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eAIP

AMDT
01/2021
Effective date
25 FEB 2021
Publication date
25 FEB 2021

wp-AMDT-2021-01

1 Significant information and changes

1.1 Singapore Changi Airport

a. Incorporation of AIRAC AIP SUP 020/2021 – Revision to Instrument Approach Charts RNP RWY 02R and RNP RWY 20L.

1.2 Seletar Airport

a. New departure speed restrictions for Runway 21 departures cleared via KK.

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 This amendment incorporates information contained in the listed AIP Supplements and NOTAMs which are hereby superseded:

AIP Supplement

AIRAC 020/2021 dated 14/01/2021

NOTAMs

A5411/20 dated 24/12/2020
A5412/20 dated 24/12/2020
A5413/20 dated 24/12/2020
A0235/21 dated 15/01/2021
A0236/21 dated 15/01/2021
A0274/21 dated 18/01/2021

Amended Pages

GEN 0.1-1/2: *: replace.*
GEN 0.2-1/2: *: replace.*
GEN 0.3-1/2: *: replace.*
GEN 0.3-3/4: *: replace.*
GEN 0.3-5/6: *: replace.*
GEN 0.4-1/2: *: replace.*
GEN 0.4-3: *: replace.*
GEN 1.6-1/2: *: replace.*
GEN 3.2-3/4: *: replace.*
ENR 1.6-3/4: *: replace.*
ENR 1.10-1/2: *: replace.*
ENR 1.10-3: *: replace.*
ENR 3.3-11/12: *: replace.*
ENR 3.3-23/24: *: replace.*
AD 2.WSSS-5/6: *: replace.*
AD 2.WSSS-17/18: *: replace.*
AD 2.WSSS-19/20: *: replace.*

AD 2.WSSS-31/32:	*: replace.*
AD-2-WSSS-ADC-2:	*: replace.*
AD-2-WSSS-ADC-3:	*: replace.*
AD-2-WSSS-AOC-4:	*: replace.*
AD-2-WSSS-IAC-13 to 13.1:	*: replace.*
AD-2-WSSS-IAC-14 to 14.1:	*: replace.*
AD 2.WSSL-23/24:	*: replace.*
AD 2.WSSL-25:	*: replace.*
AD-2-WSSL-VDC-2 to 2.1:	*: insert.*
AD-2-WSSL-VDC-2:	*: remove.*
AD 2.WSAT-3/4:	*: replace.*
AD 2.WSAT-5/6:	*: replace.*
AD 2.WSAT-7/8:	*: replace.*
AD-2-WSAT-ADC-1:	*: replace.*

Part 1 — General (GEN)

GEN 0

GEN 0.1 PREFACE

1 Name of the publishing authority

1.1 The Singapore Aeronautical Information Products are published by authority of the Civil Aviation Authority of Singapore.

2 Applicable ICAO documents

- ICAO Annex 15 - Aeronautical Information Service;
- ICAO Annex 4 - Aeronautical Charts;
- ICAO Doc 8126 - AIS Manual;
- ICAO Doc 8697 - Aeronautical Chart Manual.
- ICAO Doc 10066 - Procedures for Air Navigation Services - Aeronautical Information Management (PANS-AIM)

2.1 Differences to ICAO Standards, Recommended Practices and Procedures are listed under subsection GEN 1.7.

3 Publication Media

3.1 The Singapore Aeronautical Information Products comprising AIP Singapore, AIP Amendments, AIP Supplements, Aeronautical Information Circulars and NOTAM Lists, including NOTAMs and Pre-Flight Information Bulletins are available for retrieval from AIM-SG URL https://aim-sg.caas.gov.sg

4 The AIP structure and established regular amendment interval

4.1 The AIP structure

The AIP forms part of the Aeronautical Information Products, details of which are given in subsection GEN 3.1. The principal AIP structure is shown in graphic form on page GEN 0.1-3.

The AIP is made up of three Parts, General (GEN), En-route (ENR) and Aerodromes (AD), each divided into sections and subsections as applicable, containing various types of information.

4.1.1 *PART 1 — GENERAL (GEN)*

Part 1 consists of five sections containing information briefly described hereafter.

GEN 0 - Preface; Record of AIP Amendments; Record of current AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP; and Table of Contents to Part 1.

GEN 1 - *National regulations and requirements* - Designated authorities; Entry, transit and departure of aircraft; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; Aircraft instruments, equipment and flight documents; Summary of national regulations and international agreements/conventions; and Differences from ICAO Standards, Recommended Practices and Procedures.

GEN 2 - *Tables and codes* - Measuring system, aircraft markings, holidays; Abbreviations used in AIS publications; Chart symbols; Location indicators; List of radio navigation aids; Conversion tables; and Sunrise/Sunset tables.

GEN 3 - *Services* - Aeronautical Information Services; Aeronautical Charts; Air Traffic Services; Communication Services; Meteorological Services; and Search and Rescue.

GEN 4 - *Charges for aerodromes and air navigation services* - Aerodrome charges and Air navigation services charges.

4.1.2 *PART 2 — EN-ROUTE (ENR)*

Part 2 consists of seven sections containing information briefly described hereafter.

ENR 0 - Table of Contents to Part 2.

ENR 1 - *General rules and procedures* - General rules; Visual flight rules; Instrument flight rules; ATS airspace classification; Holding, approach and departure procedures; Radar services and procedures; Altimeter setting procedures; Regional supplementary procedures; Air traffic flow management; Flight planning; Addressing of flight plan messages; Interception of civil aircraft; Unlawful interference; and Air traffic incidents.

ENR 2 - *Air traffic services airspace* - Detailed description of Flight Information Region (FIR); Terminal Control Areas (TMA); and other regulated airspace.

ENR 3 - *ATS routes* - Detailed description of ATS routes; Area Navigation Routes; Helicopter Routes; other routes; and en-route holding.

Note - Other types of routes which are specified in connection with procedures for traffic to and from aerodromes are described in the relevant sections and subsections of Part 3 - Aerodromes.

ENR 4 - *Radio navigation aids/systems* - Radio navigation aids - en-route; special navigation systems; name-code designators for significant points; and aeronautical ground lights - en-route.

ENR 5 - *Navigation warnings* - Prohibited, restricted and danger areas; military exercise and training areas; other activities of a dangerous nature; air navigation obstacles - en-route; aerial sporting and recreational activities; and bird migration and areas with sensitive fauna.

ENR 6 - *En-route charts* - En-route Chart - ICAO.

4.1.3 *PART 3 - AERODROMES (AD)*

Part 3 consists of three sections containing information briefly described hereafter.

AD 0 - Table of Contents to Part 3.

AD 1 - *Aerodromes* - Introduction - Aerodromes availability; Rescue and fire fighting services; Index to aerodromes; and Grouping of aerodromes.

AD 2 - *Aerodromes* - Detailed information about aerodromes listed under 24 sub-sections.

AD 3 - This section has been omitted as there are no heliports in Singapore.

4.2 Regular Amendment Interval

Regular amendments to AIP Singapore will be issued once every two months. The publication dates will be on alternate AIRAC effective dates as follows:

Amendment Number	Publication Date
01/2021	25 February 2021
02/2021	22 April 2021
03/2021	17 June 2021
04/2021	12 August 2021
05/2021	07 October 2021
06/2021	02 December 2021

5 Service to contact in case of detected AIP errors or omissions

In the compilation of the AIP, care has been taken to ensure that the information contained therein is accurate and complete. Any errors and omissions which may nevertheless be detected, as well as any enquiries or suggestions concerning the Aeronautical Information Products, should be referred to:

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GEN 0.2 RECORD OF AIP AMENDMENTS

AIP AMENDMENT

NR/Year	*Publication date*	*Date inserted*	*Inserted by*
5/2014	18 SEP 2014	18 SEP 2014	
6/2014	13 NOV 2014	13 NOV 2014	
1/2015	08 JAN 2015	08 JAN 2015	
2/2015	05 MAR 2015	05 MAR 2015	
3/2015	30 APR 2015	30 APR 2015	
4/2015	25 JUN 2015	25 JUN 2015	
5/2015	20 AUG 2015	20 AUG 2015	
6/2015	15 OCT 2015	15 OCT 2015	
07/2015	10 DEC 2015	10 DEC 2015	
01/2016	04 FEB 2016	04 FEB 2016	
02/2016	31 MAR 2016	31 MAR 2016	
03/2016	26 MAY 2016	26 MAY 2016	
04/2016	21 JUL 2016	21 JUL 2016	
05/2016	15 SEP 2016	15 SEP 2016	
06/2016	10 NOV 2016	10 NOV 2016	
01/2017	05 JAN 2017	05 JAN 2017	
02/2017	02 MAR 2017	02 MAR 2017	
03/2017	27 APR 2017	27 APR 2017	
04/2017	22 JUN 2017	22 JUN 2017	
05/2017	17 AUG 2017	17 AUG 2017	
06/2017	12 OCT 2017	12 OCT 2017	
07/2017	07 DEC 2017	07 DEC 2017	
01/2018	01 FEB 2018	01 FEB 2018	
02/2018	29 MAR 2018	29 MAR 2018	
03/2018	24 MAY 2018	24 MAY 2018	
04/2018	19 JUL 2018	19 JUL 2018	
05/2018	13 SEP 2018	13 SEP 2018	

AIP AMENDMENT

NR/Year	*Publication date*	*Date inserted*	*Inserted by*
06/2018	08 NOV 2018	08 NOV 2018	
01/2019	03 JAN 2019	03 JAN 2019	
02/2019	28 FEB 2019	28 FEB 2019	
03/2019	25 APR 2019	25 APR 2019	
04/2019	20 JUN 2019	20 JUN 2019	
05/2019	15 AUG 2019	15 AUG 2019	
06/2019	10 OCT 2019	10 OCT 2019	
07/2019	05 DEC 2019	05 DEC 2019	
01/2020	30 JAN 2020	30 JAN 2020	
02/2020	26 MAR 2020	26 MAR 2020	
03/2020	21 MAY 2020	21 MAY 2020	
04/2020	16 JUL 2020	16 JUL 2020	
05/2020	10 SEP 2020	10 SEP 2020	
06/2020	05 NOV 2020	05 NOV 2020	
07/2020	31 DEC 2020	31 DEC 2020	
01/2021	25 FEB 2021	25 FEB 2021	

