/ 20L)	139.95 MHz	Not for use, unless with prior coordination	NIL

AERODROME CHART - ICAO

01 21' 33"N
103 59' 22"E

AERODROME ELEVATION 6.66m

		RAMP TWR	
TWR	118.6 / 118.25 / 131.4	GND	122.55 (GMC 4 EAST)
GND	124.3 / 121.85 / 121.725 / 127.275		125.65 (GMC 4 WEST)
DELIVERY	121.65 / 119.6		

SINGAPORE/SINGAPORE CHANGI

PAPI 3° (MEHT) *						
Pilot's eye height over the threshold when the following PAPI lights come into view.	RUNWAY					
	02L	20R	02C	20C	02R	20L
2 White lights and 2 red lights	20,0m	20,0m	19,6m	19,8m	19,7m	19,7m
3 White lights and 1 red light	24,0m	22,6m	23,7m	23,7m	23,6m	23,6m
4 White lights	26,4m	25,0m	26,2m	26,2m	26,0m	26,0m

* MEHT - Minimum Eye Height Over the Threshold.

Note : Aircraft with eye-to-wheel height greater than 8 metres are advisable to fly with 2 white lights and 2 red lights visible so as to achieve sufficient wheel clearance.

RWY	DIRECTION	THR	GEOID UNDULATION	BEARING STRENGTH
02L	023°	01 20 56.27N 103 58 38.82E	10.23m	PCR 710/F/B/X/U
20R (DISP THR)	203°	01 22 34.02N 103 59 20.09E	10.26m	
02C	023°	01 19 43.51N 103 59 05.86E	10.27m	
20C	203°	01 21 43.37N 103 59 56.46E	10.30m	
02R	023°	01 19 20.59N 103 59 59.45E	10.32m	
20L	203°	01 21 20.45N 104 00 50.05E	10.36m	

TAXIWAYS

BEARING STRENGTH

PCR 1006/R/B/W/U - TWY A1, A2, A11, A12, A (between A1 and A2, and between A11 and A12), B1, B2, B13, B14, B (between B1 and B2, and between B13 and B14), C1, C2, C13, C14, C (between C1 and C2) and L (between C13 and C14), D1, D2, D13, D14, D (between D1 and D2, and between D13 and D14), T1, T2, T4, T12, T13, T (between T11 and T13), U12, U13, U (between U12 and U13), W1, W9

PCR 930/F/B/X/U - TXL U2, TWY U7 (between TWY U and TXL U2). TWY U8 (between TWY U and TXL U2), TWY U9 (between TWY U and TXL U2), TXL S6, S8, S9, TWY S7

PCR 710/F/B/X/U - All other taxiways,

APRONS

BEARING STRENGTH

PCR 680/R/B/W/U - Aircraft stands C11, C16, C19, D30, D35, D38, E2, E6, E7, E10, F32, F36, F37, 301, 303, 304, 305, 307, 308, 309, 402, 403, 404, 605, 952, G1 to G17 and 471 to 487

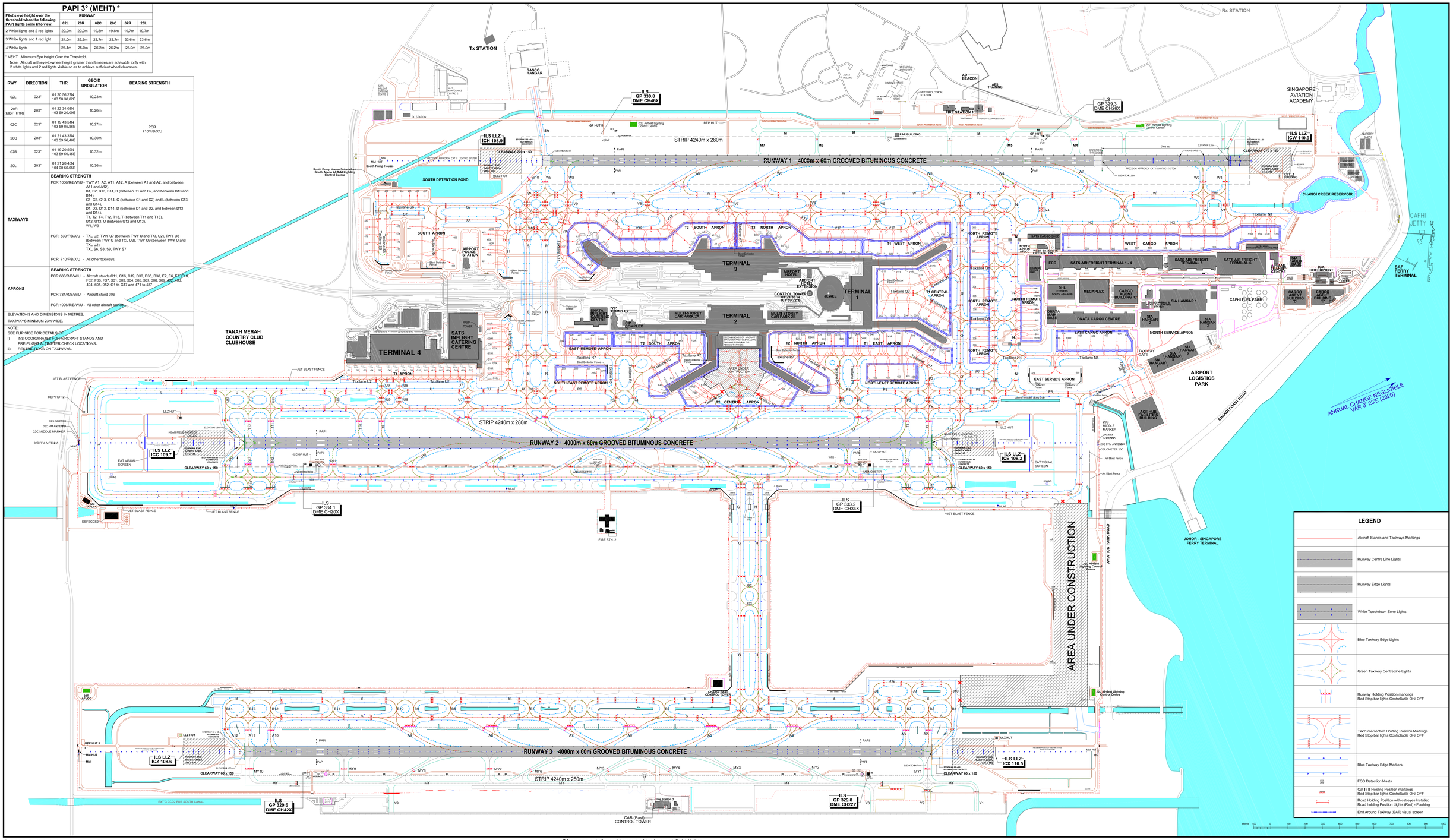
PCR 784/R/B/W/U - Aircraft stand 306

PCR 1006/R/B/W/U - All other aircraft stands

ELEVATIONS AND DIMENSIONS IN METRES.

TAXIWAYS MINIMUM 23m WIDE.

NOTE:
SEE FLIP SIDE FOR DETAILS OF
i) INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS.
ii) RESTRICTIONS ON TAXIWAYS.



Changes : Adjusted layout of taxiway airfield lights.

INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
T3 SOUTH APRON	A1	01 21 21.52	103 59 06.25	4.75m (15.58ft)
	A2	01 21 21.75	103 59 04.00	4.65m (15.26ft)
	A3	01 21 19.86	103 59 02.79	4.66m (15.29ft)
	A4	01 21 17.61	103 59 02.54	4.79m (15.72ft)
	A5	01 21 15.50	103 59 03.62	4.86m (15.94ft)
	A9	01 21 12.56	103 59 03.65	5.02m (16.47ft)
	A10	01 21 10.34	103 59 02.40	5.04m (16.54ft)
	A11	01 21 07.93	103 59 01.41	5.25m (17.22ft)
	A12	01 21 05.76	103 59 00.49	5.38m (17.65ft)
	A13	01 21 03.59	103 58 59.58	5.48m (17.98ft)
	A14	01 21 01.66	103 58 57.59	5.57m (18.27ft)
	A15	01 21 00.77	103 58 55.41	5.46m (17.91ft)
	A16	01 20 59.27	103 58 54.20	5.51m (18.08ft)
	A17	01 20 57.25	103 58 54.06	5.23m (17.16ft)
	A18	01 20 55.67	103 58 55.25	5.37m (17.62ft)
	A19	01 20 55.26	103 58 57.13	5.40m (17.72ft)
	A20	01 20 56.09	103 58 58.83	5.45m (17.88ft)
	A21	01 20 57.10	103 59 00.80	5.49m (18.01ft)
T3 NORTH APRON	B1	01 21 26.86	103 59 08.37	4.82m (15.81ft)
	B2	01 21 28.18	103 59 06.82	4.68m (15.35ft)
	B3	01 21 30.33	103 59 07.30	4.65m (15.26ft)
	B4	01 21 32.03	103 59 08.60	4.75m (15.58ft)
	B5	01 21 32.98	103 59 10.89	4.80m (15.75ft)
	B6	01 21 35.15	103 59 13.16	4.96m (16.27ft)
	B7	01 21 37.65	103 59 13.93	4.97m (16.31ft)
	B8	01 21 39.94	103 59 15.20	5.13m (16.83ft)
	B9	01 21 42.19	103 59 16.16	5.13m (16.83ft)
	B10	01 21 44.47	103 59 17.12	5.15m (16.90ft)
T1 WEST APRON	C1	01 21 46.75	103 59 18.08	5.09m (16.70ft)
	C20	01 21 48.83	103 59 19.23	5.08m (16.67ft)
	C22	01 21 51.00	103 59 20.13	5.15m (16.90ft)
	C23	01 21 53.56	103 59 20.77	5.08m (16.67ft)
	C24	01 21 56.54	103 59 20.97	4.89m (16.04ft)
	C25	01 21 59.12	103 59 20.59	4.99m (16.37ft)
	C26	01 22 01.48	103 59 20.76	5.01m (16.44ft)
T1 CENTRAL APRON	C11	01 21 47.42	103 59 23.82	5.09m (16.70ft)
	C13	01 21 49.63	103 59 24.75	5.03m (16.50ft)
	C15	01 21 51.89	103 59 25.70	5.06m (16.60ft)
	C16	01 21 53.47	103 59 26.62	4.86m (15.94ft)
	C17	01 21 55.50	103 59 26.20	5.01m (16.44ft)
	C17L	01 21 54.75	103 59 26.22	4.96m (16.27ft)
	C17R	01 21 56.01	103 59 25.68	5.12m (16.80ft)
	C18	01 21 57.86	103 59 25.75	4.99m (16.37ft)
	C19	01 21 59.79	103 59 25.63	4.95m (16.24ft)
	D30	01 21 44.54	103 59 30.14	5.08m (16.67ft)
	D32	01 21 46.75	103 59 31.08	5.08m (16.67ft)
	D34	01 21 49.03	103 59 32.04	5.07m (16.63ft)
	D35	01 21 50.87	103 59 32.82	5.02m (16.47ft)
	D36	01 21 51.98	103 59 34.52	5.06m (16.60ft)
	D37	01 21 53.37	103 59 36.28	4.97m (16.31ft)
	D38	01 21 54.58	103 59 37.77	4.99m (16.37ft)
T1 EAST APRON	D40	01 21 38.13	103 59 32.89	5.11m (16.77ft)
	D40L	01 21 37.38	103 59 32.83	5.09m (16.70ft)
	D40R	01 21 38.77	103 59 32.84	5.13m (16.83ft)
	D41	01 21 40.30	103 59 33.81	5.07m (16.63ft)
	D42	01 21 42.77	103 59 34.58	5.15m (16.89ft)
	D42L	01 21 42.00	103 59 34.47	5.12m (16.79ft)
	D42R	01 21 43.45	103 59 34.44	5.21m (17.09ft)
	D44	01 21 44.97	103 59 35.44	5.14m (16.86ft)
	D46	01 21 47.40	103 59 36.72	5.08m (16.67ft)
	D47	01 21 49.19	103 59 38.89	4.93m (16.17ft)
	D48	01 21 50.60	103 59 40.77	4.97m (16.31ft)
	D49	01 21 52.23	103 59 42.35	4.98m (16.34ft)
T2 NORTH APRON	E8	01 21 27.99	103 59 38.45	4.68m (15.35ft)
	E10	01 21 24.12	103 59 32.64	4.75m (15.58ft)
	E11	01 21 25.57	103 59 34.37	4.78m (15.68ft)
	E12	01 21 27.20	103 59 36.42	4.75m (15.58ft)
	E20	01 21 24.36	103 59 27.08	5.04m (16.54ft)
	E22	01 21 26.64	103 59 28.04	5.07m (16.63ft)
	E24	01 21 29.01	103 59 29.06	5.09m (16.70ft)
	E24L	01 21 28.32	103 59 28.77	5.10m (16.73ft)
	E24R	01 21 29.53	103 59 29.28	5.08m (16.67ft)
	E26	01 21 31.19	103 59 29.96	5.08m (16.67ft)
	E27	01 21 33.56	103 59 30.96	5.07m (16.62ft)
	E27L	01 21 32.79	103 59 30.86	5.03m (16.48ft)
	E27R	01 21 34.20	103 59 30.91	5.12m (16.80ft)
	E28	01 21 35.74	103 59 31.89	5.08m (16.67ft)

INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
T2 CENTRAL APRON	E2	01 21 19.28	103 59 27.30	4.90m (16.08ft)
	E3	01 21 18.44	103 59 29.27	4.82m (15.81ft)
	E4	01 21 18.10	103 59 31.70	4.80m (15.75ft)
	E5	01 21 19.56	103 59 33.72	4.90m (16.08ft)
	E6	01 21 21.22	103 59 35.93	4.84m (15.88ft)
	E7	01 21 22.48	103 59 37.46	4.73m (15.52ft)
	F31	01 21 13.87	103 59 25.30	4.91m(16.11ft)
	F32	01 21 13.03	103 59 27.26	4.85m (15.91ft)
	F33	01 21 11.30	103 59 28.54	4.91m (16.11ft)
	F34	01 21 08.98	103 59 28.96	4.92m (16.14ft)
	F35	01 21 06.60	103 59 29.55	4.91m (16.11ft)
	F35L	01 21 06.06	103 59 30.13	4.74m (15.55ft)
	F35R	01 21 06.96	103 59 29.05	5.04m (16.54ft)
	F36	01 21 04.34	103 59 29.67	4.82m (15.81ft)
T2 SOUTH APRON	F37	01 20 59.83	103 59 27.87	4.75m (15.58ft)
	F40	01 21 05.62	103 59 25.34	4.85m (15.91ft)
	F41	01 21 03.19	103 59 25.58	4.82m (15.81ft)
	F42	01 21 00.61	103 59 25.96	4.72m (15.49ft)
	F50	01 21 10.69	103 59 21.32	5.03m (16.50ft)
	F52	01 21 08.51	103 59 20.40	5.11m (16.77ft)
	F52L	01 21 07.82	103 59 20.11	5.16m (16.93ft)
	F52R	01 21 09.04	103 59 20.62	5.08m (16.67ft)
	F54	01 21 06.14	103 59 19.40	5.22m (17.13ft)
	F56	01 21 03.96	103 59 18.48	5.30m (17.39ft)
	F56L	01 21 03.27	103 59 18.18	5.42m (17.78ft)
	F56R	01 21 04.49	103 59 18.70	5.34m (17.52ft)
	F58	01 21 01.58	103 59 17.47	5.49m (18.01ft)
	F59	01 20 59.41	103 59 16.55	5.64m (18.50ft)
	F59L	01 20 58.72	103 59 16.26	5.67m (18.60ft)
	F59R	01 20 59.93	103 59 16.78	5.60m (18.37ft)
	F60	01 20 56.91	103 59 15.50	5.77m (18.93ft)
EAST REMOTE APRON	200	01 20 47.83	103 59 11.67	6.23m (20.44ft)
	200L	01 20 46.91	103 59 11.92	6.29m (20.64ft)
	200R	01 20 48.35	103 59 11.89	6.18m (20.28ft)
	201	01 20 49.99	103 59 12.62	5.96m (19.55ft)
	202	01 20 52.34	103 59 13.57	5.94m (19.49ft)
	202L	01 20 51.65	103 59 13.28	5.76m (18.90ft)
	202R	01 20 52.87	103 59 13.79	5.73m (18.80ft)
	203	01 20 54.52	103 59 14.47	5.92m (19.42ft)
SOUTH-EAST REMOTE APRON	205	01 20 43.91	103 59 17.06	4.77m (15.65ft)
	206	01 20 46.08	103 59 17.98	4.76m (15.62ft)
	207	01 20 48.21	103 59 19.01	4.74m (15.55ft)
	208	01 20 50.68	103 59 20.05	4.75m (15.58ft)
	208L	01 20 50.01	103 59 19.76	4.74m (15.55ft)
	208R	01 20 51.25	103 59 20.29	4.73m (15.42ft)
NORTH REMOTE APRON	300	01 22 06.95	103 59 22.67	4.53m (14.86ft)
	301	01 22 06.41	103 59 24.69	4.93m (16.17ft)
	302	01 22 05.21	103 59 26.75	4.97m (16.31ft)
	303	01 22 03.55	103 59 31.40	5.32m (17.45ft)
	304	01 22 02.84	103 59 33.06	5.35m (17.55ft)
	305	01 22 02.14	103 59 34.71	5.30m (17.39ft)
	306	01 22 01.41	103 59 36.42	5.16m (16.93ft)
	307	01 21 59.39	103 59 40.36	5.16m (16.93ft)
	308	01 21 58.96	103 59 41.35	5.10m (16.73ft)
	309	01 21 58.52	103 59 43.17	5.06m (16.60ft)
	310	01 21 57.42	103 59 44.96	4.74m (15.55ft)
	951	01 22 09.35	103 59 45.23	5.15m (16.90ft)
	951L	01 22 08.91	103 59 44.27	5.00m (16.40ft)
	951R	01 22 08.35	103 59 45.58	5.00m (16.40ft)
	952	01 22 09.94	103 59 42.65	4.89m (16.04ft)
	953	01 22 11.22	103 59 40.85	4.98m (16.34ft)
	953L	01 22 10.78	103 59 39.89	4.83m (15.85ft)
	953R	01 22 10.41	103 59 41.28	4.87m (15.98ft)
	954	01 22 12.46	103 59 37.95	4.84m (15.88ft)
	954L	01 22 12.02	103 59 36.99	4.70m (15.42ft)
	954R	01 22 11.65	103 59 38.38	4.74m (15.55ft)
NORTH-EAST REMOTE APRON	400	01 21 38.71	103 59 40.14	4.31m (14.14ft)
	401	01 21 40.98	103 59 41.10	4.31m (14.14ft)
	402	01 21 42.85	103 59 41.89	4.30m (14.11ft)
	403	01 21 44.37	103 59 42.53	4.29m (14.07ft)
	404	01 21 45.45	103 59 42.98	4.20m (13.78ft)