GEN 0.3 RECORD OF CURRENT AIP SUPPLEMENTS

NR/Year	*Subject*	*AIP section(s) affected*	*Period of validity (from/to)*	*Cancellation record*
006/2018	Paya Lebar Airport - Topless Crane and Luffer Crane	AD	*22 JAN 2018 / 28 FEB 2021*	
021/2018	Paya Lebar Airport - Luffer Crane and Saddle Cranes	AD	*06 APR 2018 / 31 DEC 2022*	
028/2018	Paya Lebar Airport - Saddle Cranes	AD	*20 JUN 2018 / 31 DEC 2022*	
029/2018	Paya Lebar Airport - Luffer Cranes	AD	*20 JUN 2018 / 31 DEC 2021*	
030/2018	Paya Lebar Airport - Luffer Crane and Topless Cranes	AD	*20 JUN 2018 / 31 DEC 2021*	
053/2018	Sembawang Aerodrome - Saddle Cranes	AD	*25 SEP 2018 / 31 DEC 2021*	
071/2018	Paya Lebar Airport - Saddle Cranes	AD	*13 NOV 2018 / 31 DEC 2023*	
077/2018	Paya Lebar Airport - Luffer Crane	AD	*28 NOV 2018 / 18 NOV 2021*	
078/2018	Paya Lebar Airport - Luffer Cranes	AD	*28 NOV 2018 / 30 DEC 2022*	
009/2019	Paya Lebar Airport - Luffer Cranes	AD	*01 JUN 2019 / 31 MAY 2021*	
028/2019	Paya Lebar Airport - Topless Cranes	AD	*27 MAR 2019 / 20 MAR 2021*	
029/2019	Paya Lebar Airport - Topless Cranes	AD	*27 MAR 2019 / 20 MAR 2021*	
030/2019	Paya Lebar Airport - Luffer Crane and Topless Cranes	AD	*27 MAR 2019 / 30 JUL 2021*	
031/2019	Paya Lebar Airport - Luffer Cranes	AD	*27 MAR 2019 / 28 JAN 2022*	
032/2019	Paya Lebar Airport - Topless Cranes	AD	*27 MAR 2019 / 09 MAR 2022*	
033/2019	Paya Lebar Airport - Luffer Crane	AD	*27 MAR 2019 / 31 DEC 2022*	
034/2019	Paya Lebar Airport - Saddle Cranes	AD	*27 MAR 2019 / 31 DEC 2022*	
035/2019	Paya Lebar Airport - Luffer Crane	AD	*27 MAR 2019 / 31 DEC 2022*	
044/2019	Paya Lebar Airport - Luffer Crane	AD	*04 APR 2019 / 13 MAR 2021*	
051/2019	Paya Lebar Airport - Luffer Crane	AD	*07 MAY 2019 / 22 APR 2021*	
053/2019	Paya Lebar Airport - Saddle Cranes and Luffer Crane	AD	*07 MAY 2019 / 31 DEC 2023*	
055/2019	Paya Lebar Airport - Topless Cranes	AD	*07 MAY 2019 / 25 APR 2021*	
060/2019	Paya Lebar Airport - Topless Crane	AD	*06 JUN 2019 / 14 NOV 2021*	
066/2019	Paya Lebar Airport - Luffing Crane	AD	*04 JUL 2019 / 16 JUN 2021*	
067/2019	Paya Lebar Airport - Topless Cranes	AD	*04 JUL 2019 / 30 JUN 2021*	
068/2019	Paya Lebar Airport - Luffing Crane	AD	*04 JUL 2019 / 30 DEC 2021*	
073/2019	Paya Lebar Airport - Luffer Cranes	AD	*19 AUG 2019 / 31 DEC 2021*	
075/2019	Paya Lebar Airport - Luffing Crane	AD	*19 AUG 2019 / 31 DEC 2021*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
091/2019	Paya Lebar Airport - Cranes	AD	*10 SEP 2019 / 30 DEC 2021*	
117/2019	Paya Lebar Airport - Luffing Crane	AD	*12 NOV 2019 / 31 MAR 2021*	
126/2019	Paya Lebar Airport - Luffer Cranes	AD	*12 NOV 2019 / 31 DEC 2022*	
004/2020	Paya Lebar Airport - Mobile Cranes	AD	*08 JAN 2020 / 20 JUN 2021*	
008/2020	Paya Lebar Airport - Luffing Crane	AD	*11 FEB 2020 / 05 APR 2021*	
009/2020	Paya Lebar Airport - Topless Cranes	AD	*11 FEB 2020 / 30 APR 2021*	
021/2020	Singapore Changi Airport - Long term closure of aircraft stand E5 at Terminal 2, Singapore Changi Airport	AD	*30 MAR 2020 / 30 DEC 2024*	
025/2020	Paya Lebar Airport - Luffing Cranes	AD	*10 MAR 2020 / 31 DEC 2021*	
029/2020	Paya Lebar Airport - Luffer Cranes	AD	*19 MAY 2020 / 05 APR 2021*	
031/2020	Paya Lebar Airport - Cranes	AD	*19 MAY 2020 / 31 MAR 2021*	
032/2020	Paya Lebar Airport - Luffing Cranes	AD	*19 MAY 2020 / 05 APR 2021*	
033/2020	Paya Lebar Airport - Cranes	AD	*19 MAY 2020 / 31 DEC 2021*	
034/2020	Paya Lebar Airport - Cranes	AD	*19 MAY 2020 / 31 DEC 2021*	
035/2020	Paya Lebar Airport - Luffing Crane	AD	*19 MAY 2020 / 30 DEC 2021*	
036/2020	Paya Lebar Airport - Cranes	AD	*19 MAY 2020 / 01 MAR 2021*	
037/2020	Paya Lebar Airport - Crawler Cranes	AD	*19 MAY 2020 / 10 APR 2021*	
038/2020	Paya Lebar Airport - Topless Cranes	AD	*19 MAY 2020 / 01 APR 2021*	
042/2020	Paya Lebar Airport - Crawler Crane	AD	*12 JUN 2020 / 05 MAY 2021*	
043/2020	Paya Lebar Airport - Topless Cranes	AD	*12 JUN 2020 / 31 MAY 2021*	
044/2020	Paya Lebar Airport - Obstacles	AD	*12 JUN 2020 / 31 DEC 2021*	
045/2020	Paya Lebar Airport - Topless Cranes	AD	*12 JUN 2020 / 01 MAY 2021*	
046/2020	Paya Lebar Airport - Luffer Crane	AD	*12 JUN 2020 / 31 MAR 2021*	
047/2020	Paya Lebar Airport - Saddle Crane	AD	*12 JUN 2020 / 16 APR 2021*	
048/2020	Paya Lebar Airport - Topless Cranes	AD	*31 JUL 2020 / 01 AUG 2021*	
049/2020	Paya Lebar Airport - Cranes	AD	*12 JUN 2020 / 15 MAY 2021*	
050/2020	Paya Lebar Airport - Mobile Crane	AD	*12 JUN 2020 / 30 APR 2021*	
051/2020	Paya Lebar Airport - Topless Crane	AD	*12 JUN 2020 / 12 APR 2021*	
052/2020	Paya Lebar Airport - Crawler Crane	AD	*12 JUN 2020 / 31 DEC 2021*	
053/2020	Sembawang Aerodrome - Saddle Cranes	AD	*15 JUN 2020 / 30 DEC 2021*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
056/2020	Paya Lebar Airport - Flat Top Cranes	AD	*16 JUL 2020 / 30 DEC 2021*	
057/2020	Paya Lebar Airport - Flat Top Cranes	AD	*16 JUL 2020 / 30 DEC 2021*	
058/2020	Sembawang Aerodrome - Mobile Crane	AD	*16 JUL 2020 / 24 JUN 2021*	
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*	
060/2020	Paya Lebar Airport - Topless Cranes	AD	*06 AUG 2020 / 30 JUN 2021*	
061/2020	Paya Lebar Airport - Luffer Cranes	AD	*06 AUG 2020 / 26 JUL 2021*	
062/2020	Paya Lebar Airport - Topless Cranes	AD	*06 AUG 2020 / 31 MAY 2021*	
063/2020	Paya Lebar Airport - Cranes	AD	*06 AUG 2020 / 19 JUN 2021*	
064/2020	Paya Lebar Airport - Luffing Crane	AD	*06 AUG 2020 / 30 MAR 2021*	
065/2020	Paya Lebar Airport - Cranes	AD	*06 AUG 2020 / 31 DEC 2021*	
066/2020	Paya Lebar Airport - Topless Cranes	AD	*06 AUG 2020 / 31 DEC 2021*	
067/2020	Paya Lebar Airport - Luffing Cranes	AD	*06 AUG 2020 / 01 AUG 2021*	
068/2020	Paya Lebar Airport - Topless Cranes	AD	*17 SEP 2020 / 01 SEP 2021*	
069/2020	Paya Lebar Airport - Mobile Crane	AD	*17 SEP 2020 / 27 AUG 2021*	
070/2020	Paya Lebar Airport - Mobile Crane	AD	*17 SEP 2020 / 27 AUG 2021*	
071/2020	Paya Lebar Airport - Topless Cranes	AD	*17 SEP 2020 / 29 AUG 2021*	
072/2020	Paya Lebar Airport - Luffing Cranes	AD	*17 SEP 2020 / 29 AUG 2021*	
073/2020	Paya Lebar Airport - Cranes	AD	*17 SEP 2020 / 01 JUN 2021*	
074/2020	Paya Lebar Airport - Luffer Cranes	AD	*17 SEP 2020 / 29 AUG 2021*	
075/2020	Paya Lebar Airport - Mobile Crane	AD	*17 SEP 2020 / 01 NOV 2021*	
076/2020	Paya Lebar Airport - Topless Crane	AD	*17 SEP 2020 / 01 SEP 2021*	
078/2020	Paya Lebar Airport - Luffer Crane	AD	*17 SEP 2020 / 06 AUG 2021*	
079/2020	Paya Lebar Airport - Luffer Cranes	AD	*17 SEP 2020 / 06 AUG 2021*	
080/2020	Paya Lebar Airport - Mobile Crane	AD	*17 SEP 2020 / 30 JUN 2021*	
081/2020	Paya Lebar Airport - Luffing Cranes	AD	*17 SEP 2020 / 30 DEC 2021*	
083/2020	Paya Lebar Airport - Cranes	AD	*17 SEP 2020 / 09 DEC 2021*	
086/2020	Paya Lebar Airport - Cranes	AD	*08 OCT 2020 / 20 DEC 2021*	
087/2020	Paya Lebar Airport - Topless Cranes	AD	*08 OCT 2020 / 01 MAY 2021*	
088/2020	Paya Lebar Airport - Mobile Cranes	AD	*08 OCT 2020 / 01 JUL 2021*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
089/2020	Paya Lebar Airport - Luffing Crane	AD	*08 OCT 2020 / 31 DEC 2021*	
090/2020	Paya Lebar Airport - Topless Cranes	AD	*08 OCT 2020 / 01 OCT 2021*	
091/2020	Paya Lebar Airport - Luffing Crane	AD	*08 OCT 2020 / 31 DEC 2021*	
092/2020	Paya Lebar Airport - Luffer Cranes	AD	*08 OCT 2020 / 31 DEC 2021*	
093/2020	Paya Lebar Airport - Mobile Cranes	AD	*08 OCT 2020 / 01 NOV 2021*	
094/2020	Paya Lebar Airport - Luffing Cranes	AD	*08 OCT 2020 / 01 OCT 2021*	
095/2020	Paya Lebar Airport - Flat Top Cranes	AD	*02 NOV 2020 / 31 DEC 2021*	
096/2020	Paya Lebar Airport - Luffing Cranes	AD	*08 OCT 2020 / 14 SEP 2021*	
097/2020	Paya Lebar Airport - Saddle Cranes	AD	*08 OCT 2020 / 31 DEC 2021*	
098/2020	Paya Lebar Airport - Topless Crane	AD	*08 OCT 2020 / 01 OCT 2021*	
099/2020	Paya Lebar Airport - Mobile Crane	AD	*08 OCT 2020 / 01 JUL 2021*	
100/2020	Singapore Changi Airport - Partial closure of taxilane R1 and temporary revision/removal of ground markings at taxilane R1 at Terminal 2	AD	*18 NOV 2020 / 12 MAY 2021*	
102/2020	Singapore Changi Airport -Closure of runway 02C/20C due to Changi East development works	AD	*03 DEC 2020 / 19 MAY 2021*	
103/2020	Paya Lebar Airport - Mobile Crane	AD	*12 NOV 2020 / 01 JUL 2021*	
104/2020	Paya Lebar Airport - Crawler Tower Crane	AD	*12 NOV 2020 / 01 JAN 2022*	
105/2020	Paya Lebar Airport - Mobile Crane	AD	*12 NOV 2020 / 25 FEB 2021*	
106/2020	Paya Lebar Airport - Cranes	AD	*12 NOV 2020 / 01 DEC 2021*	
107/2020	Paya Lebar Airport - Luffing Crane	AD	*12 NOV 2020 / 31 DEC 2021*	
108/2020	Paya Lebar Airport - Flat Top Cranes	AD	*12 NOV 2020 / 01 JUL 2021*	
109/2020	Paya Lebar Airport - Tower Crane	AD	*12 NOV 2020 / 24 OCT 2021*	
110/2020	Paya Lebar Airport - Tower Cranes	AD	*12 NOV 2020 / 01 JUL 2021*	
111/2020	Paya Lebar Airport - Topless Cranes	AD	*12 NOV 2020 / 19 OCT 2021*	
112/2020	Paya Lebar Airport - Luffer Cranes	AD	*12 NOV 2020 / 31 DEC 2021*	
113/2020	Paya Lebar Airport - Cranes	AD	*12 NOV 2020 / 31 DEC 2021*	
114/2020	Paya Lebar Airport - Luffer Cranes	AD	*12 NOV 2020 / 01 MAR 2021*	
115/2020	Sembawang Aerodrome - Mobile Crane	AD	*12 NOV 2020 / 13 SEP 2021*	
116/2020	Paya Lebar Airport - Tower Crane	AD	*08 DEC 2020 / 01 APR 2021*	
117/2020	Paya Lebar Airport - Cranes	AD	*08 DEC 2020 / 18 NOV 2021*	

NR/Year	Subject	AIP section(s) affected	Period of validity (from/to)	Cancellation record
118/2020	Paya Lebar Airport - Crawler Crane	AD	*08 DEC 2020 / 01 JUN 2021*	
119/2020	Paya Lebar Airport - Luffing Cranes	AD	*08 DEC 2020 / 31 OCT 2021*	
120/2020	Paya Lebar Airport - Mobile Crane	AD	*08 DEC 2020 / 01 JUN 2021*	
121/2020	Paya Lebar Airport - Mobile Crane	AD	*08 DEC 2020 / 01 JUN 2021*	
122/2020	Paya Lebar Airport - Cranes	AD	*08 DEC 2020 / 31 DEC 2021*	
123/2020	Paya Lebar Airport - Luffer Cranes	AD	*08 DEC 2020 / 01 DEC 2021*	
001/2021	Singapore Changi Airport - Closure of taxiway L9 and taxiway EP between taxiway L8 and L11	AD	*31 JAN 2021 / 19 MAY 2021*	
002/2021	Paya Lebar Airport - Cranes	AD	*14 JAN 2021 / 01 FEB 2022*	
003/2021	Paya Lebar Airport - Topless Cranes	AD	*14 JAN 2021 / 01 FEB 2022*	
004/2021	Paya Lebar Airport - Mobile Crane	AD	*14 JAN 2021 / 01 JAN 2022*	
005/2021	Paya Lebar Airport - Topless Cranes	AD	*14 JAN 2021 / 01 FEB 2022*	
006/2021	Paya Lebar Airport - Cranes	AD	*14 JAN 2021 / 01 JAN 2022*	
007/2021	Paya Lebar Airport - Mobile Cranes	AD	*14 JAN 2021 / 01 JUL 2021*	
008/2021	Paya Lebar Airport - Crawler Tower Cranes	AD	*14 JAN 2021 / 01 JAN 2022*	
009/2021	Paya Lebar Airport - Mobile Crane	AD	*14 JAN 2021 / 01 JUL 2021*	
010/2021	Paya Lebar Airport - Luffing Cranes	AD	*14 JAN 2021 / 15 DEC 2021*	
011/2021	Paya Lebar Airport - Cranes	AD	*14 JAN 2021 / 31 DEC 2021*	
012/2021	Paya Lebar Airport - Flat Top Cranes	AD	*14 JAN 2021 / 31 DEC 2021*	
013/2021	Paya Lebar Airport - Luffing Crane	AD	*14 JAN 2021 / 31 DEC 2021*	
014/2021	Paya Lebar Airport - Mobile Crane	AD	*14 JAN 2021 / 01 JUN 2021*	
015/2021	Paya Lebar Airport - Cranes	AD	*14 JAN 2021 / 01 NOV 2021*	
016/2021	Paya Lebar Airport - Luffing Tower Crane	AD	*14 JAN 2021 / 24 DEC 2021*	
017/2021	Paya Lebar Airport - Crawler Crane	AD	*14 JAN 2021 / 06 JUN 2021*	
018/2021	Paya Lebar Airport - Flat Top Cranes	AD	*14 JAN 2021 / 01 JAN 2022*	
019/2021	Paya Lebar Airport - Cranes	AD	*14 JAN 2021 / 31 DEC 2021*	
021/2021	Paya Lebar Airport - Cranes	AD	*08 FEB 2021 / 01 FEB 2022*	
022/2021	Paya Lebar Airport - Mobile Cranes	AD	*08 FEB 2021 / 15 NOV 2021*	
023/2021	Paya Lebar Airport - Tower Cranes	AD	*08 FEB 2021 / 19 JAN 2022*	
024/2021	Paya Lebar Airport - Mobile Cranes	AD	*08 FEB 2021 / 01 OCT 2021*	

NR/Year	*Subject*	*AIP section(s) affected*	*Period of validity (from/to)*	*Cancellation record*
025/2021	Paya Lebar Airport - Tower Crane	AD	*08 FEB 2021 / 15 JAN 2022*	
026/2021	Paya Lebar Airport - Topless Cranes	AD	*08 FEB 2021 / 01 MAR 2022*	
027/2021	Paya Lebar Airport - Mobile Crane	AD	*08 FEB 2021 / 01 JAN 2022*	
028/2021	Paya Lebar Airport - Topless Cranes	AD	*08 FEB 2021 / 01 DEC 2021*	
029/2021	Paya Lebar Airport - Mobile Crane	AD	*08 FEB 2021 / 12 JUL 2021*	
030/2021	Paya Lebar Airport - Topless Cranes	AD	*08 FEB 2021 / 01 JUL 2021*	
031/2021	Paya Lebar Airport - Luffing Tower Crane	AD	*08 FEB 2021 / 09 JAN 2022*	
032/2021	Paya Lebar Airport - Mobile Crane	AD	*08 FEB 2021 / 12 JUL 2021*	
033/2021	Paya Lebar Airport - Mobile Crane	AD	*08 FEB 2021 / 12 JUL 2021*	
034/2021	Paya Lebar Airport - Cranes	AD	*08 FEB 2021 / 01 FEB 2022*	
035/2021	Paya Lebar Airport - Cranes	AD	*08 FEB 2021 / 01 FEB 2022*	
036/2021	Paya Lebar Airport - Saddle Crane	AD	*08 FEB 2021 / 01 FEB 2022*	
037/2021	Sembawang Aerodrome - Crawler Crane	AD	*08 FEB 2021 / 31 DEC 2021*	
038/2021	Singapore Changi Airport - Closure of aircraft stand F50 at Terminal 2, Singapore Changi Airport	AD	*14 MAR 2021 / 31 AUG 2021*	

GEN 0.4 CHECKLIST OF AIP PAGES

Part 1 – General (GEN)

GEN 0

GEN 0.1-1	26 MAR 2020
GEN 0.1-2	25 FEB 2021
GEN-0.1-3	08 NOV 2018
GEN 0.2-1	13 SEP 2018
GEN 0.2-2	25 FEB 2021
GEN 0.3-1	25 FEB 2021
GEN 0.3-2	25 FEB 2021
GEN 0.3-3	25 FEB 2021
GEN 0.3-4	25 FEB 2021
GEN 0.3-5	25 FEB 2021
GEN 0.3-6	25 FEB 2021
GEN 0.4-1	25 FEB 2021
GEN 0.4-2	25 FEB 2021
GEN 0.4-3	25 FEB 2021
GEN 0.5-1	30 JAN 2020
GEN 0.6-1	05 NOV 2020
GEN 0.6-2	05 NOV 2020
GEN 0.6-3	31 DEC 2020

GEN 1

GEN 1.1-1	05 DEC 2019
GEN 1.1-2	25 APR 2019
GEN 1.2-1	05 NOV 2020
GEN 1.2-2	30 JAN 2020
GEN 1.2-3	30 JAN 2020
GEN 1.2-4	21 MAY 2020
GEN 1.2-5	30 JAN 2020
GEN 1.2-6	16 JUL 2020
GEN 1.2-7	30 JAN 2020
GEN 1.3-1	25 APR 2019
GEN 1.3-2	25 APR 2019
GEN 1.3-3	25 APR 2019
GEN 1.3-4	25 APR 2019
GEN 1.3-5	25 APR 2019
GEN-1.3/ARR PAX FLOW	25 APR 2019
GEN-1.3/DEP PAX FLOW 1	25 APR 2019
GEN-1.3/DEP PAX FLOW 2	25 APR 2019
GEN 1.4-1	20 JUN 2019
GEN 1.4-2	05 NOV 2020
GEN 1.4-3	05 NOV 2020
GEN 1.5-1	12 NOV 2015
GEN 1.6-1	26 MAR 2020
GEN 1.6-2	25 FEB 2021
GEN 1.6-3	05 NOV 2020
GEN 1.6-4	05 NOV 2020
GEN 1.7-1	31 DEC 2020
GEN 1.7-2	31 DEC 2020
GEN 1.7-3	31 DEC 2020
GEN 1.7-4	26 MAR 2020