INS COORDINATES FOR AIRCRAFT STANDS AND PRE-FLIGHT ALTIMETER CHECK LOCATIONS

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
WEST CARGO APRON	502	01 22 22.23	103 59 31.62	4.35m (14.27ft)
	503	01 22 24.98	103 59 32.78	4.29m (14.07ft)
	504	01 22 27.26	103 59 33.74	4.29m (14.07ft)
	505	01 22 29.54	103 59 34.70	4.32m (14.17ft)
	506	01 22 31.81	103 59 35.66	4.38m (14.37ft)
	507	01 22 34.11	103 59 36.64	4.36m (14.30ft)
	508	01 22 36.41	103 59 37.61	4.29m (14.07ft)
	509	01 22 39.12	103 59 38.76	4.09m (13.42ft)
	510	01 22 41.37	103 59 40.18	4.19m (13.75ft)
	511	01 22 43.54	103 59 41.09	4.22m (13.85ft)
	512	01 22 45.71	103 59 42.01	4.24m (13.91ft)
	513	01 22 47.89	103 59 42.92	4.26m (13.98ft)
	514	01 22 50.19	103 59 43.54	4.36m (14.30ft)
	515	01 22 52.90	103 59 43.20	4.09m (13.43ft)
	516	01 22 55.39	103 59 43.97	4.04m (13.26ft)
	516L	01 22 56.24	103 59 43.80	3.96m (12.98ft)
	516R	01 22 54.93	103 59 43.25	3.95m (12.97ft)
	517	01 22 58.02	103 59 45.08	4.05m (13.27ft)
	517L	01 22 58.83	103 59 44.99	3.98m (13.05ft)
	517R	01 22 57.55	103 59 44.35	3.96m (12.98ft)
EAST CARGO APRON	600	01 22 14.12	103 59 48.10	4.25m (13.94ft)
	600L	01 22 13.28	103 59 48.27	4.22m (13.83ft)
	600R	01 22 14.58	103 59 48.81	4.15m (13.60ft)
	601	01 22 16.52	103 59 49.27	4.27m (14.01ft)
	602	01 22 18.80	103 59 50.23	4.30m (14.11ft)
	603	01 22 21.15	103 59 51.02	4.29m (14.07ft)
	604	01 22 23.46	103 59 51.99	4.31m (14.14ft)
	605	01 22 25.19	103 59 52.75	4.27m (14.01ft)
EAST SERVICE APRON	606	01 22 10.00	103 59 52.53	2.43m (7.97ft)
	609	01 22 12.95	103 59 55.04	2.91m (9.55ft)
ACEHUB	611	01 22 22.14	104 00 02.87	4.01m (13.16ft)
	612	01 22 24.50	104 00 02.87	3.91m (12.83ft)
SOUTH APRON	461	01 20 39.67	103 58 52.75	5.28m (17.32ft)
	462	01 20 40.69	103 58 50.37	5.75m (18.86ft)
	462L	01 20 40.41	103 58 51.02	5.48m (17.98ft)
	462R	01 20 40.97	103 58 49.71	5.71m (18.73ft)
	463	01 20 41.80	103 58 47.76	5.97m (19.59ft)
	463L	01 20 41.52	103 58 48.42	5.82m (19.10ft)
	463R	01 20 42.06	103 58 47.17	5.82m (19.10ft)
	464	01 20 32.33	103 58 49.39	4.98m (16.34ft)
	465	01 20 33.61	103 58 47.20	5.01m (16.44ft)
	466	01 20 34.53	103 58 45.05	5.01m (16.44ft)
	467	01 20 27.32	103 58 45.73	5.01m (16.44ft)
	468	01 20 28.34	103 58 43.34	5.00m (16.41ft)
	469	01 20 29.36	103 58 40.96	5.02m (16.47ft)
	471	01 20 23.76	103 58 44.49	5.16m (16.93ft)
	472	01 20 24.55	103 58 43.24	5.16m (16.93ft)
	473	01 20 25.12	103 58 41.90	5.16m (16.93ft)
	474	01 20 25.70	103 58 40.56	5.16m (16.93ft)
	475	01 20 26.27	103 58 39.22	5.16m (16.93ft)
	476	01 20 19.16	103 58 41.47	5.16m (16.93ft)
	477	01 20 19.74	103 58 40.13	5.16m (16.93ft)
	478	01 20 20.31	103 58 38.79	5.16m (16.93ft)
	479	01 20 20.88	103 58 37.45	5.16m (16.93ft)
	480	01 20 21.45	103 58 36.11	5.16m (16.93ft)
	481	01 20 25.27	103 58 32.56	5.22m (17.13ft)
	482	01 20 26.62	103 58 33.13	5.22m (17.13ft)
	483	01 20 27.96	103 58 33.70	5.22m (17.13ft)
	484	01 20 29.31	103 58 34.27	5.22m (17.13ft)
	485	01 20 30.66	103 58 34.84	5.22m (17.13ft)
	486	01 20 32.01	103 58 35.41	5.22m (17.13ft)
	487	01 20 33.36	103 58 35.98	5.22m (17.13ft)
T4 APRON	G1	01 20 07.58	103 59 00.97	3.95m (12.96ft)
	G2	01 20 08.88	103 59 01.52	3.95m (12.96ft)
	G3	01 20 10.18	103 59 02.07	3.95m (12.96ft)
	G4	01 20 11.48	103 59 02.07	3.94m (12.93ft)
	G5	01 20 12.77	103 59 03.17	3.94m (12.93ft)
	G6	01 20 14.49	103 59 03.89	3.93m (12.89ft)
	G7	01 20 15.70	103 59 04.57	3.89m (12.76ft)
	G8	01 20 17.01	103 59 05.12	3.85m (12.63ft)
	G9	01 20 18.31	103 59 05.67	3.85m (12.63ft)
	G10	01 20 19.60	103 59 06.22	3.86m (12.66ft)
	G11	01 20 20.90	103 59 06.77	3.84m (12.60ft)
	G12	01 20 22.20	103 59 07.31	3.83m (12.57ft)
	G13	01 20 23.50	103 59 07.86	3.82m (12.53ft)
	G14	01 20 24.79	103 59 08.41	3.83m (12.57ft)
	G15	01 20 26.09	103 59 08.96	3.88m (12.73ft)
	G16	01 20 27.39	103 59 09.50	4.05m (13.29ft)
	G17	01 20 28.69	103 59 10.05	4.00m (13.12ft)
	G18	01 20 31.53	103 59 11.86	4.36m (14.30ft)
	G18L	01 20 32.05	103 59 12.85	4.34m (14.24ft)
	G18R	01 20 31.65	103 59 11.26	4.43m (14.53ft)
	G19	01 20 32.64	103 59 09.25	4.56m (14.96ft)
	G19L	01 20 33.17	103 59 11.26	4.47m (14.67ft)
	G19R	01 20 32.77	103 59 08.66	4.56m (14.96ft)
	G20	01 20 33.75	103 59 06.65	4.52m (14.83ft)
	G20L	01 20 34.13	103 59 07.58	4.44m (14.57ft)
	G20R	01 20 33.99	103 59 06.10	4.52m (14.83ft)
	G21	01 20 34.87	103 59 04.04	4.51m (14.80ft)
	G21L	01 20 35.24	103 59 04.98	4.52m (14.83ft)
	G21R	01 20 35.10	103 59 03.49	4.55m (14.93ft)

RESTRICTIONS ON TAXIWAYS

1) Pilots are advised to apply minimum thrust when
   i) turning into TWY P2, P4, P5 and Taxilane P6 while taxiing either northwards or southwards on Taxilane P7, and
   ii) thereafter when taxiing along TWY P2 up to and including the TWY P8/P2 junction.
   This is in view of apron activities at aircraft stands D40, D41, D47, D48, D49, E22, E24, E27 and E28.

2) TWY SA can only be used by aircraft with maximum wingspan 65m. TWY SA is a one-way live TWY for aircraft taxiing into SASCO hangar via RWY 02L. Only tow-out operation is allowed from SASCO hangar into TWY SA and RWY 02L.

3) Taxiway Q (between TWY V and TWY P7) can only be used by aircraft with maximum wingspan 65m.

4) Taxiway centreline along TWY T between TWY R1 and R3 offset eastward by 2.5m away from aircraft stands E7 and F36

5) Pilots are advised to apply minimum thrust when turning into Taxiway V from Taxilane V7.

6) Taxilane V11 (behind aircraft stands A18 to A21) can only be used by aircraft with maximum wingspan 61m.

7) Taxilane Q1 (behind aircraft stands C16 to C19 and between TWY P and TWY Q),
   Taxilane Q2 and Taxilane Q3 (behind aircraft stands D35 to D38 and between TWY P and TWY Q)
   can only be used by aircraft with maximum wingspan 65m.

8) Taxilane P7 (behind aircraft stands E20 to E22) and Taxilane R7 (behind aircraft stands F50 to F54) can only be used by aircraft with maximum wingspan 65m (towing and pushback exempted).

9) Taxilane U2 can only be used by aircraft with maximum wingspan 36m.

10) Taxiway U7 (between Taxilane U2 and Taxiway U), Taxiway U8 (between Taxilane U2 and Taxiway U) and Taxiway U9 (between Taxilane U2 and Taxiway U) can only be used by aircraft with maximum wingspan 36m.

11) Pilots are advised to exercise caution when taxiing near Taxilane U2, Taxiway U, U7, U8 and U9.

12) Pilots are advised to apply speed limit of 20 knots when taxiing along TWY R and TWY S.

13) Pilots turning aircraft into aircraft stand A2 or aircraft stand B2 are advised to wait for any aircraft holding at Taxilane V7, at the inner cul-de-sac portion of the terminal building to vacate this portion before turning into aircraft stand A2 or aircraft stand B2.

14) TWY M, M4, M5, M6 and M7, located western side of RWY 02L/20R, are solely for use by Republic of Singapore Air Force (RSAF) aircraft.

15) TWY MY, MY1, MY2, MY3, MY4, MY5, MY6, MY7, MY8, MY9 and MY10, located eastern side of RWY 02R/20L, are solely for use by Republic of Singapore Air Force (RSAF) aircraft.

16) Taxiway S2, S3 and Taxilane S4 can only be used by aircraft with maximum wingspan 65m.

17) Taxilane S6, S8, S9 and Taxiway S7 can only be used by aircraft with maximum wingspan 36m.

18) Pilots are advised to apply minimum thrust when taxiing on Taxilane N4 turning into Taxilane N5 (and vice versa), due to potential jet blast issues affecting Bays 603, 604, 611 and 612. Aircraft shall not stop on TXL N5 between aircraft stands 604 and 611.

NOTE:
Pilots to follow stand lead-in line and taxi through white hatched apron markings of the following aircraft stands:
A5, A9, B5, B6, C17, D40, D42, E24, E27, F35, F52, F56, F59, G18, G19, G20, G21, 200, 202, 208, 462, 463, 600, 516, 517, 951, 953, 954.

RADIO ALTIMETER OPERATIONS AREA

A radio altimeter operating area is established in the pre-threshold area of Runway 02L/20R, Runway 02C/20C and Runway 02R/20L.
The size of the radio altimeter operating area is 300m length and 120m width.

AIRCRAFT STANDS WITH SAFEGATE AIRCRAFT DOCKING GUIDANCE SYSTEM.

Changes : Removed total aircraft parking positions.

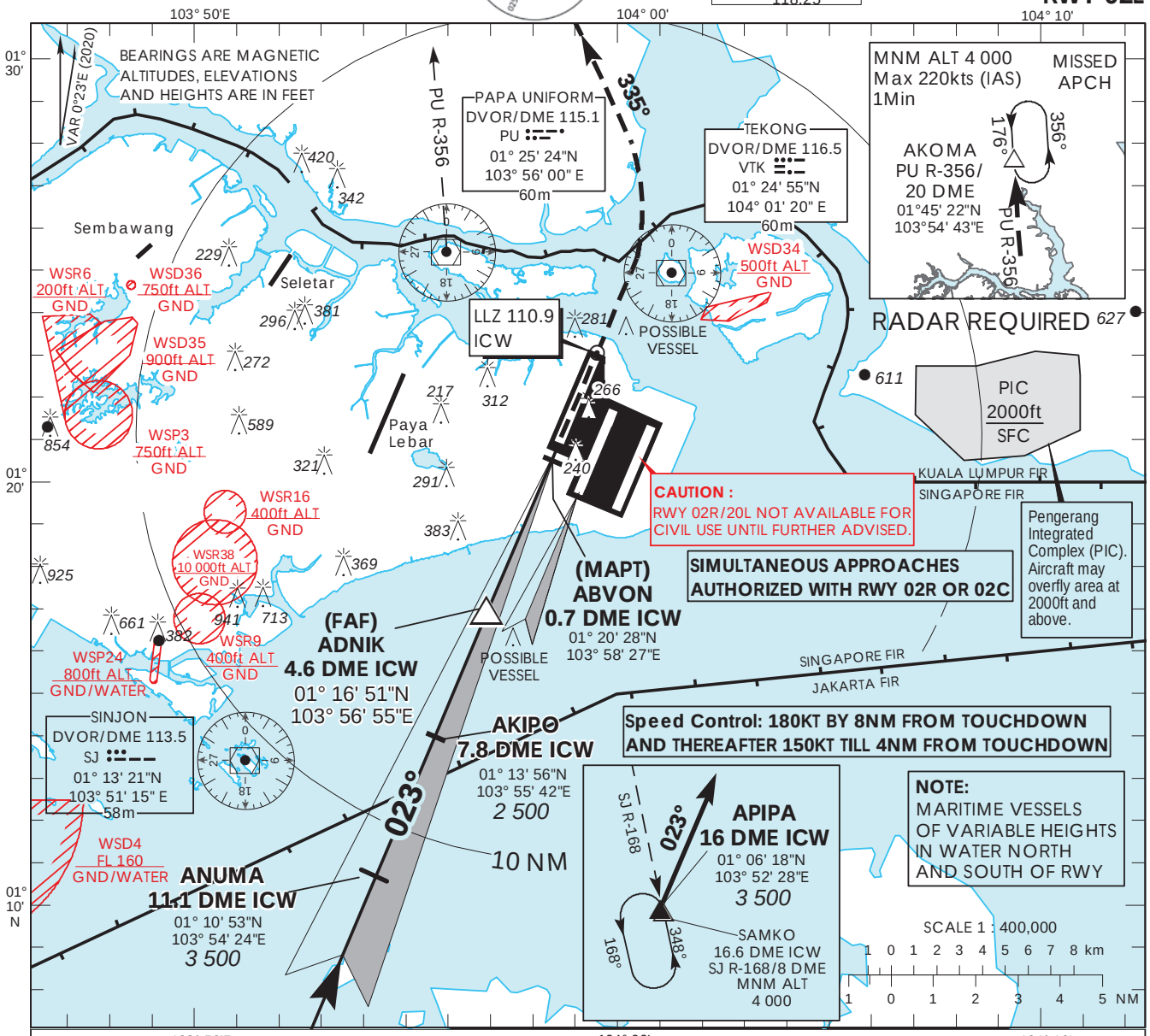
INSTRUMENT APPROACH CHART - ICAO

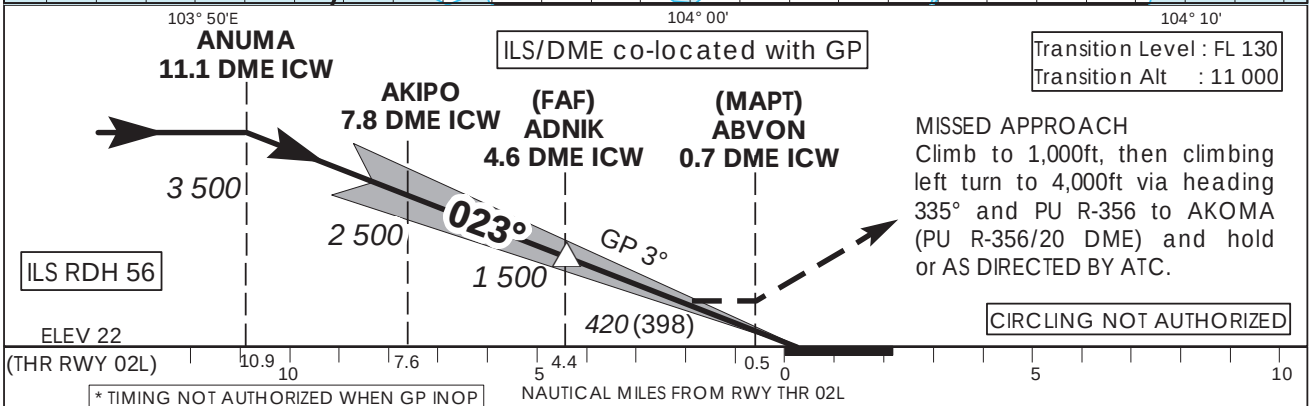
AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02L - ELEV 22ft

MSA 25 NM from TEKONG DVOR

D-ATIS	AP ID WSSS
	128.025
APP	124.05
	119.3
TWR	118.6
	118.25

SINGAPORE/ SINGAPORE CHANGI
ICW ILS/DME
RWY 02L





* TIMING NOT AUTHORIZED WHEN GP INOP

OCA (OCH)						
Category of Aircraft		A	B	C	D	D_L
Straight-in	CAT I ILS	**173 (151)**	**187 (165)**	**203 (181)**	**216 (194)**	**219 (197)**
	CAT II ILS	**88 (66)**	**98 (76)**	**108 (86)**	**127 (105)**	**127 (105)**
	GP INOP	**420 (398)**				

Distance		4 DME	3 DME	2 DME
Altitude (Height)		**1290 (1268)**	**970 (948)**	**660 (638)**
Speed	knots	70	120	150	185
FAF - MAPT 3.9nm	min : s *	**3 : 21**	**1 : 57**	**1 : 34**	**1 : 16**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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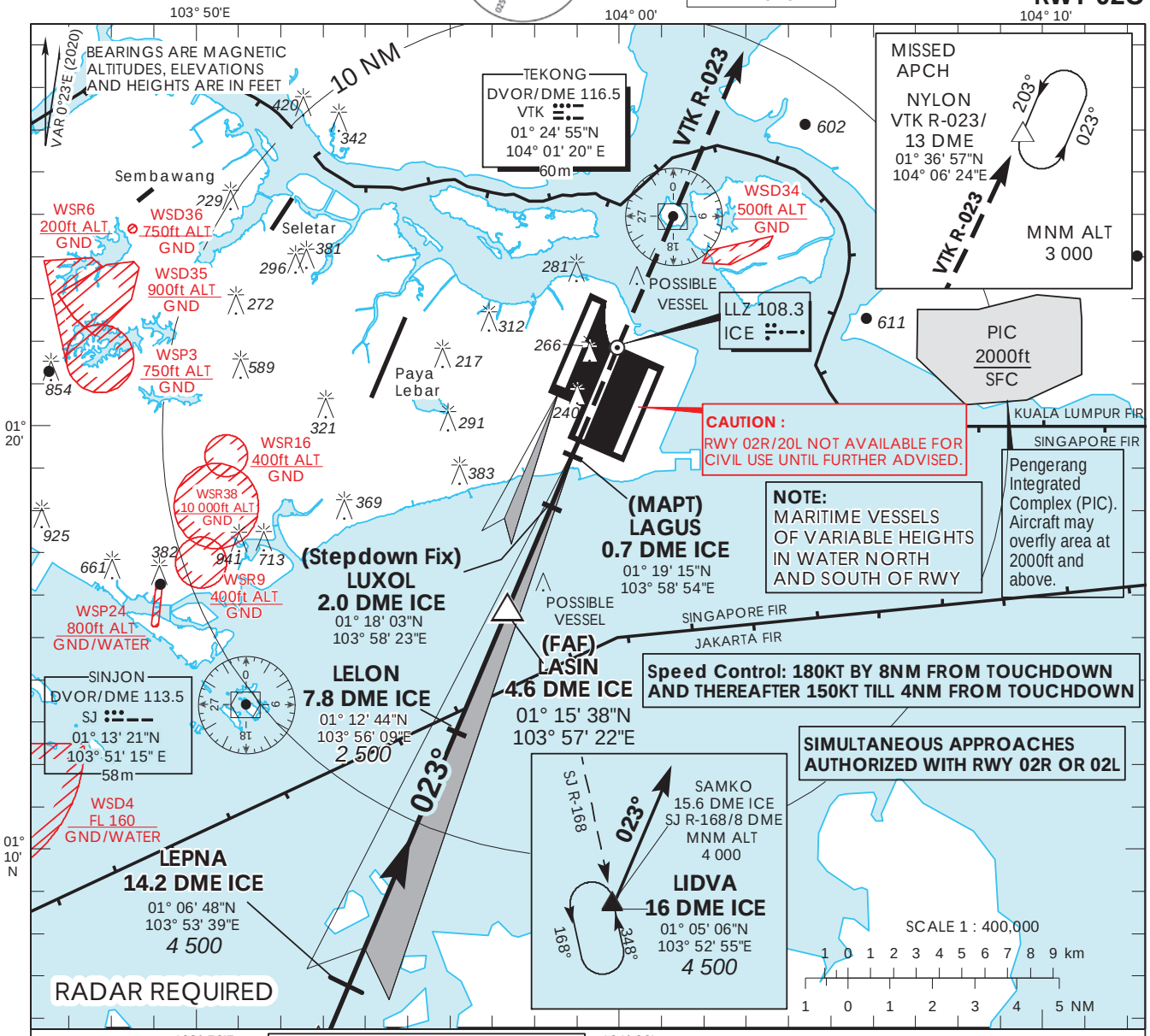
INSTRUMENT APPROACH CHART - ICAO

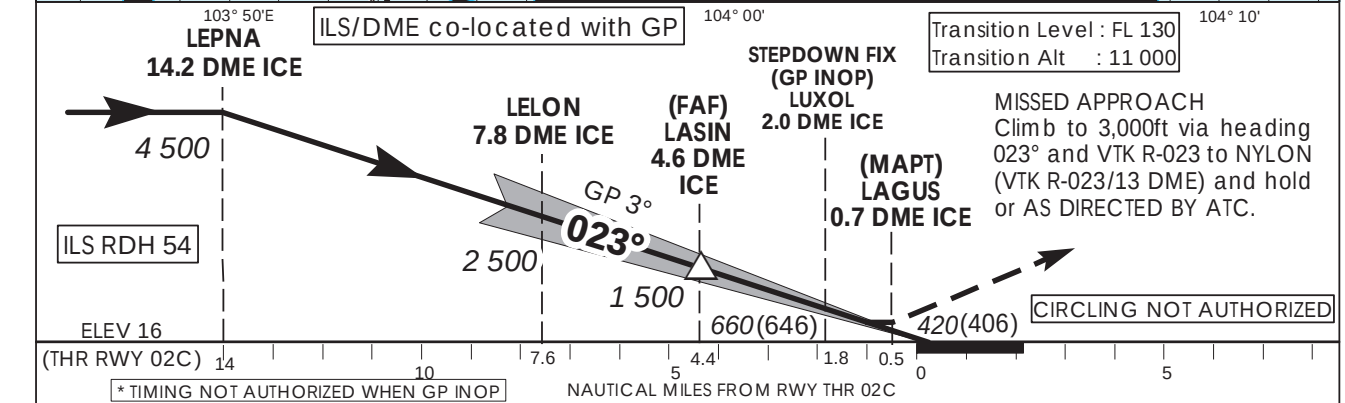
AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02C - ELEV 16ft

MSA 25 NM from TEKONG DVOR

D-ATIS	AP ID WSSS
	128.025
APP	124.05
	119.3
TWR	118.6
	118.25

SINGAPORE/ SINGAPORE CHANGI
ICE ILS/DME RWY 02C





OCA (OCH)						
Category of Aircraft		A	B	C	D	D_L
Straight-in	CAT I ILS	**170 (156)**	**180 (166)**	**196 (182)**	**209 (195)**	**212 (198)**
	GP INOP (with stepdown fix)	**420 (406)**				
	GP INOP (without stepdown fix)	**660 (646)**				