GEN 2

GEN 2.1-1	12 NOV 2015
GEN 2.1-2	05 NOV 2020
GEN 2.2-1	02 MAR 2017
GEN 2.2-2	02 MAR 2017
GEN 2.2-3	02 MAR 2017
GEN 2.2-4	05 JAN 2017
GEN 2.2-5	10 NOV 2016
GEN 2.3-1	12 NOV 2015
GEN 2.3-2	12 NOV 2015
GEN 2.3-3	12 NOV 2015
GEN 2.4-1	25 APR 2019
GEN 2.5-1	28 FEB 2019
GEN-2.5-3	21 JUL 2016
GEN 2.6-1	12 NOV 2015
GEN 2.6-2	12 NOV 2015
GEN 2.7-1	05 DEC 2019

GEN 3

GEN 3.1-1	10 SEP 2020
GEN 3.1-2	10 OCT 2019
GEN 3.1-3	10 SEP 2020
GEN 3.1-4	10 SEP 2020
GEN 3.2-1	10 OCT 2019
GEN 3.2-2	31 MAR 2016
GEN 3.2-3	31 MAR 2016
GEN 3.2-4	25 FEB 2021
GEN 3.2-5	31 DEC 2020
GEN 3.2-6	31 MAR 2016
GEN 3.3-1	31 DEC 2020
GEN 3.3-2	05 NOV 2020
GEN 3.4-1	12 NOV 2015
GEN 3.4-2	10 SEP 2020
GEN 3.4-3	10 SEP 2020
GEN 3.4-4	10 SEP 2020
GEN 3.4-5	12 NOV 2015
GEN-3.4-7	10 SEP 2020
GEN-3.4-9	21 JUL 2016
GEN 3.5-1	25 APR 2019
GEN 3.5-2	31 DEC 2020
GEN 3.5-3	31 DEC 2020
GEN 3.5-4	31 DEC 2020
GEN 3.5-5	31 DEC 2020
GEN 3.5-6	31 DEC 2020
GEN 3.5-7	31 DEC 2020
GEN 3.5-8	31 DEC 2020
GEN 3.5-9	08 NOV 2018
GEN 3.6-1	12 NOV 2015
GEN 3.6-2	12 NOV 2015
GEN 3.6-3	12 NOV 2015
GEN 3.6-4	12 NOV 2015
GEN-3.6-5	21 JUL 2016

GEN 4

GEN 4.1-1	15 SEP 2016
GEN 4.2-1	24 MAY 2018
GEN 4.2-2	12 NOV 2015
GEN 4.2-3	12 NOV 2015
GEN 4.2-4	12 NOV 2015
GEN 4.2-5	12 NOV 2015
GEN 4.2-6	12 NOV 2015

Part 2 – EN-ROUTE (ENR)

ENR 0

ENR 0.6-1	31 DEC 2020
ENR 0.6-2	31 DEC 2020
ENR 0.6-3	15 AUG 2019
ENR 0.6-4	30 JAN 2020
ENR 0.6-5	30 JAN 2020
ENR 0.6-6	26 MAR 2020

ENR 1

ENR 1.1-1	25 APR 2019
ENR 1.1-2	12 NOV 2015
ENR 1.1-3	12 NOV 2015
ENR 1.1-4	12 NOV 2015
ENR 1.1-5	12 NOV 2015
ENR 1.1-6	12 NOV 2015
ENR 1.1-7	12 NOV 2015
ENR 1.1-8	12 NOV 2015
ENR 1.1-9	12 NOV 2015
ENR 1.1-10	08 NOV 2018
ENR 1.1-11	08 NOV 2018
ENR 1.1-12	08 NOV 2018
ENR 1.1-13	08 NOV 2018
ENR 1.1-14	08 NOV 2018
ENR 1.1-15	08 NOV 2018
ENR 1.2-1	21 JUL 2016
ENR 1.3-1	12 NOV 2015
ENR 1.4-1	12 NOV 2015
ENR 1.5-1	31 DEC 2020
ENR 1.5-2	31 DEC 2020
ENR 1.5-3	31 DEC 2020
ENR 1.5-4	31 DEC 2020
ENR 1.6-1	12 NOV 2015
ENR 1.6-2	12 NOV 2015
ENR 1.6-3	12 NOV 2015
ENR 1.6-4	25 FEB 2021
ENR 1.6-5	31 DEC 2020
ENR 1.6-6	31 DEC 2020
ENR 1.6-7	29 MAR 2018
ENR 1.6-8	29 MAR 2018
ENR-1.6-9	21 JUL 2016
ENR-1.6-11	21 JUL 2016
ENR 1.7-1	15 AUG 2019
ENR 1.7-2	15 AUG 2019
ENR 1.7-3	15 AUG 2019
ENR 1.7-4	15 AUG 2019
ENR 1.7-5	15 AUG 2019
ENR 1.7-6	15 AUG 2019
ENR 1.7-7	15 AUG 2019
ENR 1.8-1	10 OCT 2019
ENR 1.8-2	15 AUG 2019
ENR 1.8-3	15 AUG 2019
ENR 1.8-4	15 AUG 2019
ENR 1.8-5	15 AUG 2019
ENR 1.8-6	15 AUG 2019
ENR 1.8-7	29 MAR 2018
ENR 1.8-8	29 MAR 2018
ENR 1.8-9	29 MAR 2018
ENR 1.8-10	29 MAR 2018
ENR 1.8-11	29 MAR 2018
ENR 1.8-12	15 AUG 2019
ENR 1.8-13	15 AUG 2019
ENR 1.8-14	15 AUG 2019
ENR 1.8-15	15 AUG 2019
ENR 1.8-16	15 AUG 2019
ENR 1.8-17	15 AUG 2019
ENR 1.8-18	15 AUG 2019
ENR 1.8-19	15 AUG 2019
ENR 1.8-20	15 AUG 2019
ENR 1.8-21	15 AUG 2019
ENR 1.8-22	15 AUG 2019
ENR 1.8-23	15 AUG 2019
ENR 1.8-24	15 AUG 2019
ENR 1.8-25	05 DEC 2019
ENR 1.8-26	15 AUG 2019
ENR 1.8-27	15 AUG 2019
ENR 1.8-28	15 AUG 2019
ENR 1.8-29	15 AUG 2019
ENR 1.9-1	30 JAN 2020
ENR 1.9-2	30 JAN 2020
ENR 1.9-3	10 SEP 2020
ENR 1.9-4	10 SEP 2020
ENR 1.9-5	10 SEP 2020
ENR 1.9-6	30 JAN 2020
ENR 1.10-1	25 FEB 2021
ENR 1.10-2	25 FEB 2021
ENR 1.10-3	25 FEB 2021
ENR 1.11-1	16 JUL 2020
ENR 1.12-1	12 NOV 2015
ENR 1.12-2	12 NOV 2015
ENR 1.12-3	12 NOV 2015
ENR 1.12-4	12 NOV 2015
ENR 1.13-1	12 NOV 2015
ENR 1.14-1	10 DEC 2015
ENR 1.14-2	15 SEP 2016
ENR-1.14-3 to ENR-1.14-4	15 SEP 2016
ENR-1.14-5 to ENR-1.14-6	15 SEP 2016
ENR-1.14-7 to ENR-1.14-8	15 AUG 2019

ENR 2

ENR 2.1-1	03 JAN 2019
ENR 2.1-2	03 JAN 2019
ENR 2.1-3	03 JAN 2019
ENR 2.1-4	25 APR 2019
ENR-2.1-7	21 JUL 2016
ENR-2.1-9	10 SEP 2020
ENR-2.1-11A	21 JUL 2016
ENR-2.1-11B	21 JUL 2016
ENR-2.1-13	21 JUL 2016
ENR-2.1-15	05 NOV 2020

ENR 3

ENR 3.1-1	02 MAR 2017
ENR 3.1-2	02 MAR 2017

AD-2-WSSS-IAC-13 to 13.1	25 FEB 2021
AD-2-WSSS-IAC-14 to 14.1	25 FEB 2021
AD-2-WSSS-VAC-1	31 DEC 2020
AD 2.WSSL-1	10 SEP 2020
AD 2.WSSL-2	28 FEB 2019
AD 2.WSSL-3	15 AUG 2019
AD 2.WSSL-4	05 DEC 2019
AD 2.WSSL-5	21 MAY 2020
AD 2.WSSL-6	15 AUG 2019
AD 2.WSSL-7	15 AUG 2019
AD 2.WSSL-8	15 AUG 2019
AD 2.WSSL-9	15 AUG 2019
AD 2.WSSL-10	15 AUG 2019
AD 2.WSSL-11	15 AUG 2019
AD 2.WSSL-12	26 MAR 2020
AD 2.WSSL-13	05 DEC 2019
AD 2.WSSL-14	15 AUG 2019
AD 2.WSSL-15	10 SEP 2020
AD 2.WSSL-16	10 OCT 2019
AD 2.WSSL-17	05 NOV 2020
AD 2.WSSL-18	05 NOV 2020
AD 2.WSSL-19	15 AUG 2019
AD 2.WSSL-20	10 OCT 2019
AD 2.WSSL-21	05 NOV 2020
AD 2.WSSL-22	10 OCT 2019
AD 2.WSSL-23	25 FEB 2021
AD 2.WSSL-24	15 AUG 2019
AD 2.WSSL-25	25 FEB 2021
AD-2-WSSL-ADC-1	16 JUL 2020
AD-2-WSSL-ADC-2	16 JUL 2020
AD-2-WSSL-ADC-3	16 JUL 2020
AD-2-WSSL-AOC-1	16 JUL 2020
AD-2-WSSL-AOC-2	16 JUL 2020
AD-2-WSSL-VAC-1	16 JUL 2020
AD-2-WSSL-VAC-2	16 JUL 2020
AD-2-WSSL-VAC-3	16 JUL 2020
AD-2-WSSL-VAC-4	16 JUL 2020
AD-2-WSSL-VDC-1	16 JUL 2020
AD-2-WSSL-VDC-2 to 2.1	25 FEB 2021
AD-2-WSSL-VFR-1	31 DEC 2020
AD-2-WSSL-IFR-1	31 DEC 2020
AD-2-WSSL-IFR-2	31 DEC 2020
AD 2.WSAP-1	16 JUL 2020
AD 2.WSAP-2	19 JUL 2018
AD 2.WSAP-3	10 OCT 2019
AD 2.WSAP-4	19 JUL 2018
AD 2.WSAP-5	10 OCT 2019
AD 2.WSAP-6	12 OCT 2017
AD 2.WSAP-7	19 JUL 2018
AD 2.WSAP-8	10 SEP 2020
AD 2.WSAP-9	16 JUL 2020
AD 2.WSAP-10	16 JUL 2020
AD 2.WSAP-11	31 DEC 2020
AD-2-WSAP-ADC-1	16 JUL 2020
AD-2-WSAP-ADC-2	16 JUL 2020
AD-2-WSAP-AOC-1	16 JUL 2020
AD-2-WSAP-IAC-1	31 DEC 2020
AD-2-WSAP-IAC-2	31 DEC 2020
AD-2-WSAP-IAC-3	31 DEC 2020
AD-2-WSAP-IAC-4	31 DEC 2020
AD-2-WSAP-IAC-5	31 DEC 2020
AD-2-WSAP-IAC-6	31 DEC 2020
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	10 SEP 2020
AD 2.WSAT-6	25 FEB 2021
AD 2.WSAT-7	12 NOV 2015
AD 2.WSAT-8	25 FEB 2021
AD-2-WSAT-ADC-1	25 FEB 2021
AD 2.WSAG-1	16 JUL 2020
AD 2.WSAG-2	08 NOV 2018
AD 2.WSAG-3	10 SEP 2020
AD 2.WSAG-4	16 JUL 2020
AD 2.WMKJ-1	12 NOV 2015
AD 2.WIDD-1	12 NOV 2015
AD 2.WIDD-2	12 NOV 2015
AD-2-WIDD-SID-1	12 NOV 2015
AD-2-WIDD-SID-2	12 NOV 2015
AD-2-WIDD-SID-3	12 NOV 2015
AD-2-WIDD-SID-4	12 NOV 2015
AD-2-WIDD-STAR-1	12 NOV 2015
AD-2-WIDD-STAR-2	12 NOV 2015
AD-2-WIDD-STAR-3	12 NOV 2015
AD-2-WIDD-STAR-4	12 NOV 2015
AD 2.WIDN-1	03 JAN 2019
AD 2.WIDN-2	03 JAN 2019
AD-2-WIDN-SID-1	12 NOV 2015
AD-2-WIDN-SID-2	12 NOV 2015
AD-2-WIDN-SID-3	12 NOV 2015
AD-2-WIDN-SID-4	12 NOV 2015
AD-2-WIDN-STAR-1	12 NOV 2015
AD-2-WIDN-STAR-2	12 NOV 2015
AD-2-WIDN-STAR-3	21 JUL 2016
AD-2-WIDN-STAR-4	12 NOV 2015

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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 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
http://sso.agc.gov.sg
http://www.caas.gov.sg

Electronic versions of all Singapore legislation may be accessed via subscription to Lawnet at
http://www.lawnet.com.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 Tower
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	Cap. 41 (2014 Rev Ed.)
2	Civil Aviation Authority of Singapore (Airport Development Levy) Order 2018	S437/2018
3	Civil Aviation Authority of Singapore (Aviation Levy) Order 2018	S522/2018
4	Civil Aviation Authority of Singapore (Changi Airport) By-laws 2009	S313/2009
5	Civil Aviation Authority of Singapore (Changi Airport) Notification 2009	S293/2009
6	Civil Aviation Authority of Singapore (Composition of Offences) Regulations 2009	S315/2009
7	Civil Aviation Authority of Singapore (Licensing of Airport Operators) Regulations 2009	S311/2009
8	Civil Aviation Authority of Singapore (Price Control of Aeronautical Charges) Rules 2009	S298/2009
9	Civil Aviation Authority of Singapore (Seletar Airport) By-laws 2009	S314/2009
10	Civil Aviation Authority of Singapore (Seletar Airport) Notification 2009	S294/2009
11	Delegation of Powers	Cap. 41, N1
Air Navigation Act & related legislation		
12	Air Navigation Act	Cap. 6 (2014 Rev Ed.)
13	Air Navigation Order	Cap. 6, O2 (1990 Rev Ed.)
14	Air Navigation (101 - Unmanned Aircraft Operations) Regulations 2019	S833/2019
15	Air Navigation (119 – Air Operator Certification) Regulations 2018	S443/2018
16	Air Navigation (121 – Commercial Air Transport by Large Aeroplanes) Regulations 2018	S444/2018
17	Air Navigation (125 – Complex General Aviation) Regulations 2018	S501/2018

No	Legislation	Citation
18	Air Navigation (135 – Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018	S445/2018
19	Air Navigation (137 – Aerial Work) Regulations 2018	S502/2018
20	Air Navigation (91 – General Operating Rules) Regulations 2018	S441/2018
21	Air Navigation (98 – Special Operations) Regulations 2018	S442/2018
22	Air Navigation (99 - Breath Testing for Alcohol) Regulations 2019	S177/2019
23	Air Navigation (Aviation Security) Order	Cap. 6, O5
24	Air Navigation (Composition of Offences) Rules 2017	S667/2017
25	Air Navigation (Flight Crew Recency - Exemption) Order 2020	S347/2020
26	Air Navigation (Investigation of Accidents and Incidents) Order	Cap. 6, O7
27	Air Navigation (Licensing of Air Services) Regulations	Cap. 6, RG 2
28	Air Navigation (Paya Lebar and Tengah Aerodrome Fees) Order	Cap. 6, O1
29	Air Navigation (Prohibited Flights) Order	Cap. 6, O6
30	Air Navigation (Protected Areas) (No. 2) Order 2015	S435/2015
31	Air Navigation (Protected Areas) Order 2015	S350/2015
32	Air Navigation (Regulated Air Cargo Agents and Known Consignors) Regulations 2017	S166/2017
33	Air Navigation (Wreck and Salvage of Aircraft) Regulations	Cap. 6, RG 1
34	Designation of Authorised Persons	Cap. 6, N2
35	Use of Seletar Aerodrome	Cap. 6, N1
Other Acts & related legislation		
36	Carriage by Air Act	Cap. 32A (2001 Rev Ed.)
37	Carriage by Air (Parties to Conventions) Order	Cap. 32A, O1
38	Carriage by Air (Singapore Currency Equivalents) Order	Cap. 32A, O2
39	Carriage by Air (Montreal Convention, 1999) Act	Cap. 32B (2008 Rev Ed.)
40	Carriage by Air (Montreal Convention, 1999) (Exclusion from Convention) Order	Cap. 32B, O1
41	Tokyo Convention Act	Cap. 327 (1985 Rev Ed.)
42	Tokyo Convention (Convention Countries) Notification	Cap. 327, N1
43	Tokyo Convention (Protocol Countries) Notification 2019	S893/2019
44	Hijacking of Aircraft and Protection of Aircraft and International Airports Act	Cap. 124 (1997 Rev Ed.)
45	International Interests in Aircraft Equipment Act	Cap. 144B (2012 Rev Ed.)
46	Infrastructure Protection Act 2017	Act 41 of 2017
47	Immigration Act	Cap. 133 (2008 Rev Ed.)
48	Immigration (Authorised Places of Entry and Departure, and Rates) Notification 2012	S627/2012
49	Immigration Regulations	Cap. 133, RG 1
50	Arms and Explosives Act	Cap. 13 (2003 Rev Ed.)
51	Arms and Explosives (Aircraft Exemption) Rules	Cap. 13, R3
52	Arms and Explosives (Explosives) Rules	Cap. 13, R2
53	Arms and Explosives (Movement Control) Rules	Cap. 13, R4
54	International Organisations (Immunities and Privileges) Act	Cap. 145 (2013 Rev Ed.)
55	International Organisations (Immunities and Privileges) (International Civil Aviation Organisation) Order	Cap. 145, OR 4

k. **Visual Approach Chart - ICAO**

This chart is produced for aerodromes used by civil aviation where:

* only limited navigation facilities are available; or
* radio communication facilities are not available; or
* no adequate aeronautical charts of the aerodrome and its surroundings at 1:500 000 or greater scale are available; or
* visual approach procedures have been established

The aeronautical data shown include information on aerodromes obstacles, designated airspace, visual approach information, radio navigation aids and communication facilities, as appropriate.

5 LIST OF AERONAUTICAL CHARTS AVAILABLE

GEN 3.2.5 LIST OF AERONAUTICAL CHARTS AVAILABLE					
Title of Chart Series	*Scale*	*Name and/or number*		*Price ($)*	*Date*
World Aeronautical Chart ICAO (WAC)	1:1 000 000		WAC 2860	In AIP	30 JAN 20
Enroute Chart ICAO (ENRC)			ERC 6-1	In AIP	05 NOV 20
Instrument Approach Chart ICAO (IAC)		***Singapore Changi***			
	1:400 000	RWY 02L - ICW ILS/DME	AD-2-WSSS-IAC-1	In AIP	31 DEC 20
	1:400 000	RWY 02C - ICE ILS/DME	AD-2-WSSS-IAC-2	In AIP	31 DEC 20
	1:400 000	RWY 20R - ICH ILS/DME	AD-2-WSSS-IAC-5	In AIP	31 DEC 20
	1:400 000	RWY 20C - ICC ILS/DME	AD-2-WSSS-IAC-6	In AIP	31 DEC 20
	1:400 000	RWY 20C - VTK DVOR/DME	AD-2-WSSS-IAC-7	In AIP	31 DEC 20
	1:400 000	RWY 02L - RNP	AD-2-WSSS-IAC-9	In AIP	31 DEC 20
	1:400 000	RWY 02C - RNP	AD-2-WSSS-IAC-10	In AIP	31 DEC 20
	1:400 000	RWY 20R - RNP	AD-2-WSSS-IAC-11	In AIP	31 DEC 20
	1:400 000	RWY 20C - RNP	AD-2-WSSS-IAC-12	In AIP	31 DEC 20
←	1:400 000	RWY 02R - RNP	AD-2-WSSS-IAC-13	In AIP	25 FEB 21
←	1:400 000	RWY 20L - RNP	AD-2-WSSS-IAC-14	In AIP	25 FEB 21
		Paya Lebar			
	1:400 000	RWY 20 - PU DVOR/DME	AD-2-WSAP IAC-1	In AIP	31 DEC 20
	1:400 000	RWY 02 - PU DVOR/DME	AD-2-WSAP IAC-2	In AIP	31 DEC 20
	1:400 000	RWY 20 - IPS ILS/DME	AD-2-WSAP IAC-3	In AIP	31 DEC 20
	1:400 000	RWY 02 - IPN ILS/DME	AD-2-WSAP IAC-4	In AIP	31 DEC 20
	1:400 000	RWY 02 - RNP	AD-2-WSAP-IAC-5	In AIP	31 DEC 20
	1:400 000	RWY 20 - RNP	AD-2-WSAP-IAC-6	In AIP	31 DEC 20
Visual Approach Chart ICAO (VAC)	1:400 000	***Singapore Changi***	AD-2-WSSS-VAC-1	In AIP	31 DEC 20
		Seletar			
	1:100 000	RWY 03	AD-2-WSSL-VAC-1	In AIP	16 JUL 20
	1:100 000	RWY 21	AD-2-WSSL-VAC-2	In AIP	16 JUL 20
	1:100 000	RWY 03	AD-2-WSSL-VAC-3	In AIP	16 JUL 20
	1:100 000	RWY 21	AD-2-WSSL-VAC-4	In AIP	16 JUL 20
Visual Departure Chart		***Seletar***			
	1:100 000	RWY 03	AD-2-WSSL-VDC-1	In AIP	16 JUL 20
←	1:100 000	RWY 21	AD-2-WSSL-VDC-2	In AIP	25 FEB 21
← **Aerodrome Chart** ICAO (AC)		***Singapore Changi***	AD-2-WSSS-ADC-2	In AIP	25 FEB 21
		Seletar	AD-2-WSSL-ADC-1	In AIP	16 JUL 20
		Paya Lebar	AD-2-WSAP-ADC-1	In AIP	16 JUL 20
Aerodrome Obstacle Chart ICAO TYPE A (AOC)		***Singapore Changi***			
	1:10 000	RWY 20R/02L	AD-2-WSSS-AOC-1	In AIP	16 JUL 20
	1:10 000	RWY 20C/02C	AD-2-WSSS-AOC-2	In AIP	31 DEC 20
←	1:10 000	RWY 02R/20L	AD-2-WSSS-AOC-4	In AIP	25 FEB 21
		Seletar			
	1:10 000	RWY 03/21	AD-2-WSSL-AOC-1	In AIP	16 JUL 20
		Paya Lebar			
	1:20 000	RWY 20/02	AD-2-WSAP-AOC-1	In AIP	16 JUL 20

1.7 RADIO FAILURE

1.7.1 In the event of failure of two-way communications while operating on the radar frequency, the pilot shall change to any other alternative ATC frequencies and request instructions.