Distance		4 DME		3 DME	
Altitude (Height)		**1290 (1276)**		**970 (956)**	
Speed	knots	70	120	150	185
FAF - MAPT 3.9nm	min : s*	**3 : 21**	**1 : 57**	**1 : 34**	**1 : 16**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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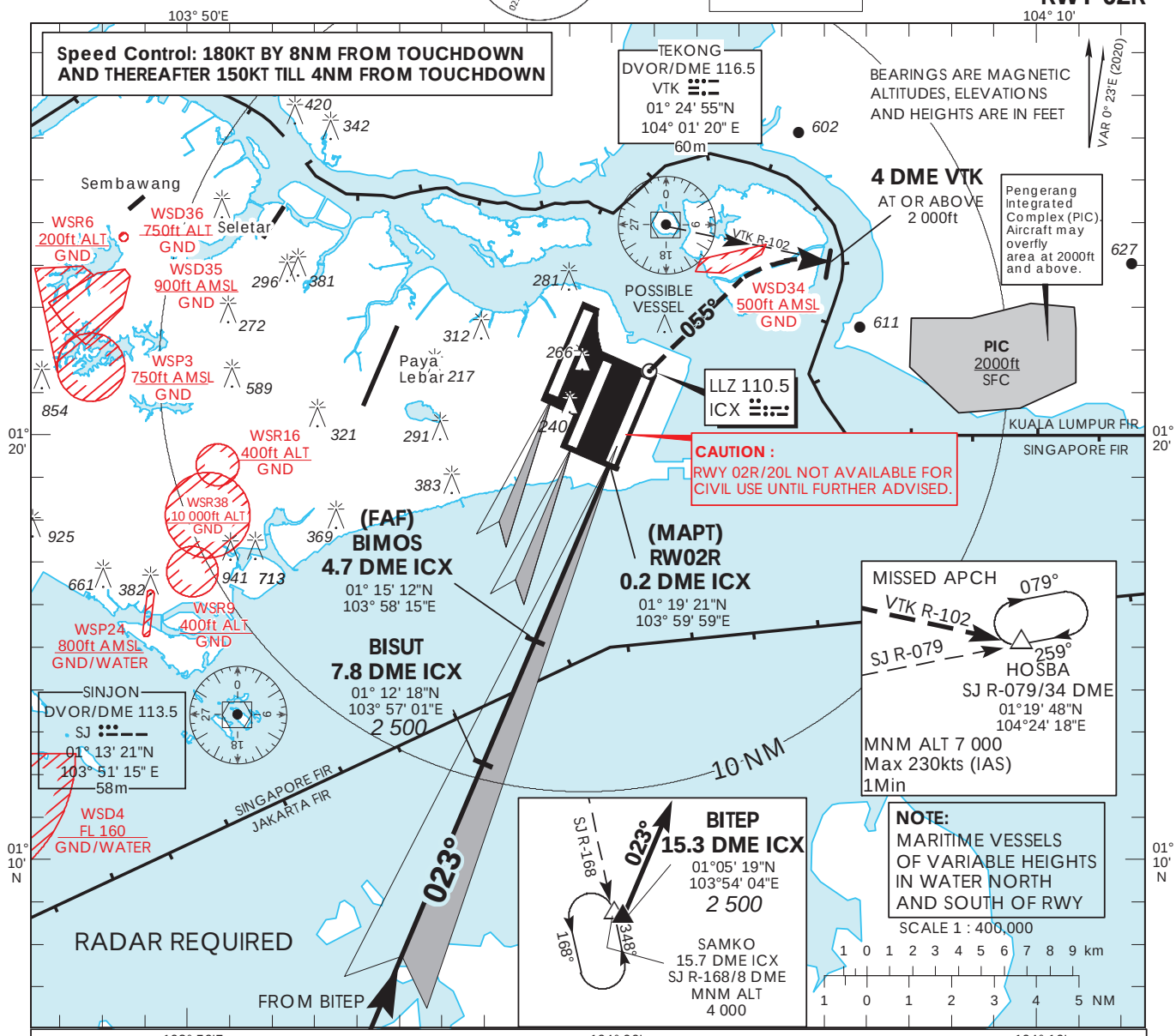
INSTRUMENT APPROACH CHART

AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02R - ELEV 16ft

MSA 25 NM from TEKONG DVOR

D-ATIS	AP ID WSSS
	128.025
APP	124.05
	119.3
TWR	131.4

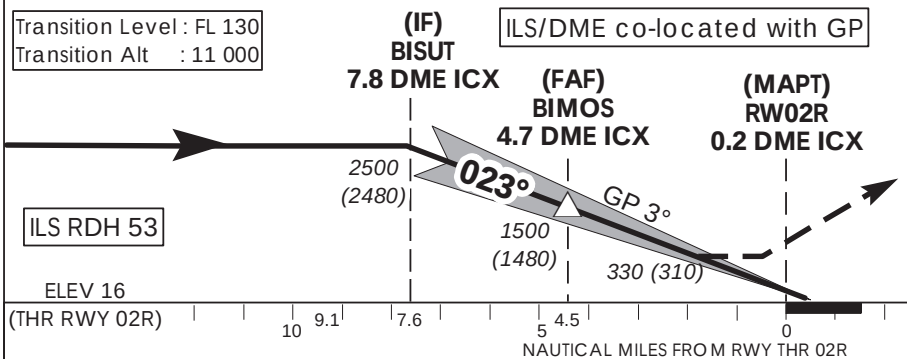
SINGAPORE/ SINGAPORE CHANGI
ICX ILS/DME RWY 02R



1. This procedure requires a missed approach climb gradient of 5% (304 ft/NM) until passing 2,000ft. MAX IAS 185kts during turning missed approach.
2. For aircraft which can only achieve a 2.5% (152 ft/NM) climb gradient, the OCA (OCH) is 820ft (800ft) and aircraft shall climb straight to 1200ft before commencing right turn climbing to 7000ft or above to HOSBA.

Transition Level : FL 130
Transition Alt : 11 000

ILS/DME co-located with GP



MISSED APPROACH
Climb straight to 500ft, turn right heading 055°. Cross 4 DME VTK at 2 000ft or above. Thereafter, turn right climbing to 7 000ft or above to HOSBA (SJ R-079/34 DME) via VTK R-102. Hold at HOSBA or AS DIRECTED BY ATC.
No turn before MAPt.

CIRCLING NOT AUTHORIZED

* TIMING NOT AUTHORIZED WHEN GP INOP

		OCA (OCH)			
Category of Aircraft		A	B	C	D
Straight-in	CAT I ILS	220 (200)			
	CAT II ILS	120 (100)			
	GP INOP	330 (310)			

Distance		4 DME		3 DME		2 DME
Altitude (Height)		1300 (1280)		980 (960)		660 (640)
Speed	knots	70	120	150	185	
FAF - MAPT 4.5nm	min : s *	3 : 52	2 : 15	1 : 48	1 : 28	
Rate of descent/GS	ft/min	630	1080	1350	1665	

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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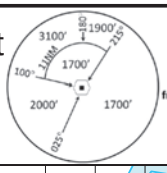
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 22ft
HEIGHT RELATED TO
DTHR RWY 20R - ELEV 13ft



D-ATIS	AP ID WSSS
	128.025
APP	124.05
	119.3
TWR	118.6
	118.25

SINGAPORE/ SINGAPORE CHANGI
ICH ILS/DME RWY 20R

Speed Control: 180KT BY 8NM FROM TOUCHDOWN AND THEREAFTER 150KT TILL 4NM FROM TOUCHDOWN

RWY 20R ILS DME NOT AVAILABLE BEYOND 15 DEG WEST OF RWY 20R CENTRELINE BELOW 2500FT

SIMULTANEOUS APPROACHES AUTHORIZED WITH RWY 20L OR 20C

BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS AND HEIGHTS ARE IN FEET

VAR 0°23'E (2020)

10 NM

IGULA
11.1 DME ICH
01° 32' 32"N
104° 03' 33"E
3 500

IDVAS
7.8 DME ICH
01° 29' 35"N
104° 02' 18"E
2 500

(FAF)
IDURO
4.6 DME ICH
01° 26' 40"N
104° 01' 04"E

(MAPT)
IDUNA
0.8 DME ICH
01° 23' 06"N
103° 59' 34"E

203°

IPNAK
16 DME ICH
01° 37' 12"N
104° 05' 31"E
3 500

203°
023°

NYLON
(16.2 DME ICH/
VTK R-023/
13 DME)
MNM ALT
3 000

TEKONG
DVOR/DME 116.5
VTK
01° 24' 55"N
104° 01' 20" E
60m

RADAR REQUIRED

Pengerang Integrated Complex (PIC). Aircraft may overfly area at 2000ft and above.

PIC
2000ft
SFC

KUALA LUMPUR FIR
SINGAPORE FIR

WSD34
500ft ALT
GND

WSR6
200ft ALT
GND

WSD36
750ft ALT
GND

WSD35
900ft ALT
GND

WSP3
750ft ALT
GND

WSR16
400ft ALT
GND

WSR38
10 000ft ALT
GND

WSP24
800ft ALT
GND/WATER

WSR9
400ft ALT
GND

WSD4
FL 160
GND/WATER

Sembawang
Seletar
Paya Lebar

POSSIBLE VESSEL
POSSIBLE VESSEL

CAUTION :
RWY 02R/20L NOT AVAILABLE FOR CIVIL USE UNTIL FURTHER ADVISED.

LLZ 108.9
ICH

NOTE:
MARITIME VESSELS OF VARIABLE HEIGHTS IN WATER NORTH AND SOUTH OF RWY

SINJON
DVOR/DME 113.5
SJ
01° 13' 21"N
103° 51' 15" E
58m

SINGAPORE FIR
JAKARTA FIR

SCALE 1 : 400,000
1 0 1 2 3 4 5 6 7 8 9 km
1 0 1 2 3 4 5 NM

MISSED APCH
SJ R-168
SJ R-146

SAMKO
SJ R-168/8 DME
01° 05' 30"N
103° 52' 55"E
348°

103° 50'E
104° 00'
104° 10'
01° 30'
01° 20' N

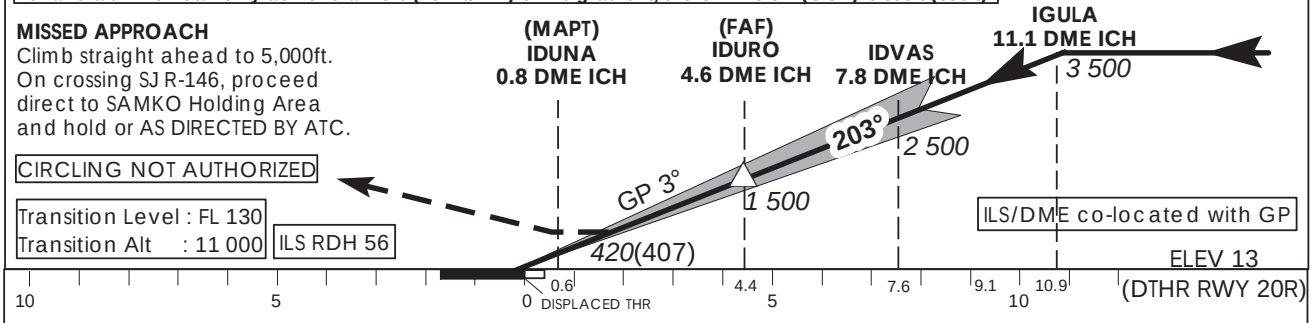
This procedure requires a missed approach climb gradient of 3.7% (225 ft/NM) until passing 2,500ft.
For aircraft which can only achieve a 2.5% (152 ft/NM) climb gradient, the CAT I OCA (OCH) is 693ft (680ft).

MISSED APPROACH
Climb straight ahead to 5,000ft.
On crossing SJ R-146, proceed direct to SAMKO Holding Area and hold or AS DIRECTED BY ATC.

CIRCLING NOT AUTHORIZED

Transition Level : FL 130
Transition Alt : 11 000

ILS RDH 56



* TIMING NOT AUTHORIZED WHEN GP INOP

OCA (OCH)						
Category of Aircraft		A	B	C	D	D_L
Straight-in	CAT I ILS	**152 (139)**	**159 (146)**	**179 (166)**	**192 (179)**	**195 (182)**
	GP INOP	**420 (407)**				

Distance	4 DME		3 DME		2 DME	
Altitude (Height)	**1290 (1277)**		**970 (957)**		**650 (637)**	
Speed	knots	70	120	150	185	
FAF - MAPT 3.9nm	min : s *	**3 : 21**	**1 : 57**	**1 : 34**	**1 : 16**	
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**	

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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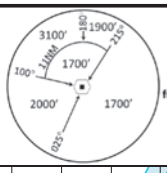
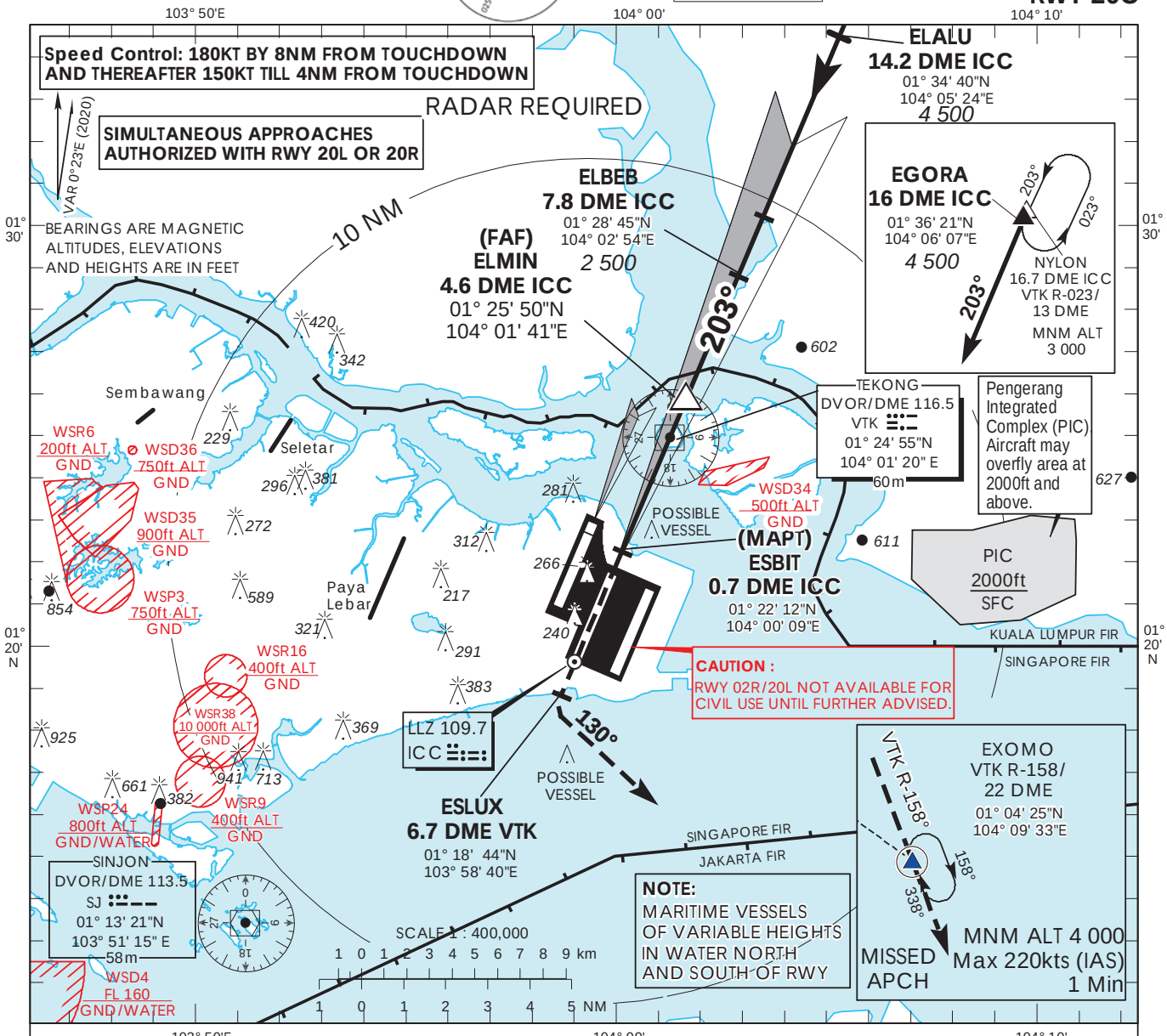
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 20C - ELEV 16ft



D-ATIS	AP ID WSSS 128.025
APP	124.05 119.3
TWR	118.6 118.25

SINGAPORE/ SINGAPORE CHANGI
ICC ILS/DME RWY 20C

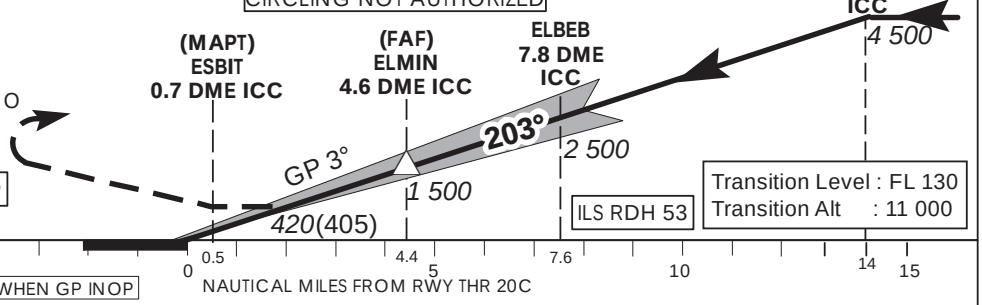


This procedure requires a missed approach climb gradient of 2.8% (171 ft/NM) until passing 2,000ft.
For aircraft which can only achieve a 2.5% (152 ft/NM) climb gradient, the CAT I OCA (OCH) is 315ft (300ft).

MISSED APPROACH
Climb to 4,000ft via VTK R-203 to ESLUX (6.7 DME VTK). At ESLUX turn left heading 130° to intercept VTK R-158 to EXOMO (VTK R-158/22 DME) and hold or AS DIRECTED BY ATC.

ILS/DME co-located with GP

CIRCLING NOT AUTHORIZED



* TIMING NOT AUTHORIZED WHEN GP INOP

OCA (OCH)						
Category of Aircraft		A	B	C	D	D_L
Straight-in	CAT I ILS	**166 (151)**	**180 (165)**	**196 (181)**	**209 (194)**	**212 (197)**
	CAT II ILS	**71 (56)**	**78 (63)**	**91 (76)**	**101 (86)**	**107 (92)**
	GP INOP	**420 (405)**				

Distance	4 DME		3 DME		2 DME	
Altitude (Height)	**1290 (1275)**		**980 (965)**		**660 (645)**	
Speed	knots	70	120	150	185	
FAF - MAPT 3.9nm	min : s *	**3 : 21**	**1 : 57**	**1 : 34**	**1 : 16**	
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**	

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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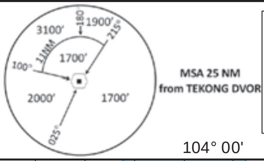
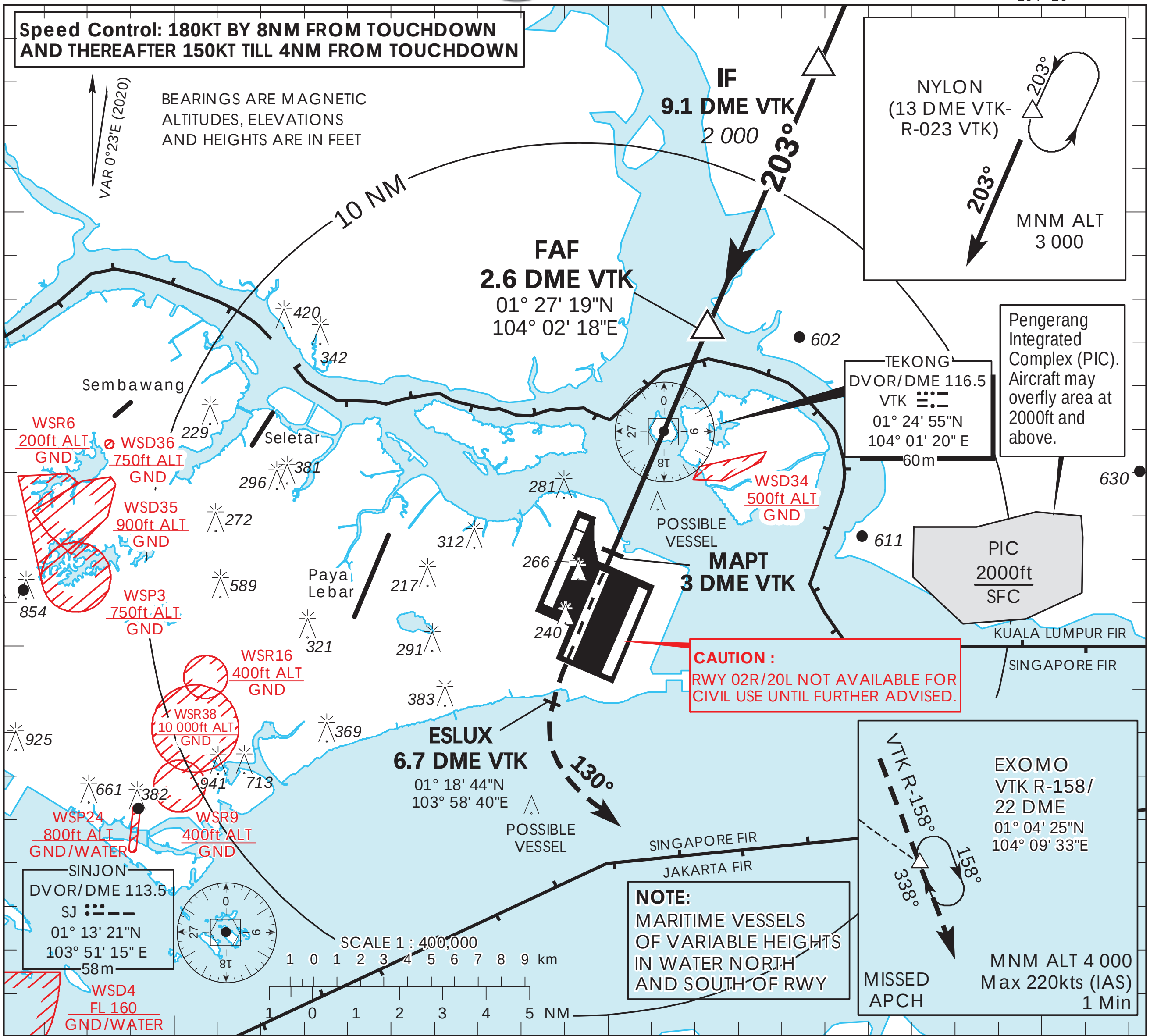
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 22ft
HEIGHT RELATED TO AD ELEV

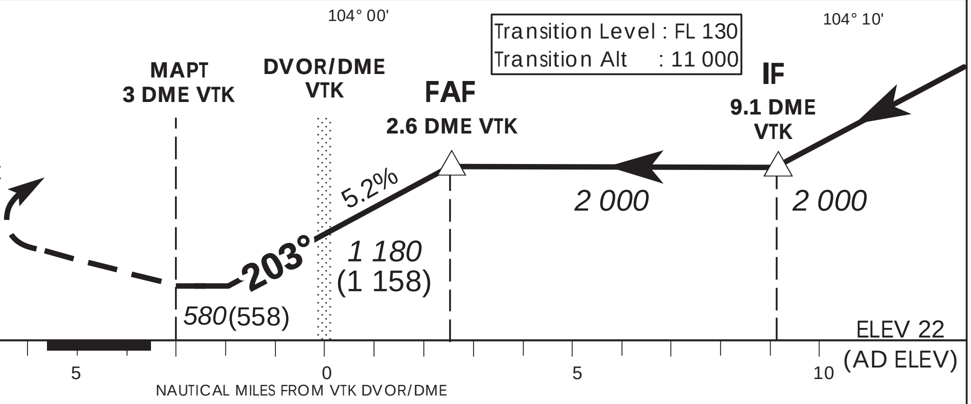


D-ATIS	AP ID WSSS	128.025
APP		124.05
		119.3
TWR		118.6
		118.25

SINGAPORE/ SINGAPORE CHANGI
VTK DVOR/DME RWY 20C



MISSED APPROACH
Climb to 4,000ft via VTK R-203 to ESLUX (6.7 DME VTK). At ESLUX (1,000ft or above) turn left heading 130° to intercept VTK R-158 to EXOMO (VTK R-158/22 DME) and hold or AS DIRECTED BY ATC.



OCA (OCH)				
Category of Aircraft	A	B	C	D
Straight-in	**580 (558)**			

Distance	2 DME		1 DME		VTK		1 DME	
Altitude (Height)	**1820 (1798)**		**1500 (1478)**		**1180 (1158)**		**860 (838)**	
Speed	knots	70		120		150		185
FAF - MAPT 5.6nm	min : s	**4 : 48**		**2 : 48**		**2 : 15**		**1 : 49**
Rate of descent/GS	ft/min	**370**		**635**		**795**		**980**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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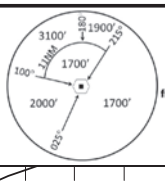
INSTRUMENT APPROACH CHART - ICAO

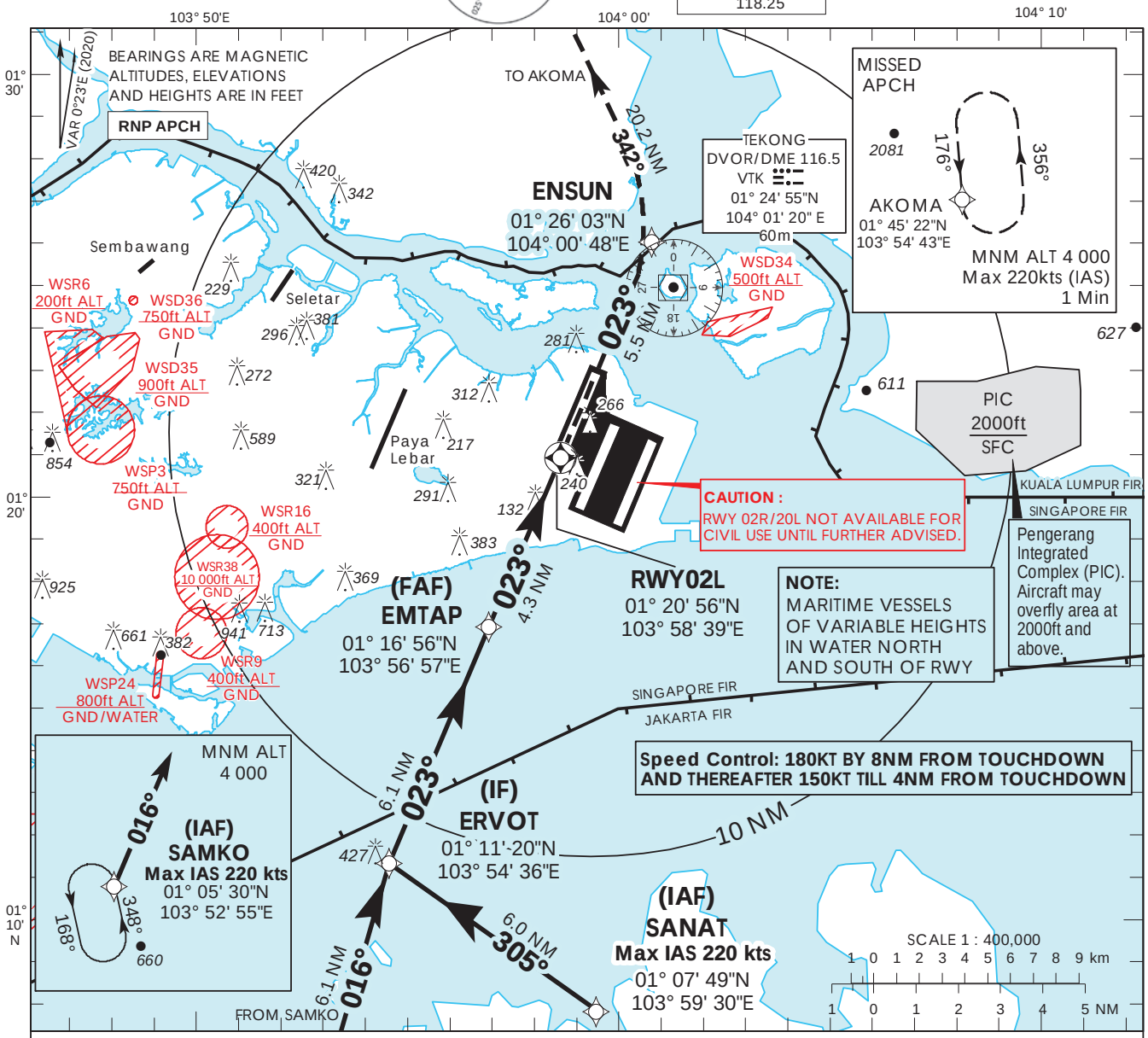
AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02L - ELEV 22ft

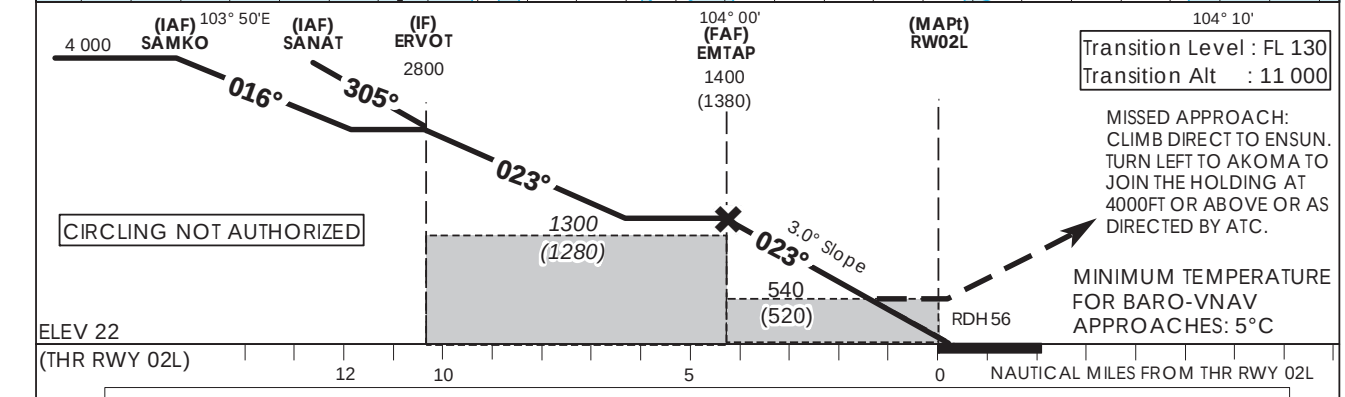


D-ATIS	AP ID WSSS
	128.025
APP	124.05
	119.3
TWR	118.6
	118.25

SINGAPORE/ SINGAPORE CHANGI

RNP RWY 02L





		OCA (OCH)			
Category of Aircraft		A	B	C	D
LNAV/VNAV	2.5%	**450 (430)**			
LNAV	2.5%	**540 (520)**			

Fix	SAMKO	SANAT	ERVOT	EMTAP	RW02L	ENSUN	AKOMA
Altitude (Height)	**4000 (3978)**	**4000 (3978)**	**2800 (2778)**	**1400 (1378)**	**540 (518)**	**880 (858)**	**4000 (3978)**
Speed	knots	80	100	120	140	160	180
FAF - MAPt 4.3nm	min : s	**3 : 14**	**2 : 35**	**2 : 09**	**1 : 51**	**1 : 37**	**1 : 26**
Rate of descent/GS	ft/min	**424**	**530**	**637**	**743**	**849**	**955**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

SINGAPORE CHANGI RNP-APCH RWY 02L – Approach from SAMKO

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	SAMKO	-	-	-0.4	-	-	A040+	220	-	RNP APCH
TF	ERVOT	-	016 (016.4)	-0.4	6.1	R	A028+	-	-	RNP APCH
TF	EMTAP	-	023 (023.4)	-0.4	6.1	-	A014+	-	-	RNP APCH
TF	RW02L	Y	023 (023.4)	-0.4	4.3	-	-	-	-3.0° / 50	RNP APCH
DF	ENSUN	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	AKOMA	-	342 (342.4)	-0.4	20.2	-	A040+	-	-	RNP APCH

SINGAPORE CHANGI RNP-APCH RWY 02L – Approach from SANAT

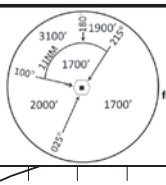
Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	SANAT	-	-	-0.4	-	-	A040+	220	-	RNP APCH
TF	ERVOT	-	305 (305.4)	-0.4	6.0	R	A028+	-	-	RNP APCH
TF	EMTAP	-	023 (023.4)	-0.4	6.1	-	A014+	-	-	RNP APCH
TF	RW02L	Y	023 (023.4)	-0.4	4.3	-	-	-	-3.0° / 50	RNP APCH
DF	ENSUN	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	AKOMA	-	342 (342.4)	-0.4	20.2	-	A040+	-	-	RNP APCH

Waypoint Coordinates

Name	Latitude	Longitude
SAMKO (IAF)	01° 05’ 30” N	103° 52’ 55” E
SANAT (IAF)	01° 07’ 49” N	103° 59’ 30” E
ERVOT (IF)	01° 11’ 20” N	103° 54’ 36” E
EMTAP (FAF)	01° 16’ 56” N	103° 56’ 57” E
RW02L	01° 20’ 56” N	103° 58’ 39” E
ENSUN	01° 26’ 03” N	104° 00’ 48” E
AKOMA	01° 45’ 22” N	103° 54’ 43” E

INSTRUMENT APPROACH CHART - ICAO

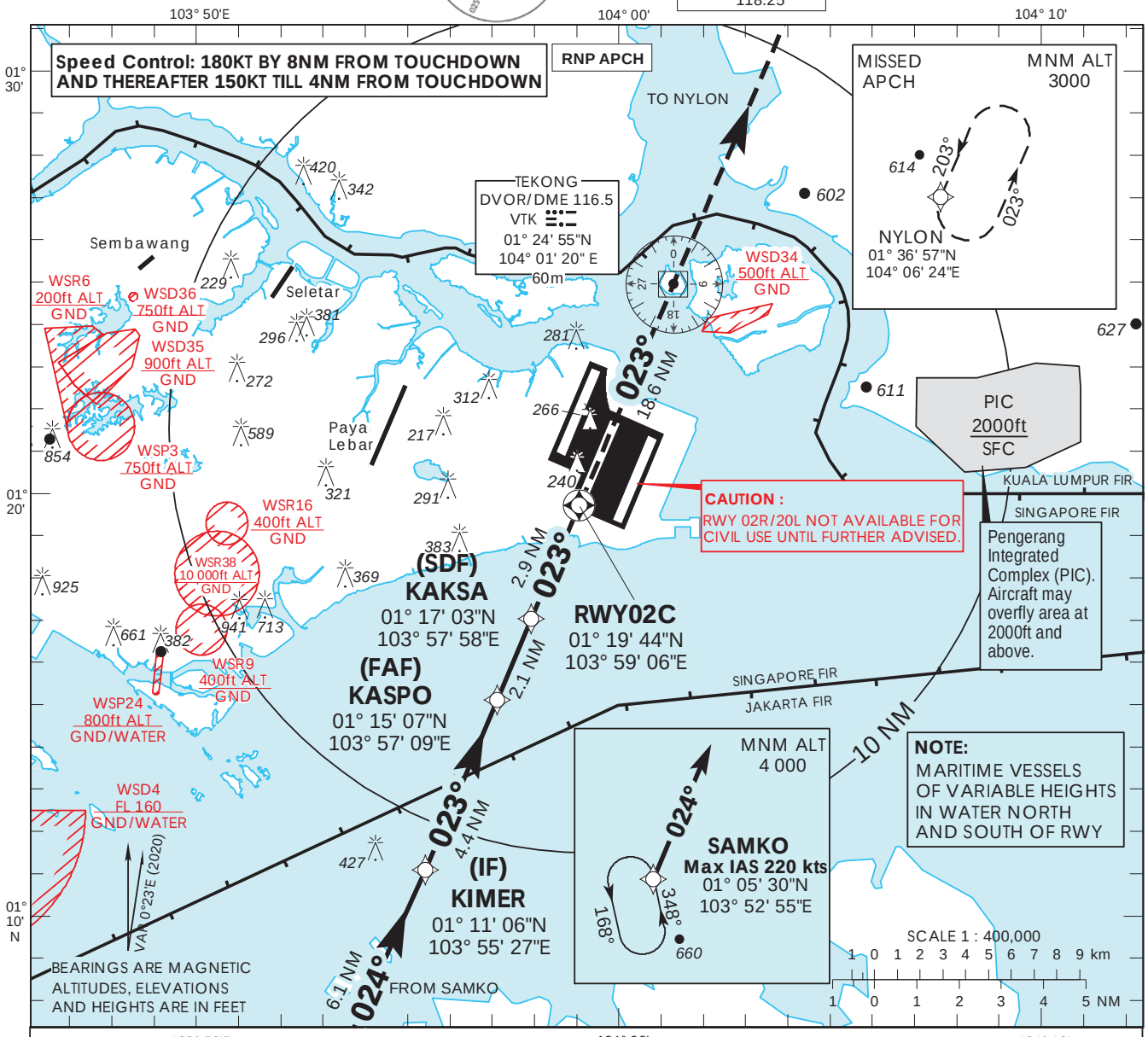
AERODROME ELEV 22ft
HEIGHT RELATED TO THR RWY 02C - ELEV 16ft

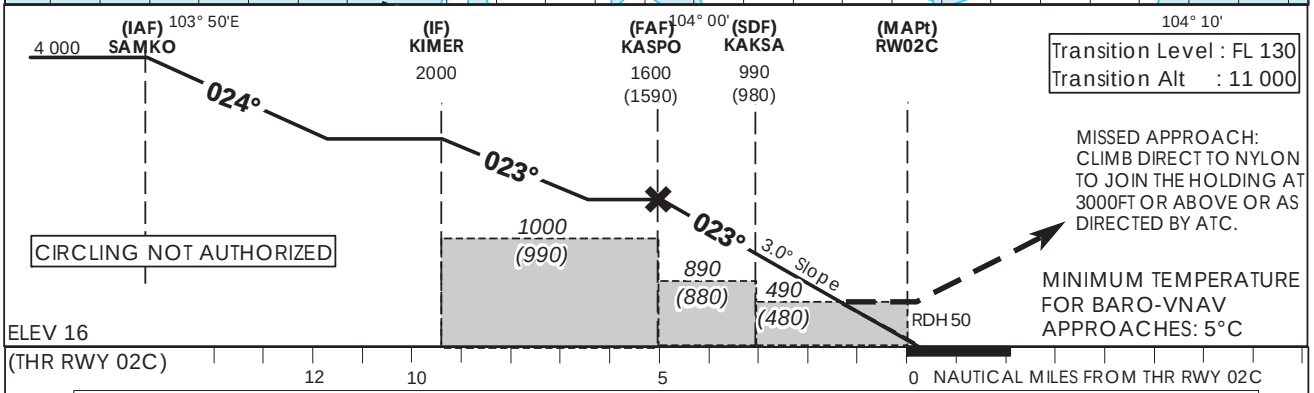


D-ATIS	AP ID WSSS
	128.025
APP	124.05
	119.3
TWR	118.6
	118.25

SINGAPORE/ SINGAPORE CHANGI

RNP RWY 02C





Category of Aircraft		OCA (OCH) A	B	C	D
LNAV	2.5%	**490 (480)**			
LNAV without SDF	2.5%	**890 (880)**			
LNAV/VNAV	2.5%	**360 (350)**			

Fix		SAMKO	KIMER	KASPO	KAKSA	RW02C	NYLON
Altitude (Height)		**4000 (3986)**	**2000 (1986)**	**1600 (1586)**	**990 (976)**	**490 (476)**	**3000 (2986)**
Speed	knots	80	100	120	140	160	180
FAF - MAPt 5nm	min : s	**3 : 45**	**3 : 00**	**2 : 30**	**2 : 09**	**1 : 53**	**1 : 40**
Rate of descent/GS	ft/min	**425**	**531**	**637**	**743**	**849**	**955**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

SINGAPORE CHANGI RNP-APCH RWY 02C – Approach from SAMKO

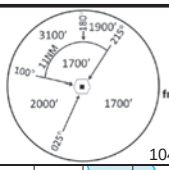
Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	SAMKO	-	-	-0.4	-	-	A040+	220	-	RNP APCH
TF	KIMER	-	024 (024.4)	-0.4	6.1	-	A020+	-	-	RNP APCH
TF	KASPO	-	023 (023.4)	-0.4	4.4	-	A016+	-	-	RNP APCH
TF	KAKSA	-	023 (023.4)	-0.4	2.1	-	990ft+	-	-	RNP APCH
TF	RW02C	Y	023 (023.4)	-0.4	2.9	-	-	-	-3.0° / 50	RNP APCH
DF	NYLON	-	-	-0.4	-	-	A030+	-	-	RNP APCH

Waypoint Coordinates

Name	Latitude	Longitude
SAMKO (IAF)	01° 05’ 30” N	103° 52’ 55” E
KIMER (IF)	01° 11’ 06” N	103° 55’ 27” E
KASPO (FAF)	01° 15’ 07” N	103° 57’ 09” E
KAKSA (SDF)	01° 17’ 03” N	103° 57’ 58” E
RW02C	01° 19’ 44” N	103° 59’ 06” E
NYLON	01° 36’ 57” N	104° 06’ 24” E