1.7.2 If able to receive but not transmit, the pilot shall remain on the frequency on which he has been communicating and comply with instructions issued by the radar controller designed to establish that the aircraft is receiving. If this is established, further instructions appropriate to the circumstances will be issued.

1.7.3 If unable to make contact on the alternative frequencies, the pilot shall comply with the standard radio failure procedures as specified below.

1.8 TOTAL RADIO COMMUNICATION FAILURE PROCEDURES

1.8.1 If total radio communication failure occurs in VMC during daylight hours, the pilot shall continue to fly in VMC and land at the most suitable aerodrome. If it occurs in VMC during the hours of darkness (between sunset and sunrise) action shall be taken in accordance with para 1.8.2 below.

1.8.2 If total radio communication failure occurs in IMC, ATC action is based on the assumption that the aircraft will continue to its destination and if unable to land, will proceed to its nominated alternate. Separation standards will be increased and airspace reserved accordingly. (see Appendices 'A' and 'B' , pages ENR 1.6-9 and 1.6-11).

1.8.3 In IMC, or if unable to maintain VFR, the pilot shall either leave or avoid controlled airspace and areas of dense traffic and establish VFR operation or, alternatively, shall:

a. Proceed according to the current flight plan, at the last assigned flight level, to the clearance limit and thereafter at the flight plan level.

b. Arrive at the destination as close as possible to ETA.

c. Commence descent as close as possible to EAT (or ETA if no EAT has been acknowledged).

d. If unable to land within 30 minutes of the time descent should have started (i.e. EAT or ETA if no EAT has been acknowledged), proceed to cross SAMKO Holding Area (SHA) at 4,000ft then via A457 at FL200 if Kuala Lumpur is the nominated alternate or via B470 at FL290 if Soekarno- Hatta is the nominated alternate or otherwise proceed at the planned flight level to other nominated alternate.

Note:

1) Aircraft are to follow the established radio failure procedures as laid down by the respective airports.

2) During this 30 minute period ATC will reserve the airspace at the aircraft's flight level and below. At the expiry of this period with the concurrence of other users normal operations will resume.

1.8.4 In all cases, the pilot shall contact ATC as soon as possible after landing.

1.9 RADIO FAILURE - TRANSPONDER - EQUIPPED AIRCRAFT

1.9.1 Aircraft equipped with transponder shall set transponder to Mode A/C Code 7600.

1.9.2 Partial Radio Failure

a. Aircraft Unable to Receive
Pilots shall adopt the complete RTF failure procedures specified in para 1.8.

b. Aircraft Able to Receive
Following verification that aircraft is able to receive ground transmissions, ATC will continue to issue instructions and/or clearance to pilots. Such instructions and clearances will be repeated.

1.10 TOTAL RADIO FAILURE - SPECIAL PROCEDURES - SINGAPORE CHANGI AP - ARRIVALS

1.10.1 In VMC during daylight hours, if total radio communication failure occurs to an aircraft bound for Singapore Changi Airport, the pilot shall maintain VMC to land at the most suitable airfield and report to the appropriate air traffic control unit by the most expeditious means.

1.10.2 For IFR flights to Singapore Changi Airport, aircraft experiencing radio failure shall:

i. Proceed according to the last acknowledged clearance received from Singapore ATC, or

ii. If no specific instructions or clearance has been received from Singapore ATC:

← a. Maintain the last assigned altitude or flight level and proceed via planned ATS Routes thereafter the appropriate STAR for RWY 02L/02C/02R to SAMKO Holding Area (SHA). If SHA is not part of the STAR, flight shall proceed to SHA after the last waypoint on the STAR.

b. Commence descent from SHA at or as close as possible to the ETA as indicated on the flight plan.

c. Carry out the appropriate instrument approach procedure from SHA to land on RWY 02L/02C/02R.

iii. If radio failure occurs while flight is on assigned heading from an ATC issued instruction which takes the aircraft off the STAR, the pilot shall rejoin the last assigned STAR by resuming own navigation to the next ensuing waypoint on STAR

iv. Identify the runway-in-use in accordance to paragraph 1.11. If unable to effect a landing on:

a. RWY 02L
Carry out missed approach procedure to AKOMA (PU R-356/20DME) (014522N 1035443E). Leave AKOMA at 4,000ft to NYLON Holding Area (NHA) and execute the appropriate instrument procedure from NHA to land on RWY 20R, RWY 20C or RWY 20L, as appropriate.

b. RWY 02C
Carry out missed approach procedure to NYLON Holding Area (NHA) and execute the appropriate instrument procedure from NHA to land on RWY 20R, RWY 20C or RWY 20L, as appropriate.

c. RWY 20R
Carry out missed approach procedure to SAMKO Holding Area (SHA) and execute the appropriate instrument procedure from SHA to land on RWY 02L, RWY 02C or RWY 02R, as appropriate.

d. RWY 20C
Carry out missed approach procedure to EXOMO (VTK R-158/22DME) (010425.49N 1040933.17E). Leave EXOMO at 4,000ft to SAMKO Holding Area (SHA) and execute the appropriate instrument procedure from SHA to land on RWY 02L, RWY 02C or RWY 02R, as appropriate.

e. RWY 02R
Carry out missed approach procedure to HOSBA (VTK R-103/24DME) (011948N 1042418E) Holding Area (HHA). Leave HHA at 7,000ft to NHA via ATS route W401 and VTK DVOR. Execute the appropriate instrument procedure from NHA to land on RWY 20L, RWY 20C or RWY 20R.

f. RWY 20L
Carry out missed approach procedure to HOSBA (SJ R-079/34DME) (011948N 1042418E) Holding Area (HHA). Leave HHA at 7,000ft to SHA via ATS route G580 and SJ DVOR. Execute the appropriate instrument procedure from SHA to land on RWY 02L, RWY 02C or RWY 02R.

1.11 IDENTIFICATION OF RUNWAY-IN-USE

1.11.1 ATC will switch on the appropriate approach lights and the ILS serving the runway-in-use to assist the pilot in its identification. If the approach lights for the runway-in-use are sighted but the ILS frequency is not received, the pilot shall assume that the ILS is inoperative and shall proceed to land on the runway on which the approach lights have been sighted.

1.11.2 If unable to land within 30 minutes of EAT or ETA, if no EAT has been received and acknowledged, proceed in accordance with AIP page ENR 1.6-3 para 1.8.3 (d).

ENR 1.10 FLIGHT PLANNING

1 PROCEDURES FOR SUBMISSION OF A FLIGHT PLAN

1.1 Requirement for submission of a Flight Plan

1.1.1 The pilot-in-command or airline operator shall submit an ICAO flight plan to ATC via the AFS or the AIM-SG system (accessible by registration at https://aim-sg.caas.gov.sg) for the following flights:

a. Flights on airways, associated holding areas and all other controlled airspaces whether IFR or VFR;
b. Any flight or portion thereof to be provided with air traffic control service;
c. Any flight within or into designated areas, or along designated routes to facilitate co-ordination with appropriate military units or with air traffic service units in adjacent States in order to avoid the possible need for interception for the purpose of identification;
d. Any flight across international borders.

1.1.2 The pilot-in-command or the airline operator shall submit details of a test/training flight, planned to be conducted in the Seletar aerodrome circuit or in Light Aircraft Training Areas A, B and C, by electronic mail using the "Seletar Test/Training Form" retrievable from webpage: https://aim-sg.caas.gov.sg

1.1.3 For a flight that will be operating within Singapore only (except for flights mentioned in paragraph 1.1.2, the pilot-in-command or the operator shall submit the ICAO flight plan using the automated AIM-SG system and to include Military ATC addressee WSARYWYX. If for any reason a flight plan is not approved, the pilot-in- command shall contact RSAF Air Operations Control (AOC) at 67683702 for clarification.

1.1.4 The pilot-in-command or the operator of IFR flight operating out of Seletar is required to file via KK or RECHI - PONJO - SJ.

1.1.5 The pilot-in-command or the operator of IFR flight operating into Seletar is required to file according to WSSL AD 2.22 Flight Procedures.

1.1.6 VFR flight operating between Seletar and Johor Bahru shall route via Point X (012830N1034954E), Tebrau City Mall (013259N1034748E), Felda Ulu Tebrau (013751N1034510E) and vice versa.

1.2 Requirement for submission of a Flight Plan for Test Flights

1.2.1 Test flights shall be conducted on Airway G580 between HOSBA and NIMIX to minimise disruption to civil scheduled flight movements and to facilitate the test flight operations.

1.2.2 A flight plan shall be submitted for a test flight at least one hour before departure. The pilot-in- command or the operator shall include in Item 18 of the flight plan ‘RMK/TEST FLT APPROVED BY ATC’.

1.2.3 The pilot-in-command shall maintain a 2-way VHF communication with Singapore ATC on the assigned VHF frequency at all times.

1.2.4 The pilot-in-command of the test flight shall adhere to ATC instructions at all times. Test flight manoeuvres are subject to ATC clearance, real-time coordination and traffic.

← 1.2.5 Procedures for application to conduct test flights are provided on GEN 1.2 section 6.

1.3 Lead time for filing flight plans and flight plan associated messages

1.3.1 Flight plan shall be filed 120 hours, or five days, at the earliest but no later than 60 minutes prior to departure (estimated off-block time).

1.3.2 In the event of a delay of 30 minutes in excess of the estimated off-block time, the flight plan should be amended or a new flight plan submitted and the old flight plan cancelled, whichever is applicable. To indicate a delay to a flight, a DLA or a CHG message may be used depending on the circumstances.