INSTRUMENT APPROACH CHART - ICAO

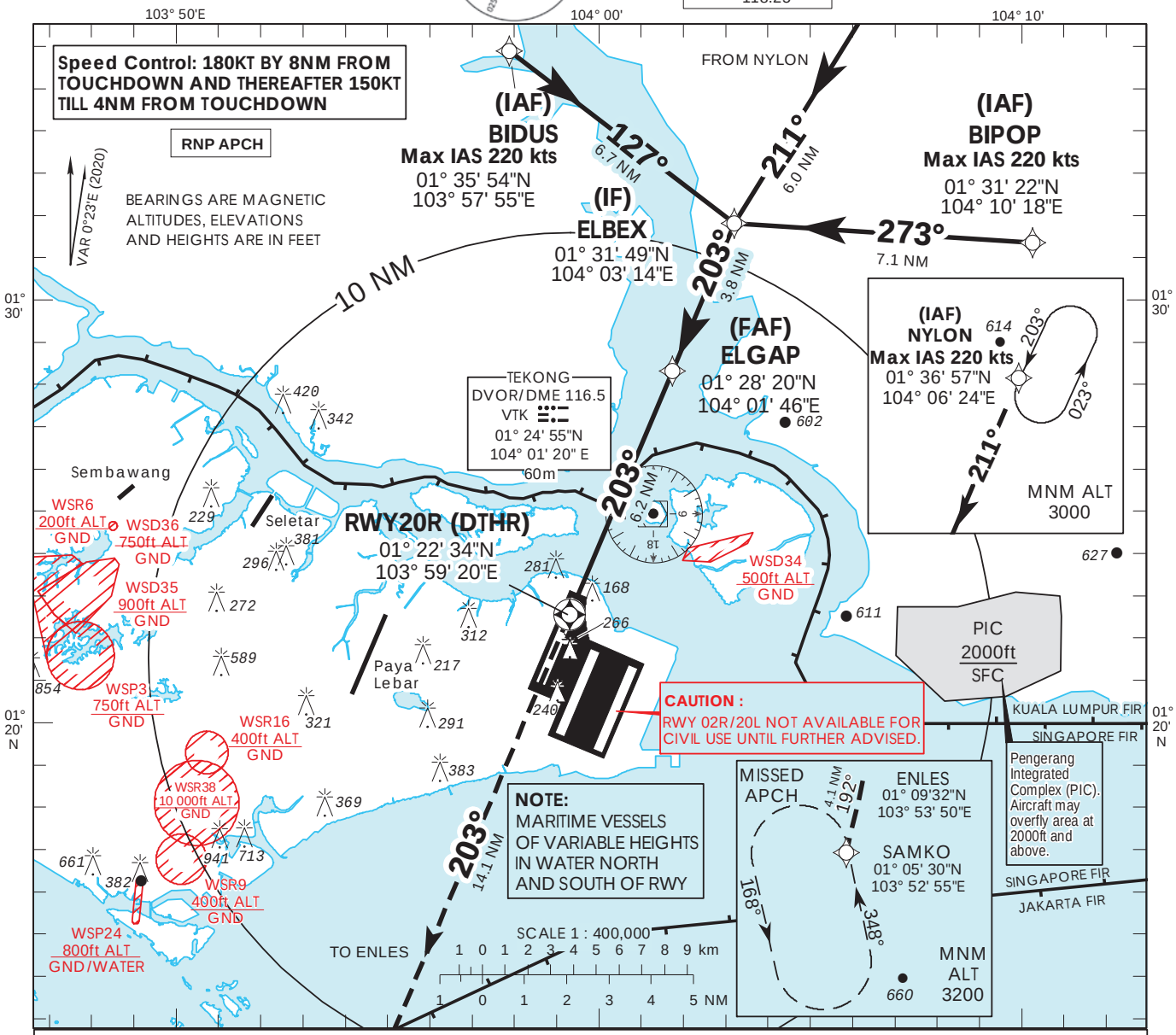
AERODROME ELEV 22ft
HEIGHT RELATED TO
DTHR RWY 20R - ELEV 13ft

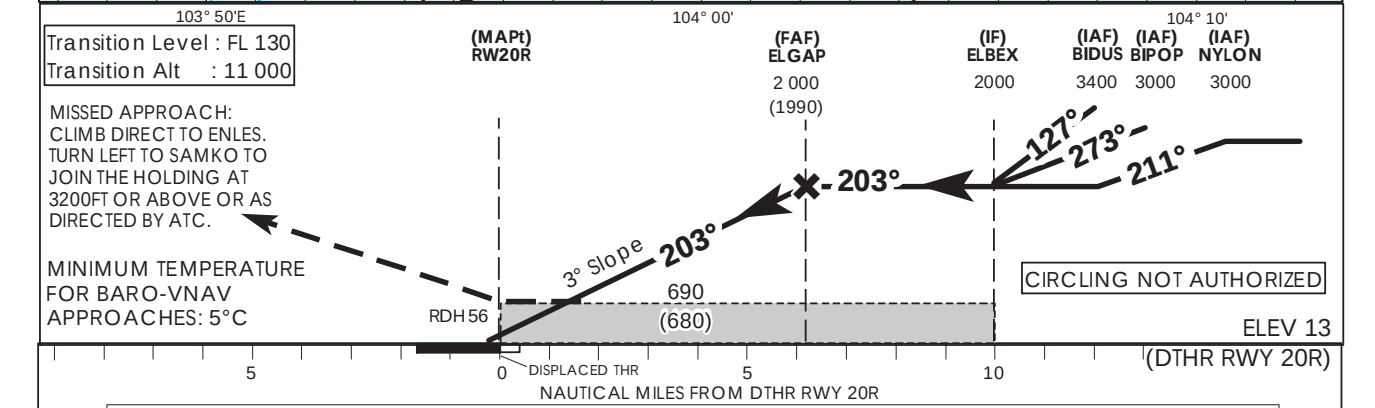


D-ATIS	AP ID WSSS 128.025
APP	124.05
	119.3
TWR	118.6
	118.25

SINGAPORE/ SINGAPORE CHANGI

RNP RWY 20R





OCA (OCH)					
Category of Aircraft		A	B	C	D
LNAV/VNAV	2.5%	690 (680)			
LNAV	2.5%	690 (680)			

Fix	BIDUS	NYLON	BIPOP	ELBEX	ELGAP	RW20R	ENLES	SAMKO
Altitude (Height)	3400 (3387)	3000 (2987)	3000 (2987)	2000 (1987)	2000 (1987)	690 (680)	2180 (2167)	3200 (3187)

Speed	knots	80	100	120	140	160	180
FAF - MAPt 6.2 nm	min : s	4 : 39	3 : 44	3: 06	2 : 40	2 : 20	2 : 04
Rate of descent/GS	ft/min	425	531	637	743	849	955

CHANGES : Revision to Restricted Areas WSR9 and WSR16

SINGAPORE CHANGI RNP-APCH RWY 20R – Approach from BIDUS

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	BIDUS	-	-	-0.4	-	-	A034+	220	-	RNP APCH
TF	ELBEX	-	127 (127.4)	-0.4	6.7	R	A020+	-	-	RNP APCH
TF	ELGAP	-	203 (203.4)	-0.4	3.8	-	A020+	-	-	RNP APCH
TF	RW20R	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ENLES	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	SAMKO	-	192 (192.4)	-0.4	4.1	-	A032+	-	-	RNP APCH

SINGAPORE CHANGI RNP-APCH RWY 20R – Approach from NYLON

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	NYLON	-	-	-0.4	-	-	A030+	220	-	RNP APCH
TF	ELBEX	-	211 (211.4)	-0.4	6.0	L	A020+	-	-	RNP APCH
TF	ELGAP	-	203 (203.4)	-0.4	3.8	-	A020+	-	-	RNP APCH
TF	RW20R	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ENLES	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	SAMKO	-	192 (192.4)	-0.4	4.1	-	A032+	-	-	RNP APCH

SINGAPORE CHANGI RNP-APCH RWY 20R – Approach from BIPOP

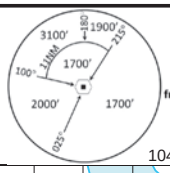
Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	BIPOP	-	-	-0.4	-	-	A030+	220	-	RNP APCH
TF	ELBEX	-	273 (273.4)	-0.4	7.1	L	A020+	-	-	RNP APCH
TF	ELGAP	-	203 (203.4)	-0.4	3.8	-	A020+	-	-	RNP APCH
TF	RW20R	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ENLES	-	-	-0.4	-	L	-	-	-	RNP APCH
TF	SAMKO	-	192 (192.4)	-0.4	4.1	-	A032+	-	-	RNP APCH

Waypoint Coordinates

Name	Latitude	Longitude
BIDUS (IAF)	01° 35’ 54” N	103° 57’ 55” E
NYLON (IAF)	01° 36’ 57” N	104° 06’ 24” E
BIPOP (IAF)	01° 31’ 22” N	104° 10’ 18” E
ELBEX (IF)	01° 31’ 49” N	104° 03’ 14” E
ELGAP (FAF)	01° 28’ 20” N	104° 01’ 46” E
RW20R	01° 22’ 34” N	103° 59’ 20” E
ENLES	01° 09’ 32” N	103° 53’ 50” E
SAMKO	01° 05’ 30” N	103° 52’ 55” E

INSTRUMENT APPROACH CHART - ICAO

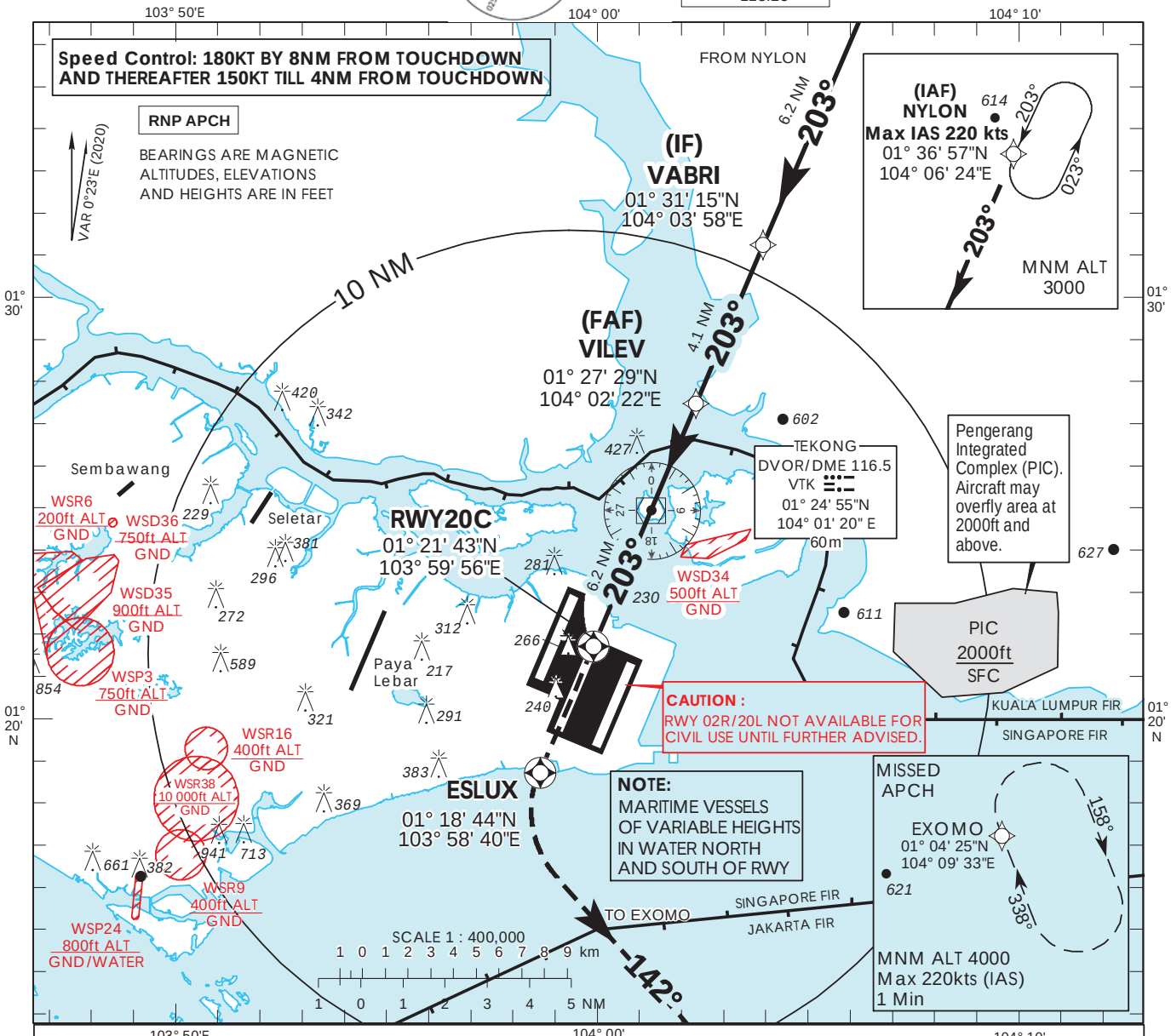
AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 20C - ELEV 16ft

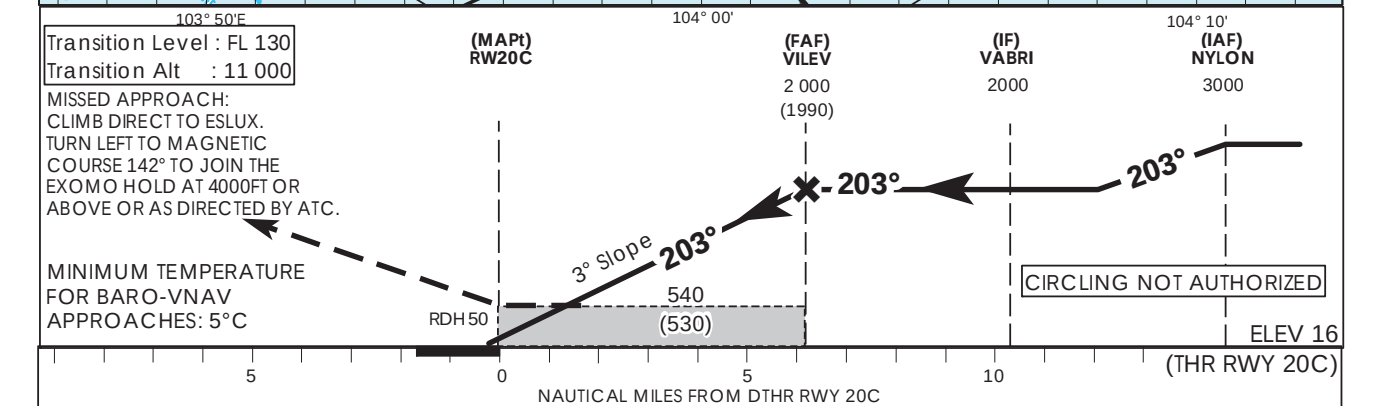


D-ATIS	AP ID	WSSS
		128.025
APP		124.05
		119.3
TWR		118.6
		118.25

SINGAPORE/ SINGAPORE CHANGI

RNP RWY 20C





OCA (OCH)					
Category of Aircraft		A	B	C	D
LNAV/VNAV	2.5%	**490 (480)**			
LNAV	2.5%	**540 (530)**			

Fix	NYLON	VABRI	VILEV	RW20C	ESLUX	EXOMO
Altitude (Height)	**3000 (2985)**	**2000 (1985)**	**2000 (1985)**	**540 (525)**	**540 (525)**	**4000 (3985)**

Speed	knots	80	100	120	140	160	180
FAF - MAPt 6.2 nm	min : s	**4 : 39**	**3 : 44**	**3: 06**	**2 : 40**	**2 : 20**	**2 : 04**
Rate of descent/GS	ft/min	**425**	**531**	**637**	**743**	**849**	**955**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

SINGAPORE CHANGI RNP-APCH RWY 20C – Approach from NYLON

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	NYLON	-	-	-0.4	-	-	A030+	220	-	RNP APCH
TF	VABRI	-	203 (203.4)	-0.4	6.2	-	A020+	-	-	RNP APCH
TF	VILEV	-	203 (203.4)	-0.4	4.1	-	A020+	-	-	RNP APCH
TF	RW20C	Y	203 (203.4)	-0.4	6.2	-	-	-	-3.0° / 50	RNP APCH
DF	ESLUX	Y	-	-0.4	-	L	-	-	-	RNP APCH
TF	EXOMO	-	142 (142.4)	-0.4	-	-	A040+	-	-	RNP APCH

Waypoint Coordinates

Name	Latitude	Longitude
NYLON (IAF)	01° 36’ 57” N	104° 06’ 24” E
VABRI (IF)	01° 31’ 15” N	104° 03’ 58” E
VILEV (FAF)	01° 27’ 29” N	104° 02’ 22” E
RW20C	01° 21’ 43” N	103° 59’ 56” E
ESLUX	01° 18’ 44” N	103° 58’ 40” E
EXOMO	01° 04’ 25” N	104° 09’ 33” E

INSTRUMENT APPROACH CHART

AERODROME ELEV 22ft
HEIGHT RELATED TO
THR RWY 02R - ELEV 16ft

MSA 25 NM from TEKONG DVOR

D-ATIS	AP ID WSSS	128.025
APP		124.05
		119.3
TWR		131.4

SINGAPORE/ SINGAPORE CHANGI

RNP RWY 02R

104° 00' 104° 10'

Speed Control: 180KT BY 8NM FROM TOUCHDOWN AND THEREAFTER 150KT TILL 4NM FROM TOUCHDOWN

RNP APCH

TEKONG DVOR/DME 116.5
VTK
01° 24' 55"N
104° 01' 20" E
60m

BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS
AND HEIGHTS ARE IN FEET

VAR 0° 23'E (2020)

IGODO
AT OR ABOVE
2 000ft
01° 24' 03"N
104° 05' 14"E

Pengerang Integrated Complex (PIC). Aircraft may overfly area at 2000ft and above.

PIC
2000ft
SFC

WSD34
500ft AMSL
GND

POSSIBLE VESSEL

Seletar
Paya Lebar

342 296 381 272 589 321 369 941 713 281 312 217 291 383 266 240 602 611

CAUTION :
RWY 02R/20L NOT AVAILABLE FOR CIVIL USE UNTIL FURTHER ADVISED.

KUALA LUMPUR FIR
SINGAPORE FIR

01° 20'

WSR16
400ft ALT
GND

WSR38
10 000ft ALT
GND

(MAPT) RW02R
01°19' 21"N
103°59' 59"E

3 NM 023°

2 NM 023°

(FAF) MOPSI
01° 16' 35"N
103° 58' 49"E
1 030

(IF) LUVUL
01° 14' 44"N
103° 58' 03"E
1700

10 NM

NOTE:
MARITIME VESSELS OF VARIABLE HEIGHTS IN WATER NORTH AND SOUTH OF RWY

MNM ALT
7 000

079°
259°

HOSBA
01° 19' 48"N
104° 24' 18"E

MISSED APCH

SINGAPORE FIR
JAKARTA FIR

SCALE 1 : 300,000
1 0 1 2 3 4 5 6 7 8 9 km
1 0 1 2 3 4 5 NM

EXPECT RADAR VECTORS TO LUVUL

RADAR REQUIRED

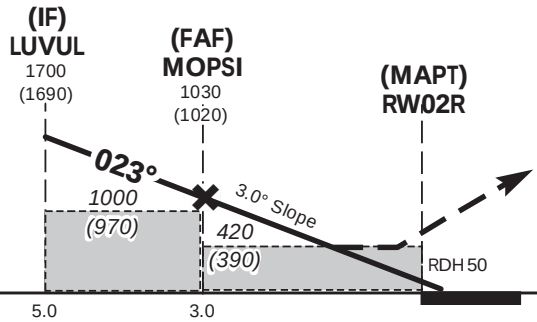
104° 00' 104° 10'

1. This procedure requires a missed approach climb gradient of 5% (304 ft/NM) until passing 2,000ft. MAX IAS 185kts during turning missed approach.
2. For aircraft which can only achieve a 2.5% (152 ft/NM) climb gradient, the OCA (OCH) is 820ft (800ft) and aircraft shall climb straight to 1200ft before commencing right turn climbing to 7000ft or above to HOSBA.

Transition Level : FL 130
Transition Alt : 11 000

MINIMUM TEMPERATURE FOR BARO-VNAV APPROACHES: 5°C

ELEV 16
(THR RWY 02R)



MISSED APPROACH
Climb direct to IGODO at 2 000ft or above. Thereafter, turn right climbing to 7 000ft or above to HOSBA.
Hold at HOSBA or AS DIRECTED BY ATC.
No turn before MAPt.

CIRCLING NOT AUTHORIZED

		OCA (OCH)			
Category of Aircraft		A	B	C	D
LNAV/VNAV	5%	**330 (310)**			
LNAV	5%	**420 (390)**			

Distance			LUVUL		MOPSI	
Altitude (Height)			**1700 (1690)**		**1030 (1020)**	
Speed	knots	70	120	150	185	
FAF - MAPT 3.0nm	min : s *	**2 : 34**	**1 : 30**	**1 : 12**	**0 : 58**	
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**	

CHANGES : Revision to Restricted Area WSR16

SINGAPORE CHANGI RNP-APCH RWY 02R – Approach from LUVUL

Path Terminator	Waypoint	Fly-Over	Course °M (°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA/ TCH(FT)	Navigation Specification
IF	LUVUL	-	023 (023.4)	-0.4	-	-	1700+	180	-	RNP APCH
TF	MOPSI	-	023 (023.4)	-0.4	2.0	-	1030+	150	-	RNP APCH
TF	RW02R	Y	023 (023.4)	-0.4	3.0	R	-	-	-3.0° / 50	RNP APCH
DF	IGODO	-	-	-0.4	-	R	2000+	185	-	RNP APCH
TF	HOSBA	-	103 (103.4)	-0.4	-	-	7000+	-	-	RNP APCH

Waypoint Coordinates

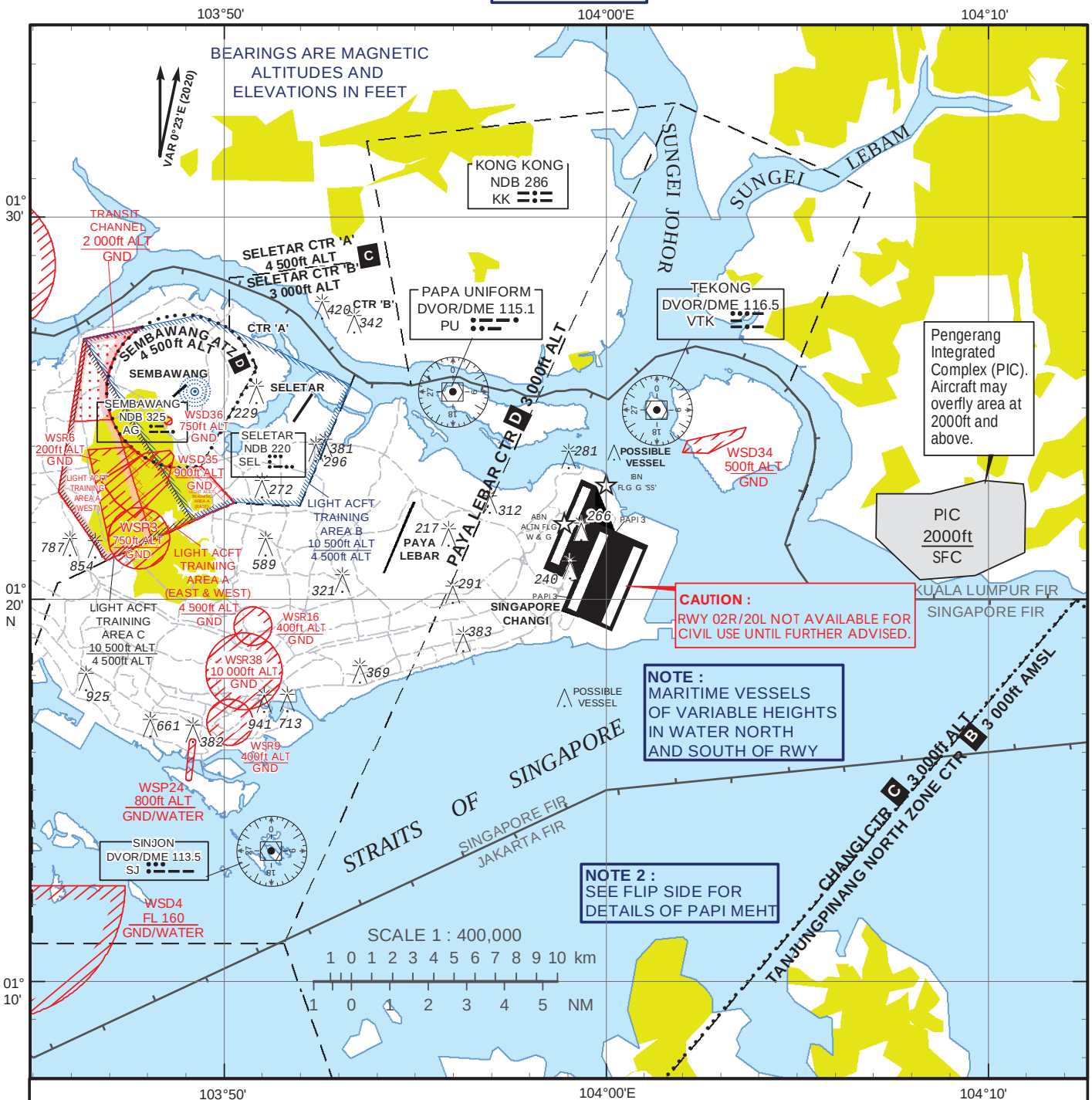
Name	Latitude	Longitude
LUVUL (IF)	01° 14’ 44” N	103° 58’ 03” E
MOPSI (FAF)	01° 16’ 35” N	103° 58’ 49” E
RW02R	01° 19’ 21” N	103° 59’ 59” E
IGODO	01° 24’ 03” N	104° 05’ 14” E
HOSBA	01° 19’ 48” N	104° 24’ 18” E

VISUAL APPROACH CHART - ICAO

AERODROME ELEV 22 ft

D-ATIS	AP ID WSSS
	128.025
APP	124.05
	119.3
TWR	118.6
	118.25

SINGAPORE/SINGAPORE CHANGI



VISUAL APPROACH PROCEDURE

1. **An IFR flight operating into Singapore Changi Airport may be cleared for a visual approach subject to the following conditions :-**
   - a) **The pilot has the aerodrome in sight and can conduct his approach with visual reference to terrain;**
   - b) **The flight will not cause delay to other traffic;**
   - c) **There is no conflicting tall vessel movement;**
   - d) **The cloud ceiling at the aerodrome is 4,000ft or more for landing on RWY 20C/R/L and 3,000ft or more for on RWY 02C/L/R ; and**
   - e) **The visibility at the aerodrome is 5km or more.**
2. **Notwithstanding para 1d) and 1e), if the pilot reports that he has the aerodrome in sight and can conduct his approach with visual reference to terrain, the flight may be cleared for a visual approach.**
3. **Pilots may expect radar vectoring for separation and sequencing with other traffic prior to being cleared for a visual approach.**

PAPI 3° (MEHT)*						
Pilot's eye height over the threshold when the following PAPI lights come in view.	**RUNWAY**					
	02L	20R	02C	20C	02R	20L
2 White lights and 2 Red lights	20.0m	20.0m	19.8m	19.8m	19.7m	19.7m
3 White lights and 1 Red light	24.0m	22.6m	23.7m	23.7m	23.6m	23.6m
4 White lights	26.4m	25.0m	26.2m	26.2m	26.0m	26.0m

*MEHT : Minimum Eye Height Over the Threshold.

Note : Aircraft with eye-to-wheel height greater than 8 metres are advised to fly with 2 white lights and 2 red lights visible so as to achieve sufficient wheel clearance.

VISUAL DEPARTURE CHART

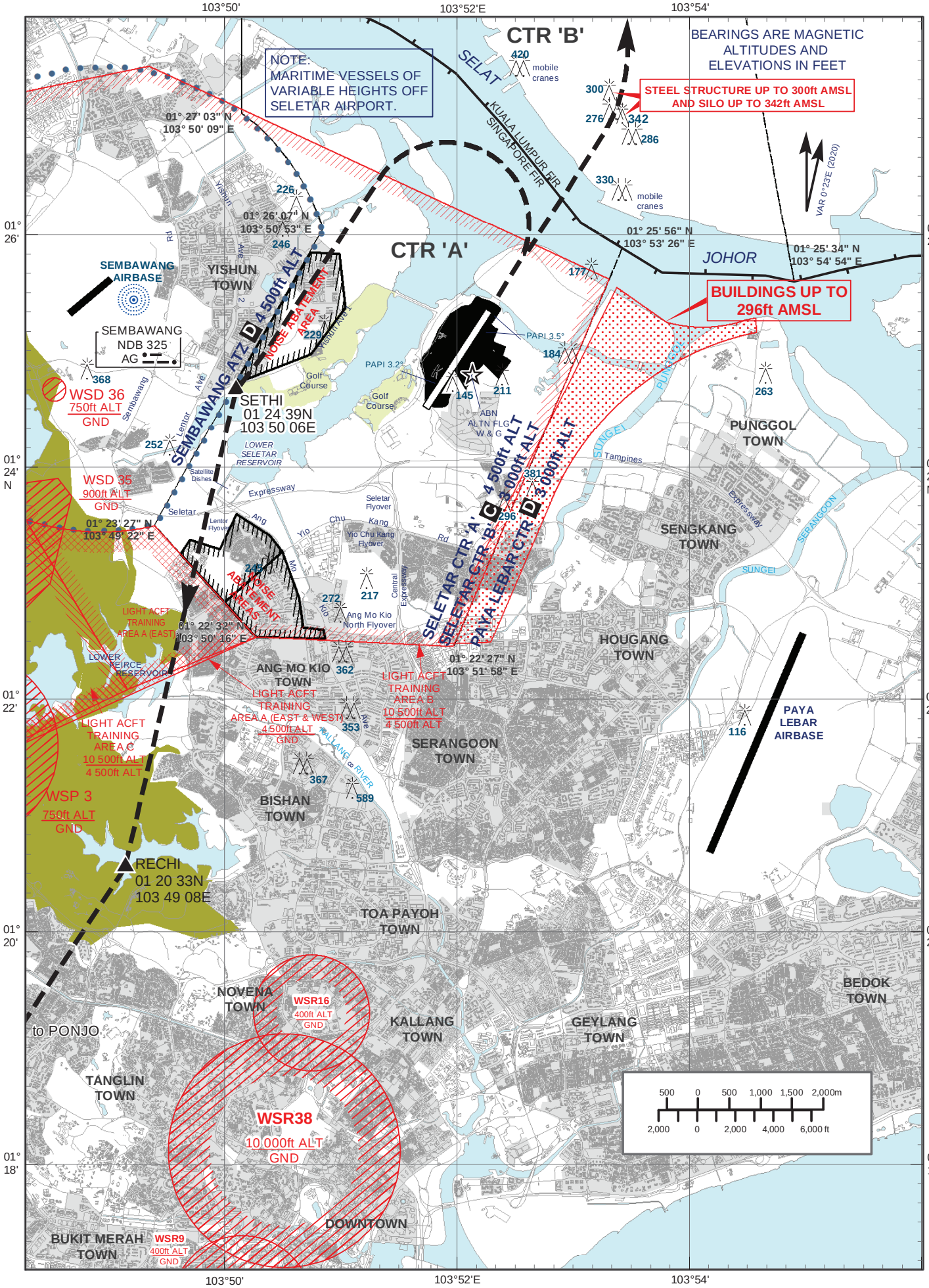
AD ELEV 46 ft

ATIS AP ID-WSSL 128.425

APP 124.05
TWR 118.45
270.4

SINGAPORE/SELETAR

RWY 03



ADVISORY DEPARTURE PROCEDURES FOR RUNWAY 03

On departure, pilots of both fixed-wing and rotary-wing aircraft should climb ahead to an altitude cleared by ATC. Pilots can expect a radar heading to leave Seletar CTR. Where a radar heading is not given, pilots shall navigate to SETHI-RECHI-PONJO-SJ, or navigate to OMKOM, in accordance with their ATC clearance.

CAUTION

a) Pilots are required to keep clear of Sembawang ATZ. Turns should therefore be kept within Seletar CTR.

b) Pilots of fixed-wing aircraft should not fly to the east of the runway. This is to keep clear of tall buildings up to 296ft AMSL there. Pilots should have all relevant obstacles in sight, including the steel structure 300ft AMSL and SILO 342ft AMSL 2nm north of the airfield.

c) When cleared via SETHI-RECHI-PONJO-SJ, pilots shall not deviate from the clearance unless approved by ATC. This is due to the proximity of WSR38 which is Permanently active from Ground to 10,000ft.

d) Pilots shall maintain a speed of not more than 185KTS until passing PONJO to mitigate risk of encroaching into WSD4.

e)  Minimum altitudes apply over noise abatement areas (WSSL AD 2.21). Aircraft types which are unable to safely manoeuvre clear of the noise abatement areas are not allowed to operate at Seletar Airport.

VISUAL DEPARTURE CHART

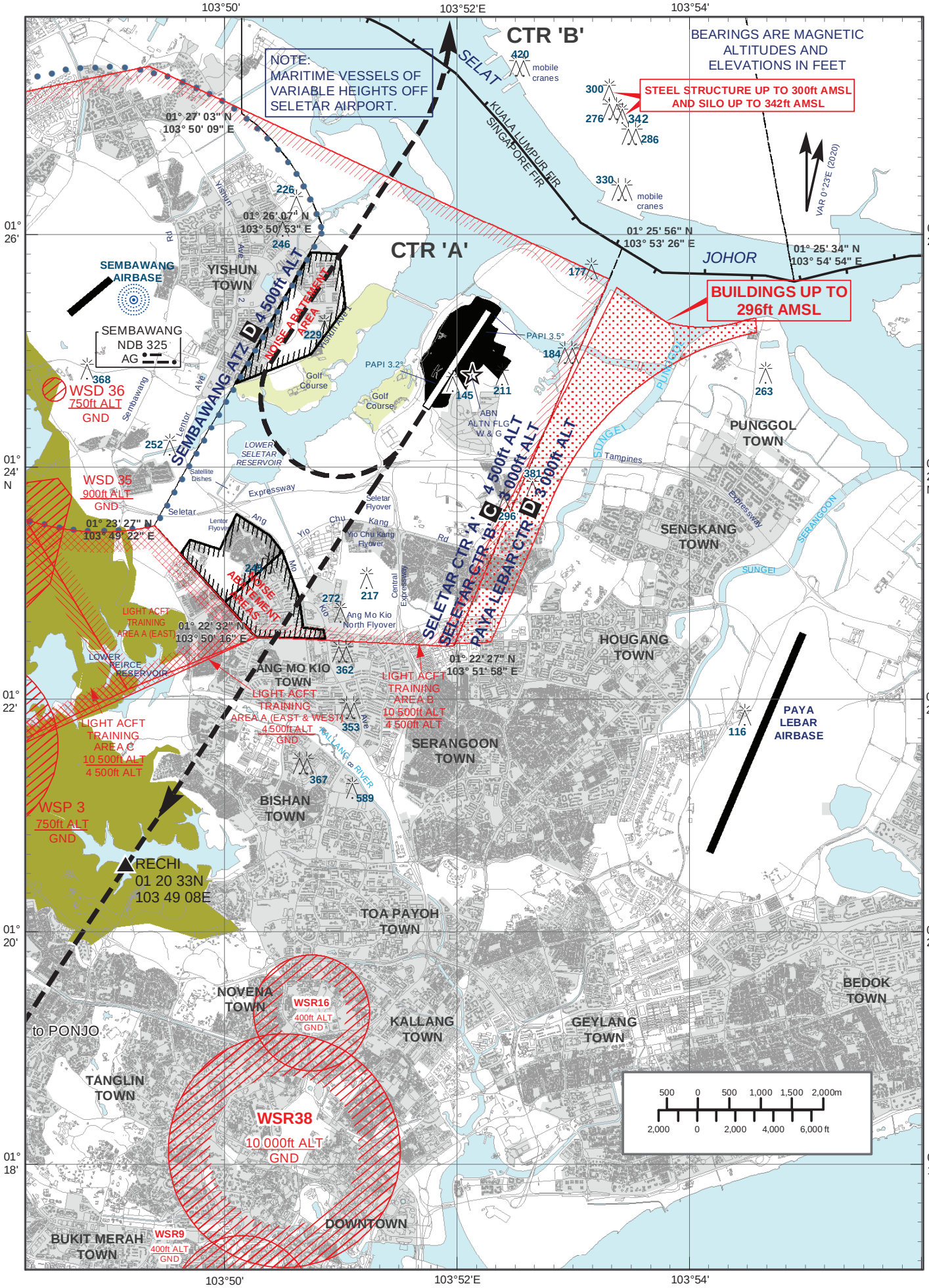
AD ELEV 46 ft

ATIS AP ID-WSSL 128.425

APP 124.05
TWR 118.45
270.4

SINGAPORE/SELETAR

RWY 21



CHANGES : Revision to Restricted Areas WSR9 and WSR16

ADVISORY DEPARTURE PROCEDURES FOR RUNWAY 21

On departure, pilots can expect to climb to an initial altitude clearance by ATC. Pilots of fixed-wing aircraft navigating to OMKOM can expect to turn right to join the circuit till end of downwind and then expect a radar heading to leave Seletar CTR. Where a radar heading is not given, pilots shall navigate to RECHI-PONJO-SJ, or navigate to OMKOM in accordance with their ATC clearance.

Pilots of rotary-wing aircraft can expect to turn left after departure to join the helicopter circuit pattern till end of downwind. Thereafter, they can expect further en-route clearance.

CAUTION

a) Pilots are required to keep clear of Sembawang ATZ. Turns should therefore be kept within Seletar CTR.

b) Pilots of fixed-wing aircraft should not fly to the east of the runway. This is to keep clear of tall buildings up to 296ft AMSL there. Pilots should have all relevant obstacles in sight, including the steel structure 300ft AMSL and SILO 342ft AMSL 2nm north of the airfield.

c) When cleared via RECHI-PONJO-SJ, pilots shall not deviate from the clearance unless approved by ATC. This is due to the proximity of WSR38 which is Permanently active from Ground to 10,000ft.

d) Pilots shall maintain a speed of not more than 185KTS until passing PONJO to mitigate risk of encroaching into WSD4.

e)  Minimum altitudes apply over noise abatement areas (WSSL AD 2.21). Aircraft types which are unable to safely manoeuvre clear of the noise abatement areas are not allowed to operate at Seletar Airport.

f) When cleared via OMKOM, pilots shall maintain a speed of not more 185KTS until established on the downwind leg to mitigate risk of encroaching into Sembawang ATZ.

WSAP — PAYA LEBAR

Note: The following sections in this chapter are intentionally left blank:
AD 2.16, AD 2.21.

WSAP AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WSAP — PAYA LEBAR

WSAP AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	*ARP coordinates and site at AD*	012120.6N 1035410.0E(Paya Lebar IBN)
2	*Direction and distance from (city)*	-
3	*Elevation/Reference temperature*	20 M (65ft) / 31.5° C
4	*MAG VAR*	0°23' E (2020)
5	*AD Administration, address, telephone, telefax, telex, AFS*	PAYA LEBAR AIRPORT SINGAPORE 534395 Tel: 63813111 (Base Command Post) AFS: WSAPYWYX
6	*Types of traffic permitted*	IFR
7	*Remarks*	Operator: Republic of Singapore Air Force. Alternate/Emergency Diversionary Aerodrome for Singapore Changi Airport (see page WSAP AD 2-9)

WSAP AD 2.3 OPERATIONAL HOURS

1	*Aerodrome Administration*	BTN 2300-1100 SUN/MON to THU/FRI Public holidays and outside operating hours prior permission required from RSAF Headquarters via Paya Lebar Base Command Post.
2	*Customs and immigration*	by prior arrangement only
3	*Health and sanitation*	by prior arrangement only
4	*AIS Briefing Office*	-
5	*ATS Reporting Office*	-
6	*MET Briefing Office*	H24
7	*Air Traffic Services*	H24
8	*Remarks*	AD may be closed periodically for Foreign Object Damage (FOD) walk. Actual emergency or diversion will be accepted at 30 min notification. Such closure will be published via NOTAM.

WSAP AD 2.4 HANDLING SERVICES AND FACILITIES

1	*Cargo Handling Facilities*	-
2	*Fuel / Oil Types*	JET A1, Oil
3	*Fuelling Facilities / Capacity*	BTN 2300-1100 SUN/MON to THU/FRI Public holidays and outside operating hours prior permission required from RSAF Headquarters via Paya Lebar Base Command Post.
4	*Hangar space for visiting aircraft*	-
5	*Repair facilities for visiting aircraft*	-
6	*Remarks*	NIL

WSAP AD 2.5 PASSENGER FACILITIES

1	*Hotels*	NIL
2	*Restaurants*	NIL
3	*Transportation*	NIL
4	*Medical Facilities*	NIL
5	*Banks and Post Offices*	NIL
6	*Tourist Office*	NIL
7	*Remarks*	NIL

WSAP AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	*AD category for fire fighting*	CAT9
2	*Rescue equipment*	Adequately provided as recommended by ICAO
3	*Capability for removal of disabled aircraft*	Sufficient salvage equipment provided by Airfield Ground Services section at military bases.
4	*Remarks*	All Airport Emergency Services personnel are trained in rescue and fire-fighting as well as medical first-aid.

WSAP AD 2.7 SEASONAL AVAILABILITY - CLEARING

The aerodrome is available throughout the year.

WSAP AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	*Apron surface and strength*	Strength: PCR559/R/B/W/U (Apron A) Strength: LCN100 - PCN71/R/B/W/U (Apron B) Strength: PCR637/R/B/W/U (Apron C) Strength: PCR305/R/B/W/U (Apron D) Strength: PCR559/R/B/W/U (Jet Apron) Strength: PCR574/R/B/W/U (Jet Apron Extension)
2	*Taxiway width, surface and strength*	Strength: PCR502/F/B/X/U
3	*Remarks*	TWY between TWY W1 and TWY W2 closed to all code C and above aircraft. Pilots to exercise caution.

WSAP AD 2.10 AERODROME OBSTACLES

IN APPROACH / TKOF AREAS			
	RWY/Area affected	***OBST type, ELEV, Markings/LGT***	***Location/Coordinates***
	1	2	3
a.	RWY 02 APCH RWY 20 TKOF	Industrial buildings, HGT 83ft AMSL. OBST LGTD.	Located on either side of approach funnel 2300ft from RWY 02 THR.
b.	RWY 02 APCH RWY 20 TKOF	Structure (water tower), HGT AMSL, marked and LGTD.	012022N 1035436E (east of RWY)
c.	RWY 02/20 APCH RWY 02/20 TKOF	ILS LLZ, co-located with LLZ antennae, HGT 17ft AGL.	LLZ RWY 02 located 1324ft from RWY 20 THR. LLZ RWY 20 located 1525ft from RWY 02 THR.
d.	RWY 02/20 APCH RWY 02/20 TKOF	ILS LLZ, co-located with LLZ antennae, HGT 8ft AGL.	LLZ RWY 02 located 1244ft from RWY 20 THR.

IN CIRCLING AREA AND AT AERODROME		
	OBST type, ELEV, Markings/LGT	***Location/Coordinates***
	1	2
a.	ILS GP huts co-located with GP antenna mast, 53ft AGL, marked and lighted.	GP RWY 02 located 296ft west of western edge of RWY and 858ft from RWY 02 THR. GP RWY 20 located 296ft west of western edge of RWY and 984ft from RWY 20 THR.
b.	Precision Approach Radar (PAR) hut, 49.2ft AGL, marked and lighted.	211ft east of eastern edge of RWY, 7089ft north of RWY 02 THR.
c.	2 x Frangible PAR Moving Target Indicator (MTI) reflectors, 16ft AGL, marked and lighted.	RWY 02 MTI reflectors, located 213ft east of eastern edge of RWY, 4389ft from RWY 02 THR. RWY 20 MTI reflectors, located 209ft east of eastern edge of RWY, 2911ft from RWY 20 THR.
d.	Arrestor hookwire retriever unit, 4ft AGL, lighted.	Within the RWY strip. Located 52ft from both sides of the RWY edges, installed 1200ft from RWY 02 THR and 1100ft from RWY 20 THR.
e.	Arrestor barrier flat on the ground.	Within the RWY strip, installed 210ft south of RWY 02 THR and 118ft north of RWY 20 THR.
f.	Surface wind direction sleeves, 25ft AGL, marked and lighted.	344ft west of western edge of RWY for both sides, 458ft from RWY 02 THR and 307ft from RWY 20 THR.
g.	AWOS stanchions, 23ft AGL, marked and lighted.	296ft west of western edge of RWY on both sides, 658ft from RWY 02 THR and 654ft from RWY 20 THR.
h.	One wheel structure, 585ft AMSL, lighted.	Erected at 011726N 1035150E, BRG 216 DEG, DIST 5NM from WSAP ARP - within WSAP CTR.
i.	One Building, 804ft AMSL, lighted.	Erected at 011642N 1035105E, BRG 216 DEG, DIST 6.2NM from WSAP ARP - within WSAP CTR.
j.	Mobile aircraft arrestor gear, 6.6ft AGL, lighted.	39ft from edge of western taxiway between TWY W1 and W2 at 1362ft south of TWY W1.
k.	Lightning protection system, 218ft AMSL, marked and lighted.	Erected at 012203.36N 1035509.39E.
l.	Mobile aircraft arrestor gear, 6.6ft AGL, lighted.	300ft south of RWY 20 THR, 33ft from RWY edge on both sides. All RWY 20 inbound shall land 500ft up RWY 20 THR. LDA 11,900ft.
m.	Lightning protection system, 40ft AGL and cabin structure, 19.8ft AGL, marked and lighted.	Erected at 012240N 1035453E.
n.	Trees, 197ft AMSL.	Exceed HGT limitations of Eastern Transitional Surface for Runway 02 and Runway 20. Pilots to exercise caution.
o.	Concrete hut, arm barrier and fences, 19.3ft AGL.	Erected at 012032N 1035405E, Exceed HGT limitations of Take-Off Climb Surface for RWY 20. Pilots to exercise caution.
p.	ILS GP huts co-located with GP antenna mast, 49ft AGL, marked and lighted.	GP RWY 02 located 263ft west of western edge of RWY and 858ft from RWY 02 THR. GP RWY 20 located 266ft west of western edge of RWY and 950ft from RWY 20 THR.