1.3.3 The old flight plan shall be cancelled and a new flight plan shall be submitted when changes are made to any one of the following fields:
7/Aircraft Identification, 15/Route and/or 16/Destination Aerodrome.

1.3.4 A flight plan submitted in flight on HF RTF shall be submitted at least 20 minutes (or if on VHF RTF at least 10 minutes) prior to the intended point of entry into a control zone, control area, advisory area or advisory route.

1.3.5 A pilot-in-command may change from an IFR flight plan to a VFR flight plan by reporting “CANCELLING MY IFR FLIGHT” when weather conditions indicate that the remainder of the flight can be conducted under VFR.

[However, within Singapore, all flights whether IFR or VFR shall be regulated in accordance with instrument flight rules.] (see note 2 below).

1.3.6 ATC will acknowledge:

"IFR flight cancelled at.....(time)" or

if information is available which indicates the likelihood of IMC prevailing along the route, will notify these conditions as follows:

"Instrument MET conditions reported (or forecast) in the vicinity of....."

Note:
1) The fact that pilot flying in VMC does not by itself constitute cancellation of an IFR flight plan.
2) Within the Singapore/Johor Airspace Complex and Control Zones all flights are regulated in accordance with IFR separation standards.

1.4 Persons on board (POB)

1.4.1 The pilot-in-command or his representative is required to state the total number of persons on board (POB - i.e. passengers and crew) in the flight plan.

1.5 DATA LINK Communication and Surveillance

← 1.5.1 Aircraft using data link communications (see ENR 1.1 section 8) must insert one or more of the following letters in Item 10a of their flight plan to indicate serviceable COM aid equipment and capabilities available:

J1	CPDLC ATN VDL Mode 2
J2	CPDLC FANS 1/A HFDL
J3	CPDLC FANS 1/A VDL Mode A
J4	CPDLC FANS 1/A VDL Mode 2
J5	CPDLC FANS 1/A SATCOM (INMARSAT)
J6	CPDLC FANS 1/A SATCOM (MTSAT)
J7	CPDLC FANS 1/A SATCOM (Iridium)
P1	CPDLC RCP 400
P2	CPDLC RCP 240
P3	SATVOICE RCP 400
P4-P9	Reserved for RCP

← 1.5.2 Aircraft using data link surveillance (see ENR 1.1 section 8) must insert one or more of the following letters in Item 10b of their flight plan to indicate serviceable SUR equipment and capabilities available:

D1	ADS-C with FANS 1/A capabilities
G1	ADS-C with ATN capabilities

1.5.3 Additional surveillance equipment or capabilities are to be listed in Item 18 following the indicator SUR/ .

1.6 RNAV Approved Aircraft

← 1.6.1 Aircraft flying on RNAV routes A464, A576, B470, G334, L625, L642, L644, L649, M646, M751, M753, M758, M761, M767, M768, M771, M772, M774, N875, N884, N891, N892 and Y514 (see ENR 1.8 sub-section 2.2) must be RNAV equipped and should annotate their flight plan as follows:

	Item 10	Item 15	Item 18
RNAV equipment is carried	**G** (GNSS) **I** (Inertial Navigation) **R** (PBN approved) Guidance material in the application of performance based navigation to a specific route segment, route or area is contained in the Performance Based Navigation Manual (Doc 9613).	True Mach NR and FL at entry and exit points	The types of external GNSS augmentation, if any, are specified following the indicator NAV/ and separated by a space. The performance based navigation levels that can be met shall be specified following the indicator PBN/.

← 1.6.2 Aircraft flying on RNAV routes L642 (CHEUNG CHAU-MERSING), L644 (DUDIS-KIKOR), L649 (DAKIX-LAXOR), M771 (MERSING-CHEUNG CHAU), M772 (ASISU-LAXOR), N892 (HENGCHUN-MERSING), L625 (TOMAN-MEVIN), N884 (MERSING-MANILA) and M767 (JOMALIG-TOMAN) (see ENR 1.8 sub-section 3.1) must be RNP 10 approved and shall indicate in their flight plan:

Item 10 - "R" where R = PBN approved
Item 18 - PBN/A1 where A1 = RNAV 10 (RNP 10)

← 1.6.3 Operators of aircraft unable to meet the RNP 10 requirements (see ENR 1.8 sub-section 3.2) and wishing to operate at or above FL290 on RNAV routes specified in paragraph 1.6.2 shall annotate their flight plan as follows:

Item 18 - insert "RMK/REQ FL (insert level)" where FL = the preferred flight level (subject to ATC co-ordination)

1.6.4 Operators of aircraft approved for RNP 1 (P-RNAV) operations shall also include the following information in their flight plan:

Item 10 - "R" where R = PBN approved
Item 18 - PBN/O1 where O1 = Basic RNP1 all permitted sensors, or
PBN/O2 where O2 = Basic RNP1 GNSS, or
PBN/O3 where O3 = Basic RNP1 DME/DME, or
PBN/O4 where O4 = Basic RNP1 DME/DME/IRU

1.7 RVSM and NON-RVSM Approved Aircraft

← 1.7.1 Operators of RVSM approved or non-RVSM approved aircraft operating in RVSM airspace (see ENR 1.8 sub-section 1.9 and 1.10) shall annotate their flight plan as follows:

	Item 10	Item 18
RVSM approved aircraft	W	
Non-RVSM approved aircraft		STS/NONRVSM

1.8 Other Documentary and / or Permit Requirements

1.8.1 In addition to the flight planning requirements, all pilots-in-command and aircraft operators should consult the respective AIPs for other documentary and / or permit requirements for flights intending to enter, depart, and / or overfly the sovereign airspaces of States along the planned flight routes.

1.8.2 In particular, for Indonesian sovereign airspace within Singapore FIR, aircraft operators should also consult AIP Indonesia GEN 1.2 Entry, Transit and Departure of Aircraft at https://aimindonesia.dephub.go.id for Indonesia's requirements for flights intending to enter, depart, and/or overfly its sovereign airspace. Please note that this AIP's reference to these requirements is without prejudice to Singapore's legal position on such requirements.

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Route Designator {RNP Type}	*[Route Usage Notes]*					
Significant Point Name	*Significant Point Coordinates*					*Remarks*
{RNP Type}	*Initial Track MAG* ↓ ↑	*Great Circle Dist NM*	*Upper limit / Lower limit*	*FL series* ↓	*FL series* ↑	*Controlling unit Frequency {Airspace class} Remarks*
1	2	3	4	5	6	7
M630	*Route availability:* (1) H24					
▲ SUKRI	012306N 1025904E					
(5)		37.3NM	FL 460 / 5500 FT ALT	Odd(1)		[Class A - ABV FL150 Class B - BLW FL150]
∆ BOBAG	010230N 1032954E					(2)
(5)		61.3NM	FL 460 / 5500 FT ALT	Odd(1)		[Class A - ABV FL150 Class B - BLW FL150]
▲ TANJUNG PINANG VOR/DME (TPG)	005413N 1043052E					

Route Remarks:
Lateral Limits:
11.5NM either side of line joining SUKRI to TPG.

Flight departing from aerodromes in Peninsular Malaysia and overflying WSJC are restricted to FL270 and above at waypoint SUKRI if the planned cruising level is FL270 or higher.

Flight Planning:
Southbound flight planning permitted for flights from Kuala Lumpur and airports beyond which are overflying beyond Singapore. Flights landing at Singapore Changi Airport to flight plan on A464.

Singapore ACC FREQ:
P133.25 MHz
S135.8 MHz

Point/Segment Remarks:
(2) NIL

Route Designator {RNP Type}	*[Route Usage Notes]*					
Significant Point Name	*Significant Point Coordinates*					*Remarks*
{RNP Type}	*Initial Track MAG* ↓ ↑	*Great Circle Dist NM*	*Upper limit / Lower limit*	*FL series* ↓	*FL series* ↑	*Controlling unit Frequency {Airspace class} Remarks*
1	2	3	4	5	6	7
M635	*Route availability:* (1) H24					
▲ TEKONG DVOR/DME (VTK)	012455N 1040120E					*(4)*
(10)		42.5NM	FL 460 / 5500 FT ALT	Odd*(1)*	Even*(1)*	[Class A - ABV FL150 Class B - BLW FL150] *(2)*
▲ TANJUNG PINANG VOR/DME (TPG)	005413N 1043052E					
(10)		58.5NM	FL 460 / 5500 FT ALT	Odd*(1)*	Even*(1)*	[Class A - ABV FL150 Class B - BLW FL150] *(3)*
▲ ATPOM	002425N 1052114E					
(10)		93.1NM	FL 460 / 5500 FT ALT	Odd*(1)*	Even*(1)*	[Class A - ABV FL150 Class B - BLW FL150] *(2)*
◭ SURGA (WSJC/WIIZ FIR BDRY)	003657S 1063119E					

Route Remarks:
Lateral Limits:
25NM either side of line joining VTK to SURGA.

Singapore ACC FREQ:
P134.4 MHz
S128.1 MHz

Flight Planning:
Flights overflying Singapore to destinations north of Kuala Lumpur and Subang are to flight plan via SURGA M635 TPG A464 SJ G579 VJB Y342 AROSO Y339.

Flights overflying Singapore to land at Kuala Lumpur and Subang are to flight plan via SURGA M635 TPG A464 SJ G579 VJB A457.

Point/Segment Remarks:
(2) NIL
(3) TPG 120.5°
58.5NM
(4) Kuala Lumpur / Singapore FIR boundary approximately 1.2NM north of VTK.

Route Designator {RNP Type}	[Route Usage Notes]					
Significant Point Name	Significant Point Coordinates					Remarks
{RNP Type}	Initial Track MAG ↓ ↑	Great Circle Dist NM	Upper limit / Lower limit	FL series ↓	FL series ↑	Controlling unit Frequency {Airspace class} Remarks
1	2	3	4	5	6	7
M772	*Route availability:* (1) H24					
▲ LAXOR (WSJC/RPHI FIR BDRY)	094937N 1144829E					*(2)*
(10)	020° / -	147.5NM	FL 460 / FL 240		Even*(1)*	[Class A]
▲ BIDAG	073101N 1135544E					*(2)*
(10)	020° / -	97.9NM	FL 460 / FL 240		Even*(1)*	[Class A]
▲ ASISU (WBFC/WSJC FIR BDRY)	055906N 1132046E					*(3)*

Route Remarks:
Lateral Limits:
25NM either side of line joining ASISU to LAXOR.

Available only for flights departing from :
- WIII and WIHH to VHHH and airports in People's Republic of China.
- WBGB, WBSB, WBGG, WBKL, WBGR and WBGS to VHHH only.

ADS-C and CPDLC services are available to suitably equipped aircraft operating outside radar cover within the Singapore FIR.