WSAP AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	*Associated MET Office*	Paya Lebar (WSAP)
2	*Hours of service*	H24
3	*Office responsible for TAF preparation and Periods of validity*	Paya Lebar (WSAP), 9, 24
4	*Type of landing forecast and Interval of issuance*	NIL
5	*Briefing/consultation provided*	P
6	*Flight documentation and Language(s) used*	Charts or Tabular forms, English
7	*Charts and other information available for briefing or consultation*	S, U, P
8	*Supplementary equipment available for providing information*	APT, WXR
9	*ATS units provided with information*	-
10	*Additional information*	Tel : 63813156 (Met Office)

WSAP AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	**TRUE & MAG BRG**	**Dimensions of RWY (m)**	**Strength (PCR) and surface of RWY/SWY**	**THR Coordinates**	**THR elevation and highest elevation of TDZ of precision APCH RWY**
1	2	3	4	5	6
02	023° GEO 023° MAG	3780 x 61	502/F/B/X/U Bituminous concrete	012041.08N 1035410.36E	12.9 M (43ft)
20	203° GEO 203° MAG	3780 x 61	502/F/B/X/U Bituminous concrete	012234.41N 1035458.53E	19.7 M (65ft)
Designations RWY NR	*Slope of (RWY - SWY)*	*Dimensions of SWY (m)*	*Dimensions of CWY (m)*	*Dimensions of Strip*	*OFZ*
1	7	8	9	10	11
02	-	300x61	300x150	-	-
20	-	300x61	300x150	-	-

12	*Remarks*
a.	Intensive fixed wing flying operation west of runway.
b.	Helizone adjacent west of runway up to 800ft QNH.
c.	Arrestor Barrier both ends of runway. Pilots are to land at least 500ft up the THR of RWY in use.
d.	Hookwire cable installed 335m inwards from RWY 20 THR and 360m inwards from RWY 02 THR.
e.	Intense bird activity after rain, and up to 2 hour after dusk and dawn.
f.	Pilots making approaches for RWY 20 are to take note of the high ground, 32m AMSL, 1NM north of RWY 20 THR and to exercise caution.
g.	Threshold markings consist of 16 stripes.

WSAP AD 2.13 DECLARED DISTANCES

RWY Designator	**TORA (m)**	**TODA (m)**	**ASDA (m)**	**LDA (m)**	**Remarks**
1	2	3	4	5	6
02	3780	4080	4080	3780	NIL
20	3780	4080	4080	3780	NIL

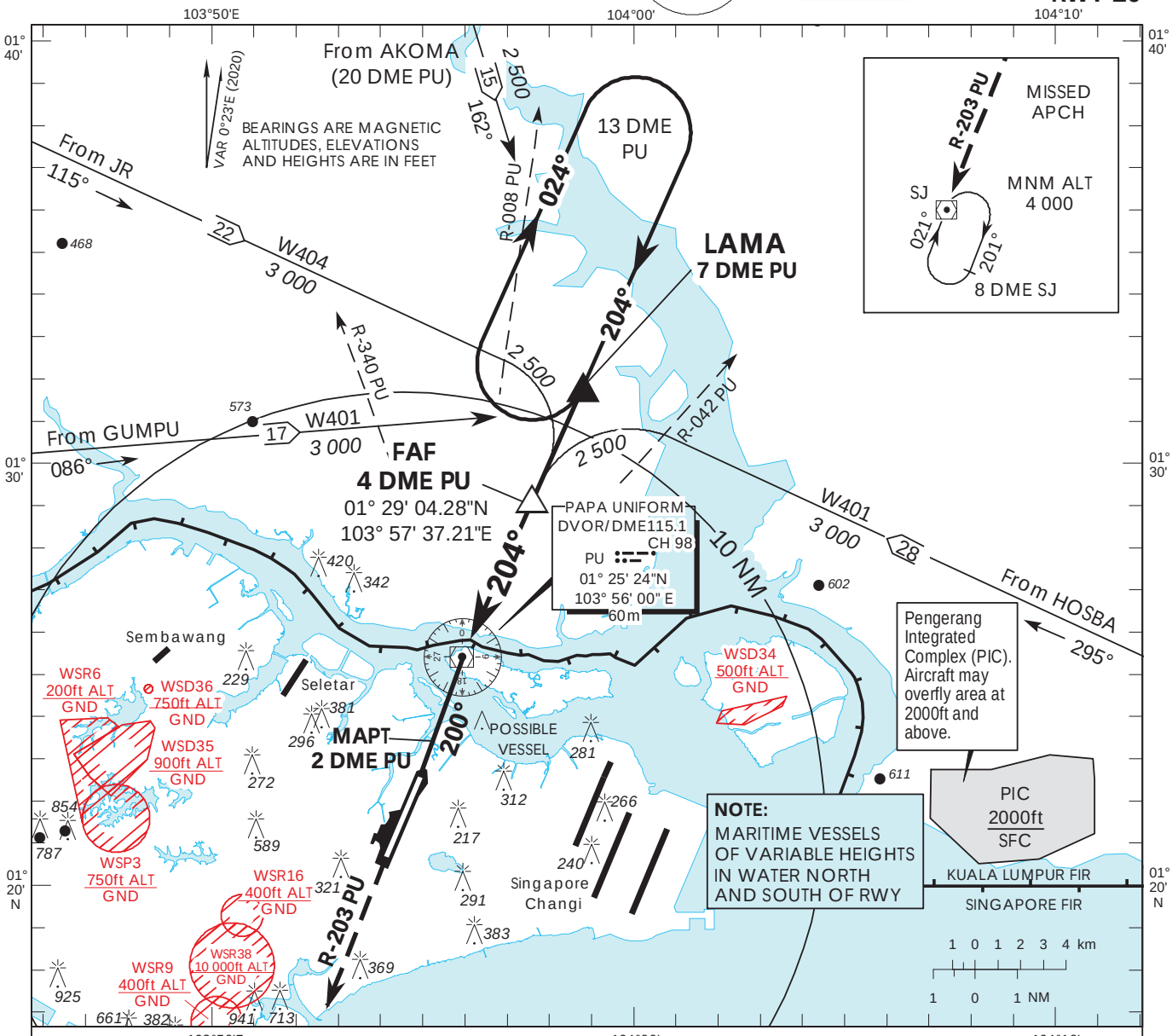
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO AD ELEV - 65ft

MSA 25 NM from PAPA UNIFORM DVOR
3400' 180° 2900' 090° 270° 2100'

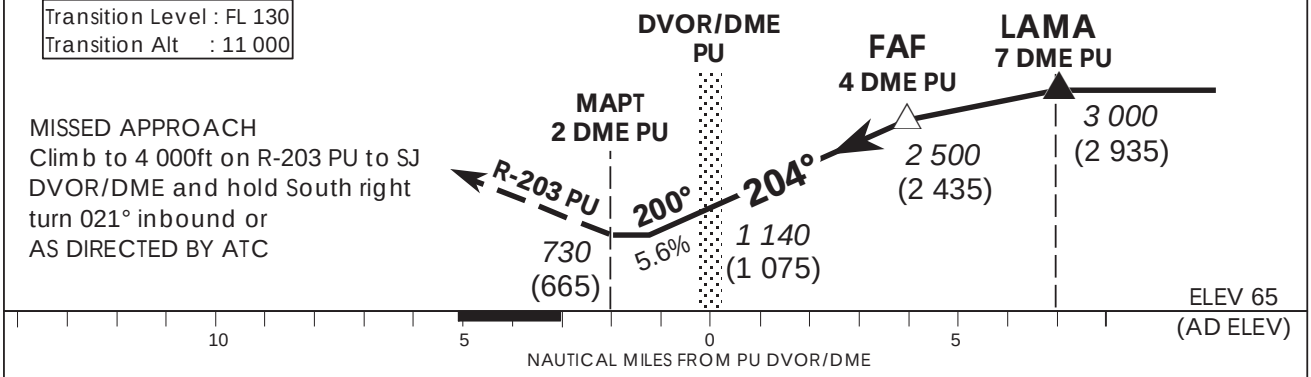
APP	124.05
	119.9
	126.025
TWR	118.05

SINGAPORE/ PAYA LEBAR
PU DVOR/DME RWY 20



Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH
Climb to 4 000ft on R-203 PU to SJ DVOR/DME and hold South right turn 021° inbound or AS DIRECTED BY ATC



OCA (OCH)				
Category of Aircraft	A	B	C	D
Straight-in	**730 (665)**			

Distance	3 DME	2 DME	1 DME	PU DVOR/DME	1 DME
Altitude (Height)	**2160 (2095)**	**1820 (1755)**	**1480 (1415)**	**1140 (1075)**	**800 (735)**
Speed	knots	70	120	150	185
FAF - MAPT 6nm	min : s	**5 : 09**	**3 : 00**	**2 : 24**	**1 : 57**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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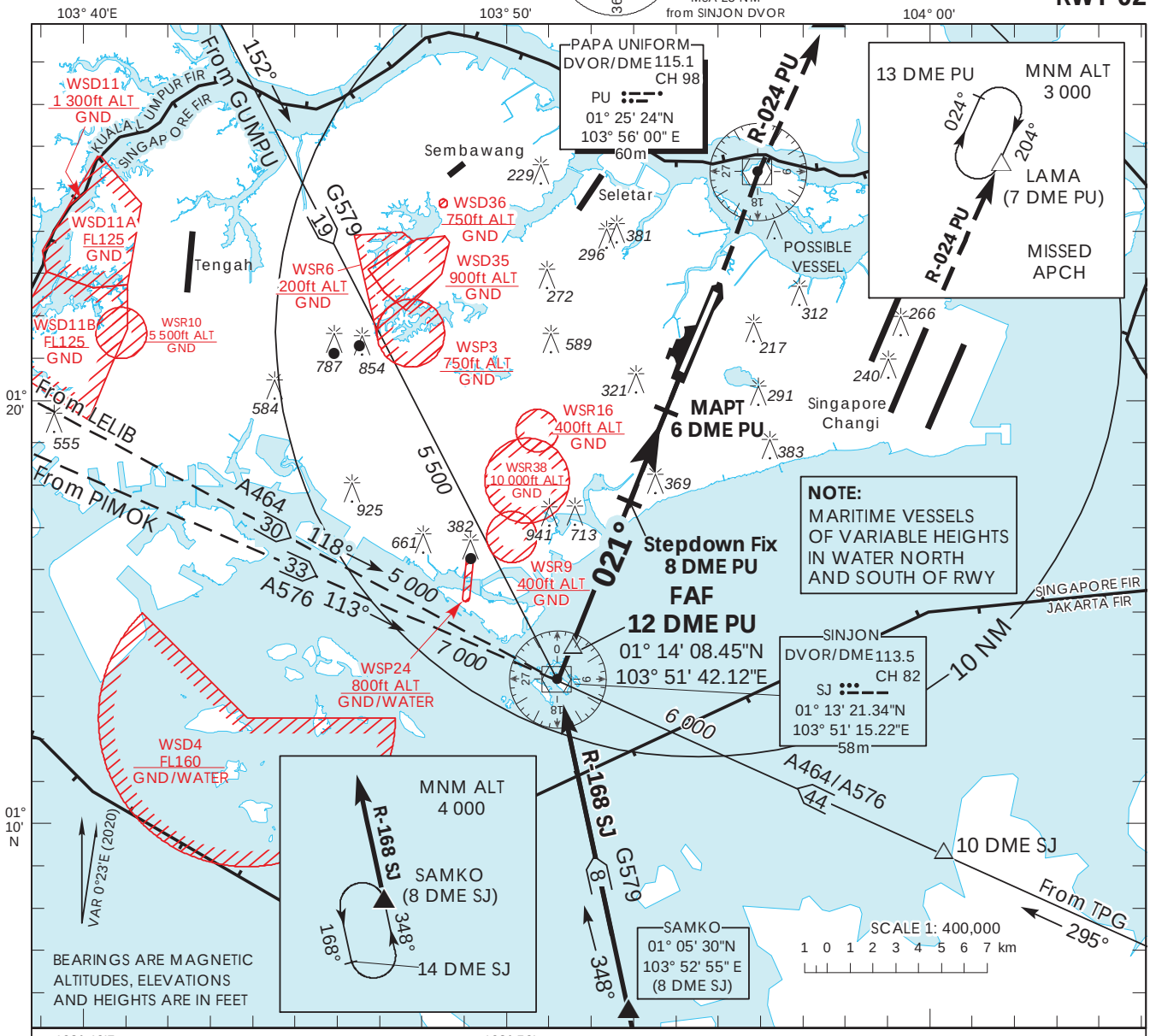
INSTRUMENT APPROACH CHART - ICAO

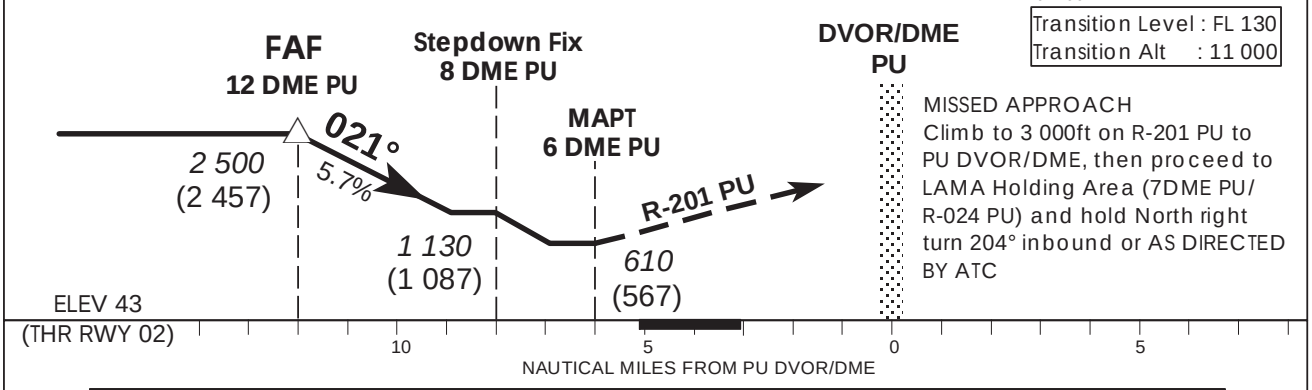
AERODROME ELEV 65ft
HEIGHT RELATED TO
THR RWY 02 - ELEV 43ft

MSA 25 NM from SINJON DVOR
3400' 090° 2100' 180° 2500' 360°

APP 124.05
119.9
126.025
TWR 118.05

SINGAPORE/ PAYA LEBAR
PU DVOR/DME RWY 02





Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH
Climb to 3 000ft on R-201 PU to PU DVOR/DME, then proceed to LAMA Holding Area (7DME PU/ R-024 PU) and hold North right turn 204° inbound or AS DIRECTED BY ATC

OCA (OCH)				
Category of Aircraft	A	B	C	D
Straight-in (with stepdown fix)	**610 (567)**			
Straight-in (without stepdown fix)	**1 130 (1 087)**			

Distance	11 DME	10 DME	9 DME	8 DME	7 DME
Altitude (Height)	**2170 (2127)**	**1820 (1777)**	**1470 (1427)**	**1130 (1087)**	**780 (737)**
Speed	knots	70	120	150	185
FAF - MAPT 6nm	min : s	**5 : 09**	**3 : 00**	**2 : 24**	**1 : 57**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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INSTRUMENT APPROACH CHART - ICAO

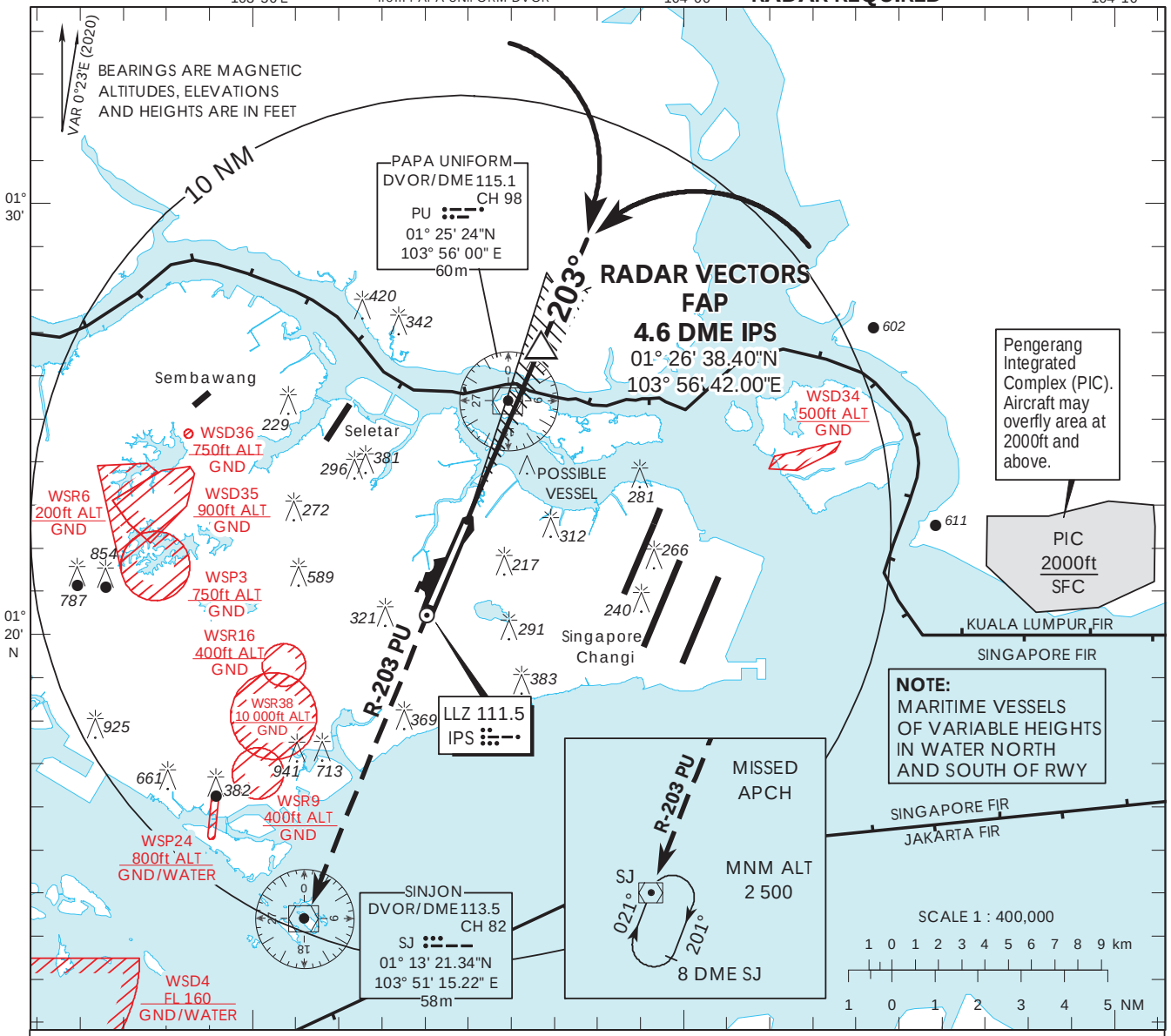
AERODROME ELEV 65ft
HEIGHT RELATED TO THR RWY 20 - 65ft

MSA 25 NM from PAPA UNIFORM DVOR
3400' 2900' 2100'

ATIS Paya Lebar	148.9	
Singapore APP	124.05	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

RADAR REQUIRED

SINGAPORE/ PAYA LEBAR
IPS ILS/DME RWY 20

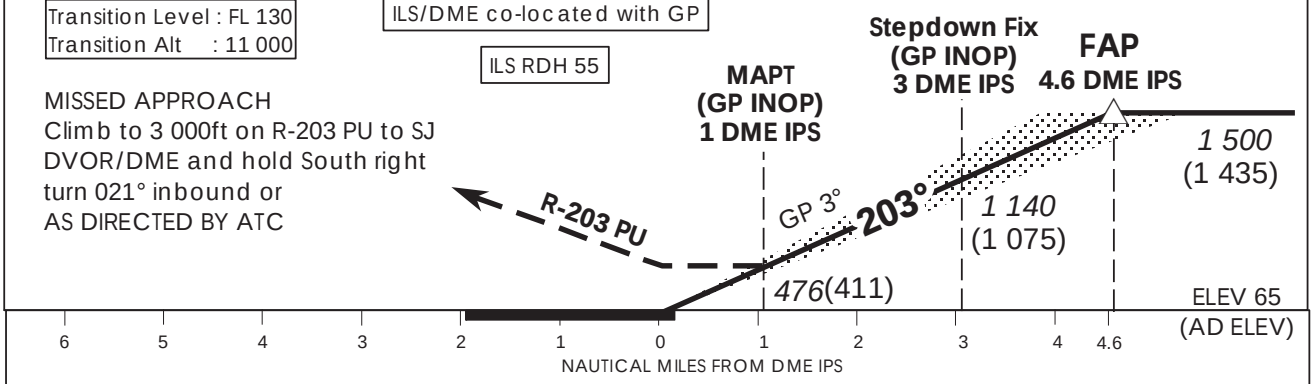


Transition Level : FL 130
Transition Alt : 11 000

ILS/DME co-located with GP

ILS RDH 55

MISSED APPROACH
Climb to 3 000ft on R-203 PU to SJ DVOR/DME and hold South right turn 021° inbound or AS DIRECTED BY ATC



OCA (OCH)					
Category of Aircraft		A	B	C	D
Straight-in	CAT I ILS	**194 (129)**	**204 (139)**	**214 (149)**	**224 (159)**
	GP INOP	**476 (411)**			

Distance		4 DME	3 DME	2 DME	
Altitude (Height)		**1300 (1235)**	**1140 (1075)**	**820 (755)**	
Speed	knots	70	120	150	185
FAF - MAPT 3.6nm	min : s	**3 : 06**	**1 : 48**	**1 : 27**	**1 : 11**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO
THR RWY 02 - ELEV 43ft

MSA 25 NM
from PAPA UNIFORM DVOR

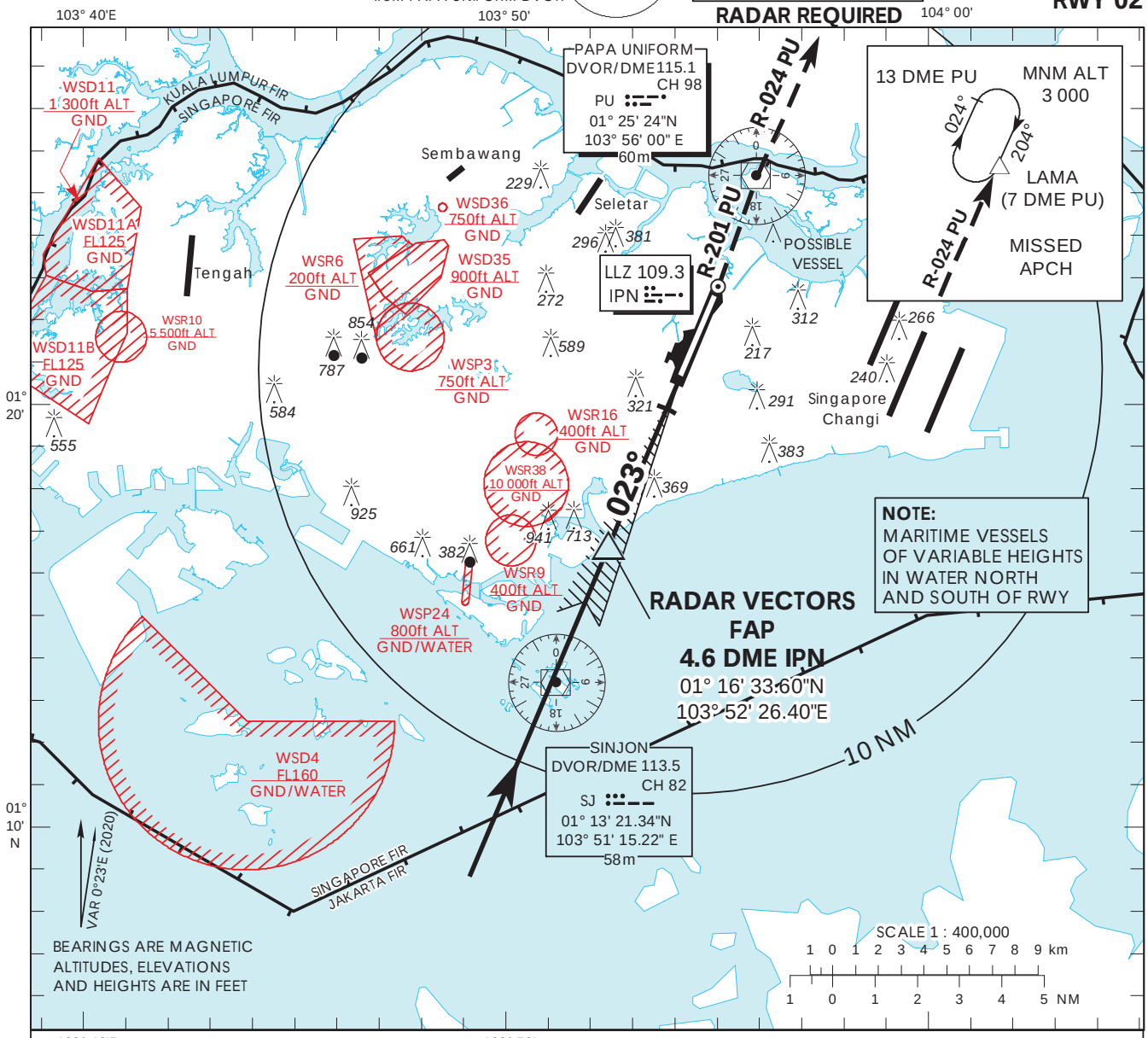
3400' 2900' 2100'

ATIS Paya Lebar	148.9	
Singapore APP	124.05	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

SINGAPORE/ PAYA LEBAR

IPN ILS/DME RWY 02

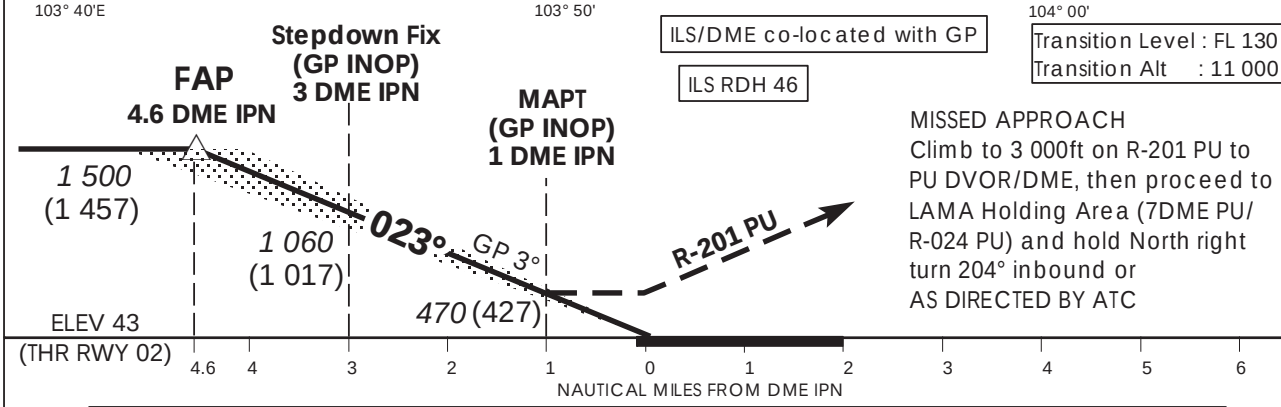
RADAR REQUIRED



ILS/DME co-located with GP

ILS RDH 46

Transition Level : FL 130
Transition Alt : 11 000



MISSED APPROACH
Climb to 3 000ft on R-201 PU to PU DVOR/DME, then proceed to LAMA Holding Area (7DME PU/ R-024 PU) and hold North right turn 204° inbound or AS DIRECTED BY ATC

OCA (OCH)					
Category of Aircraft		A	B	C	D
Straight-in	CAT I ILS	**178 (135)**	**188 (145)**	**198 (155)**	**208 (165)**
	GP INOP	**470 (427)**			

Distance	4 DME	3 DME	2 DME
Altitude (Height)	**1300 (1257)**	**1060 (1017)**	**740 (697)**

Speed	knots	70	120	150	185
FAF - MAPT 3.6nm	min : s	**3 : 06**	**1 : 48**	**1 : 27**	**1 : 11**
Rate of descent/GS	ft/min	**370**	**635**	**795**	**980**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 65ft
HEIGHT RELATED TO THR RWY 02 - 43ft

ATIS Paya Lebar	148.9	
Singapore APP	124.05	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

SINGAPORE/ PAYA LEBAR

RNP RWY 02

MSA 25 NM from PAYA LEBAR ARP

RADAR REQUIRED

103°50'E 104°00' 104°10'

01° 30' 01° 20' N 01° 10' N

VAR 0°23'E (2020)

BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS
AND HEIGHTS ARE IN FEET

(MATF)
ALDAM
01°27'49.57"N
103°57'12.64"E

022° 10 NM 4.3 NM

023° 7.7 NM

023° 4.5 NM

023° 5.0 NM

(MAPt)
RWY02
01°20'41.08"N
103°54'10.36"E

(FAP)
ALBUR
01°16'28.90"N
103°52'23.08"E

RADAR VECTORS
(IF)
ALBAV
01°11'52.85"N
103°50'25.65"E

MISSED APCH
MNM ALT 3 000
024°
204°
022°
LAMA
01°31'50.00"N
103°58'50.00"E

Sembawang
Seletar
Singapore Changi
POSSIBLE VESSEL

WSD34 500ft ALT GND
WSD36 750ft ALT GND
WSR6 200ft ALT GND
WSD35 900ft ALT GND
WSP3 750ft ALT GND
WSR16 400ft ALT GND
WSR38 10 000ft ALT GND
WSR9 400ft ALT GND
WSP24 800ft ALT GND/WATER
WSD4 FL 160 GND/WATER

PIC 2000ft SFC

KUALA LUMPUR FIR
SINGAPORE FIR
SINGAPORE FIR
JAKARTA FIR

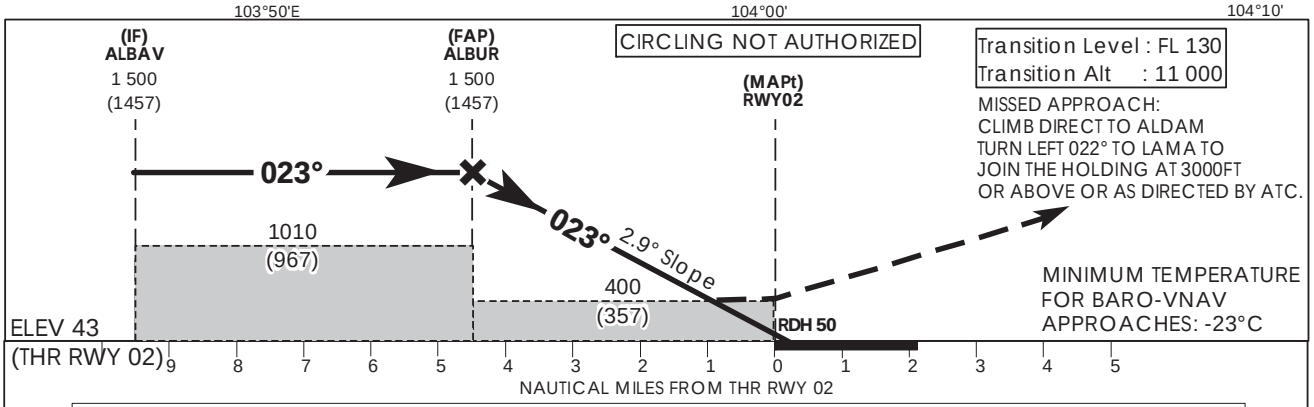
Pengerang Integrated Complex (PIC). Aircraft may overfly area at 2000ft and above.

NOTE:
MARITIME VESSELS OF VARIABLE HEIGHTS IN WATER NORTH AND SOUTH OF RWY

SCALE 1 : 400,000

1 0 1 2 3 4 5 6 7 8 9 km

1 0 1 2 3 4 5 NM



Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH:
CLIMB DIRECT TO ALDAM
TURN LEFT 022° TO LAMA TO
JOIN THE HOLDING AT 3000FT
OR ABOVE OR AS DIRECTED BY ATC.

MINIMUM TEMPERATURE FOR BARO-VNAV APPROACHES: -23°C

OCA (OCH)					
Category of Aircraft		A	B	C	D
LNAV/VNAV	2.5%	**400 (357)**			
LNAV	2.5%	**400 (357)**			

Fix		ALBAV	ALBUR	RWY02	ALDAM	LAMA
Altitude (Height)		**1500 (1457)**	**1500 (1457)**	**400 (357)**	**1250 (1207)**	**1910 (1867)**
Speed	knots	80	100	120	140	160	180
FAP - MAPt 4.5 nm	min : s	**3 : 23**	**2 : 42**	**2 : 15**	**1 : 56**	**1 : 41**	**1 : 30**
Rate of descent/GS	ft/min	**410**	**513**	**615**	**718**	**821**	**923**

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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INSTRUMENT APPROACH CHART - ICAO

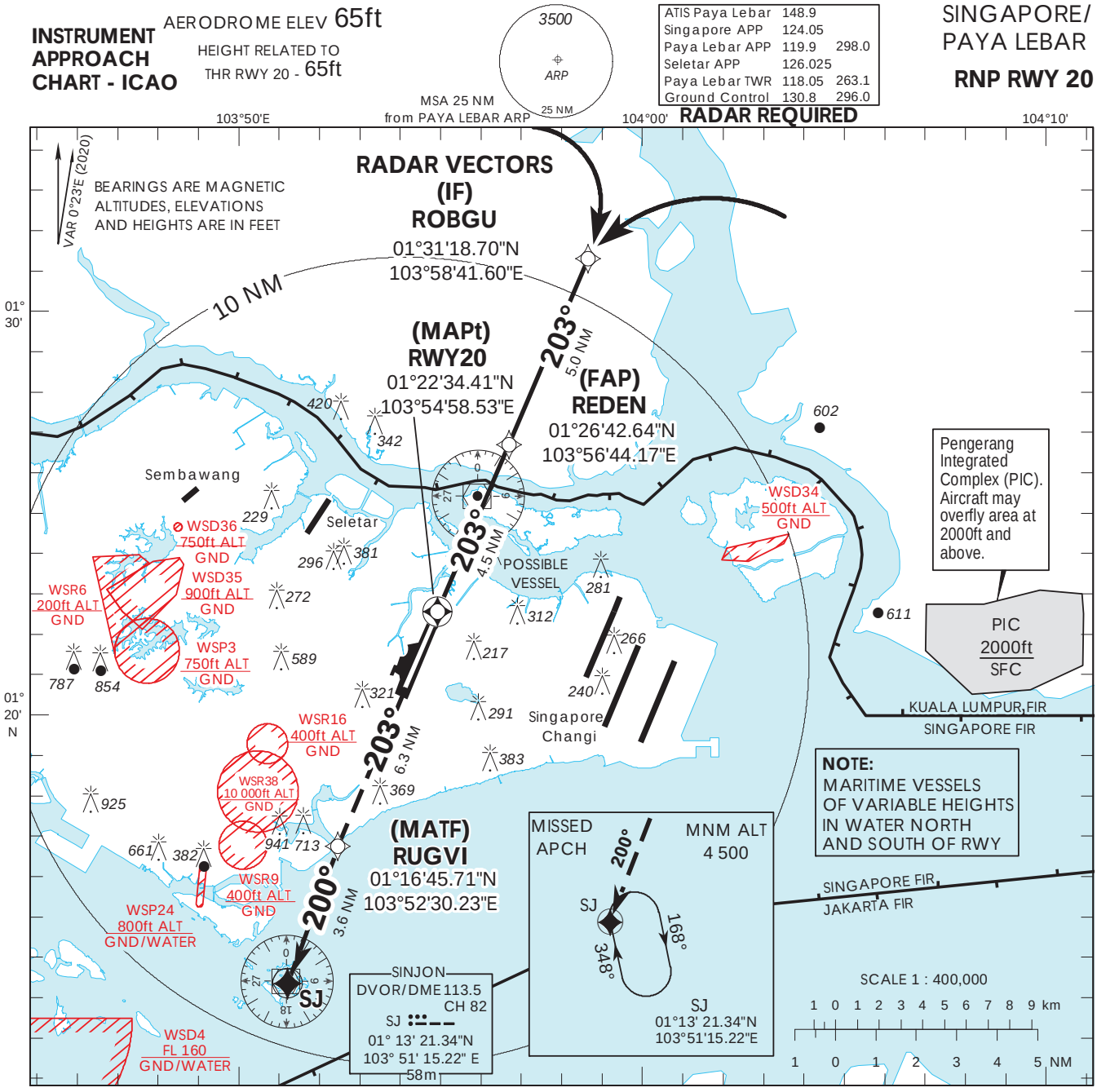
AERODROME ELEV 65ft

HEIGHT RELATED TO THR RWY 20 - 65ft

ATIS Paya Lebar	148.9	
Singapore APP	124.05	
Paya Lebar APP	119.9	298.0
Seletar APP	126.025	
Paya Lebar TWR	118.05	263.1
Ground Control	130.8	296.0

SINGAPORE/ PAYA LEBAR

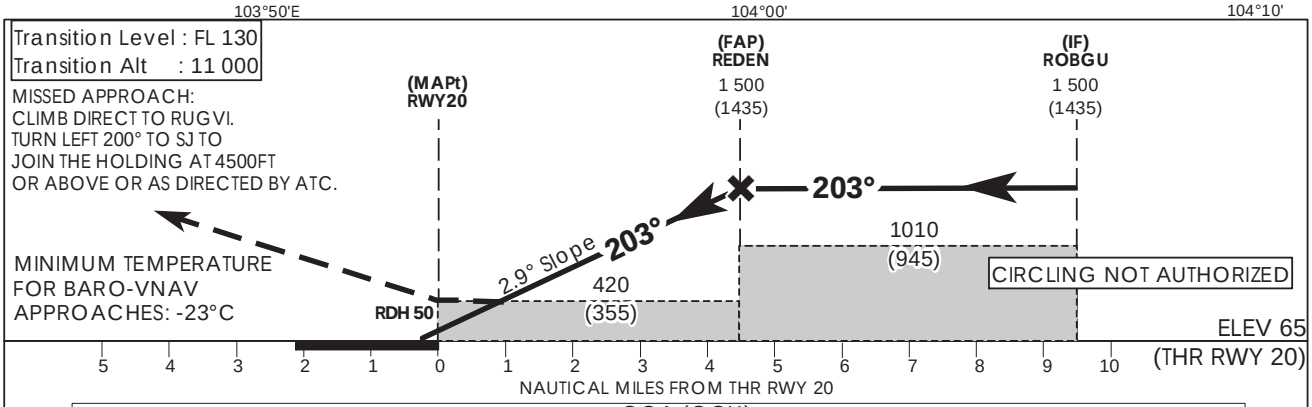
RNP RWY 20



Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH:
CLIMB DIRECT TO RUGVI.
TURN LEFT 200° TO SJ TO
JOIN THE HOLDING AT 4500FT
OR ABOVE OR AS DIRECTED BY ATC.

MINIMUM TEMPERATURE
FOR BARO-VNAV
APPROACHES: -23°C



OCA (OCH)					
Category of Aircraft		A	B	C	D
LNAV/VNAV	2.5%	420 (355)			
LNAV	2.5%	420 (355)			

Fix		ROBGU	REDEN	RWY20	RUGVI	SINJON
Altitude (Height)		1500 (1435)	1500 (1435)	420 (355)	1030 (965)	1580 (1515)
Speed	knots	80	100	120	140	160	180
FAP - MAPt 4.5 nm	min : s	3 : 23	2 : 42	2 : 15	1 : 56	1 : 41	1 : 30
Rate of descent/GS	ft/min	410	513	615	718	821	923

CHANGES : Revision to Restricted Areas WSR9 and WSR16

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WIDD — BATAM/HANG NADIM (INDONESIA)

Note: The following sections in this chapter are intentionally left blank:
AD 2.2, AD 2.3, AD 2.4, AD 2.5, AD 2.6, AD 2.7, AD 2.8, AD 2.9, AD 2.10, AD 2.11, AD 2.12, AD 2.13, AD 2.14, AD 2.15, AD 2.16, AD 2.19, AD 2.20, AD 2.21, AD 2.22, AD 2.23.

WIDD AD 2.1 AERODROME LOCATION INDICATOR AND NAME

WIDD — BATAM/HANG NADIM (INDONESIA)

WIDD AD 2.17 ATS AIRSPACE

1	*Designation and Lateral Limits*	Hang Nadim Vicinity of Aerodrome
2	*Vertical Limits*	Vicinity of Aerodrome
3	*Airspace Classification*	C
4	*ATS Unit Callsign*	HANG NADIM TOWER
5	*Language(s)*	English
6	*Transition Altitude*	11000 FT / FL 130
7	*Hours of applicability*	H24
8	*Remarks*	Nil

WIDD AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Callsign	Channel	SATVOICE number (s)	Logon Address	Hours of operation	Remarks
TWR	Hang Nadim Tower	118.7 MHz 118.3 MHz (SRY)	Nil	Nil	H24	Nil
	Hang Nadim Ground	121.95 MHz	Nil	Nil	H24	Nil
ATIS	Nil	126.25 MHz	Nil	Nil	H24	Nil

WIDD AD 2.24 CHARTS RELATED TO AN AERODROME

See AIP Indonesia WIDD AD 2.24.

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