Point/Segment Remarks:
(2) NIL
(3) BRU 305°
113.3NM

Route Designator {RNP Type}	[Route Usage Notes]					
Significant Point Name	Significant Point Coordinates					Remarks
{RNP Type}	Initial Track MAG ↓ ↑	Great Circle Dist NM	Upper limit / Lower limit	FL series ↓	FL series ↑	Controlling unit Frequency {Airspace class} Remarks
1	2	3	4	5	6	7
M774	*Route availability:* (1) H24					
▲ TANJUNG PINANG VOR/DME (TPG)	005413N 1043052E					*(2)*
		148.1NM	FL 460 / 5500 FT ALT	Odd*(1)*	Even*(1)*	[Class A-ABV FL150 Class B-BLW FL150]
▲ OBDOS	002503N 1065551E					*(3)*
(10)		57.5NM	FL 460 / 5500 FT ALT	Odd*(1)*	Even*(1)*	[Class A-ABV FL150 Class B-BLW FL150]
KADAR (WSJC/WIIZ FIR BDRY)	000647S 1074342E					*(2)*

← *Route Remarks:*
Lateral Limits:
25NM either side of line joining TPG to KADAR.

Singapore ACC FREQ:
P134.4 MHz
S128.1 MHz

Flight Planning:
Flights overflying Singapore to destinations north of Kuala Lumpur and Subang are to flight plan via KADAR M774 TPG A464 SJ G579 VJB Y342 AROSO Y339.

Flights overflying Singapore to land at Kuala Lumpur and Subang are to flight plan via KADAR M774 TPG A464 SJ G579 VJB A457.

Point/Segment Remarks:
(2) NIL
(3) TPG 101.3°
148.1NM

WSSS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guidelines and visual docking/parking guidance system of aircraft stands.
	Taxiing guidance signs at all intersections with TWY and RWY at all holding positions. Guidelines at apron. Nose-in guidance at aircraft stands. For information on Safegate Aircraft Docking Guidance System, Taxiing Guidance System at Singapore Changi Airport, refer to WSSS AD 2.9. Aircraft stand manoeuvring guidance lights are provided at aircraft stands at Terminal 3, Terminal 4 and South Aprons.
2	RWY and TWY markings and LGT.
←	**RWY 02L/02C and RWY 20C** RWY LGT: refer to WSSS AD 2.14 and WSSS AD 2.15. TWY LGT: Blue LGT on TWY curved edges, selected straight TWY edge sections and apron TWY edges only. Blue TWY edge markers along selected straight TWY edge sections. Red stop bar at TWY INT controllable on/off. Red stop bar LGT at TWY HLDG PSN entrances to RWY are controllable on/off and are supplemented with elevated RWY guard LGT at the sides. Internally/externally lighted mandatory or information TWY signboards. Yellow TWY centreline markings, supplemented by alternate green and yellow taxiway centreline lights along taxiways within ILS sensitive zone in the vicinity of the runway and green taxiway centreline lights with selective controls along taxi-routes to/from main RWY and aprons MARKING AIDS: THR, touchdown zone, centreline, side stripe, RWY designations, aiming point markings, TWY centreline, taxi holding positions - all taxiways, apron guide lines. For positions of aircraft nosewheel in relation to stopbar and description of the Safegate Aircraft Docking Guidance System - refer to WSSS AD 2.9.
←	**RWY 20R** RWY LGT: refer to WSSS AD 2.14 and WSSS AD 2.15. TWY LGT: same as for RWY 02L/02C and RWY 20C. MARKING AIDS: Pre-threshold centreline, transverse stripe for displaced THR, RWY designations, THR, touchdown zone, aiming point marking, RWY centreline and stripe marking aids.
←	**RWY 02R/20L** RWY LGT: refer to WSSS AD 2.14 and WSSS AD 2.15. TWY LGT: Blue lights on TWY curved edges. Blue TWY edge markers along selected straight TWY edge sections. Red stop bar lights at TWY INT are controllable on/off. Red stop bar lights at Pattern “A” RWY HLDG PSN entrances to RWY are controllable on/off and are supplemented with elevated RWY guard lights and RWY designation sign at the sides. Red stop bar lights at Pattern “B” RWY HLDG PSN before entry into the RWY ILS sensitive area are controllable on/off with Category I/II RWY HLDG PSN sign. Internally lighted mandatory or information TWY signboards. “MIL” destination signs on the east of RWY 02R/20L indicate the direction to aircraft movement area for military use only. On the west of RWY 02R/20L, yellow taxiway centreline markings, supplemented by alternate green and yellow taxiway centreline lights along taxiways within ILS sensitive zone in the vicinity of the runway and green taxiway centreline lights with selective controls along taxi-routes to/from main RWY and aprons. On the east of RWY 02R/20L, no taxiway centreline lights. MARKING AIDS: THR, touchdown zone, RWY centreline, RWY side stripe, RWY designations, aiming point markings, TWY centreline, taxi holding positions – all taxiways.
3	*Stop bars:* Stop bars where appropriate.
4	*Remarks:* Where Red stop bar is not present at the TWY INT, Yellow INTERMEDIATE HLDG PSN LGT will be used at TWY INT and switched on between sunset and sunrise or during periods of poor visibility.

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 of Singapore Changi Airport.

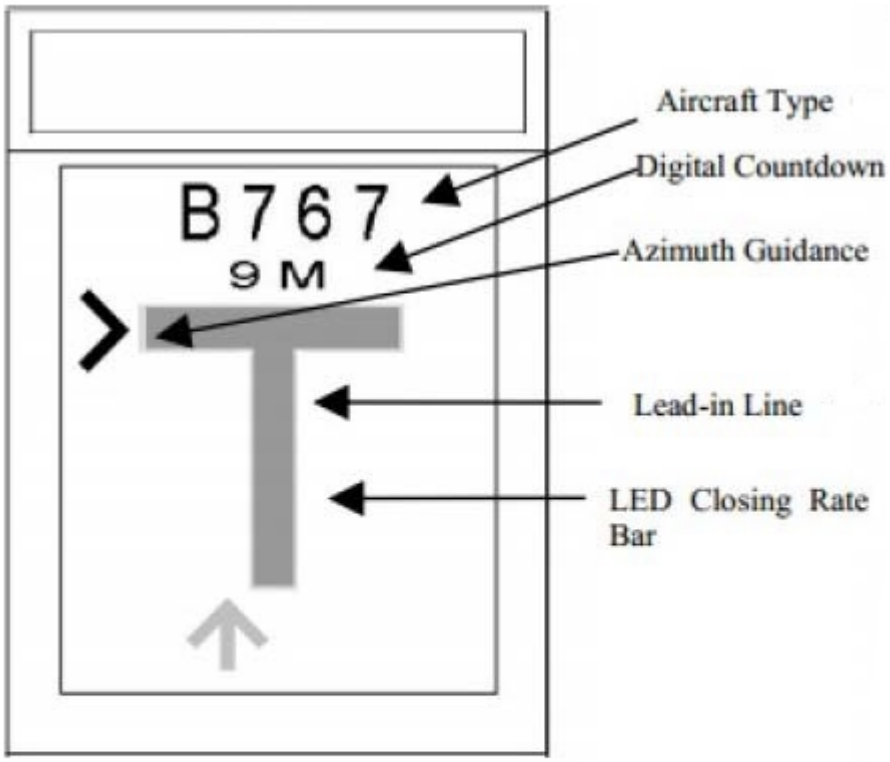
1.2 DESCRIPTION OF SYSTEM

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 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

Slope of RWY-SWY Transverse / Longitudinal	SWY Dimensions (m)	CWY Dimensions (m)	STRIP dimensions (m)	Dimensions of RESA (m)	Locations and description of ARST system	OFZ
7	8	9	10	11	12	13
RWY 20L 1.25% / 0% SWY 1.22% / 0%	60 X 60	60 X 150	4240 X 280	240 X 150	Not Applicable	Yes

Remarks
14
1) Open-air drains, demarcated by frangible poles, within the runway strip of RWY 02R/20L. 2) Not in use military hookwire system embedded in runway pavement at 490m from RWY 02R and RWY 20L thresholds. 3) **Scheduled Closure of RWY 02L/20R** a. BTN 1700-2100UTC on every SUN and WED of the month (preventive maintenance work). In the event of emergency, RWY will be re-opened within 30 minutes. b. A 5-minute inspection conducted within the periods BTN 0100-0359UTC, 0500-0759UTC and 0800-1059UTC daily. 4) **Scheduled Closure of RWY 02C/20C** a. BTN 1700-2100UTC on every FRI of the month (preventive maintenance work). In the event of emergency, RWY will be re-opened within 30 minutes. b. A 5-minute inspection conducted within the periods BTN 0100-0359UTC, 0500-0759UTC and 0800-1059UTC daily. 5) **Scheduled Closure of RWY 02R/20L** a. BTN 1700-2100UTC on every MON of the month (preventive maintenance work). In the event of emergency, RWY will be re-opened within 30 minutes. b. A 5-minute inspection conducted within the periods BTN 0100-0359UTC, 0500-0759UTC and 0800-1059UTC daily. 6) **Additional Inspection and Maintenance Closures** a. On days when there is a scheduled 4-hour runway closure BTN 1700-2100UTC i. 10-minute inspection conducted within the period BTN 1500-1610UTC on the other operational runway(s); ii. 15-minute inspection conducted within the period BTN 2300-2359UTC on the other operational runway(s); iii. 5-minute inspection conducted within period BTN 2300-2359UTC on the re-opened runway. b. On days when there is no scheduled 4-hour runway closure BTN 1700-2100UTC I. RWY 02L/20R: i. 5-minute inspection conducted BTN 2300-2305UTC ii. 30-minute maintenance will be conducted BTN 1830-1900UTC II. RWY 02C/20C: i. 5-minute inspection conducted BTN 2315-2320UTC ii. 30-minute maintenance will be conducted BTN 1915-1945UTC III. RWY 02R/20L: i. 5-minute inspection conducted BTN 2330-2335UTC ii. 60-minute maintenance will be conducted BTN 2000-2100UTC

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
	E2	3808	3868	3868	Not applicable	
	E3	3421	3481	3481	Not applicable	
	E4	2721	2781	2781	Not applicable	
02C	Not applicable	4000	4060	4060	4000	NIL
	E10	3842	3902	3902	Not applicable	
	E9	3329	3389	3389	Not applicable	
	E8	3197	3257	3257	Not applicable	
	E7	2551	2611	2611	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 follow: 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 follow: From THR to 600m from RWY end: White, 600m to RWY end: Amber.	Red	Elevated Red

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
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 follow: 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 I High Intensity reduced approach lighting (810m) consisting of centreline barrettes showing variable White, 1 crossbar, 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.	NIL	Inset High Intensity centreline lights (longitudinal spacing at 30m apart) as follow: 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 follow: From THR to 600m from RWY end: White, 600m to RWY end: Amber.	Red	Elevated Red
20C	CAT II High Intensity reduced approach lighting (720m) 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 left 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	Inset High Intensity centreline lights (longitudinal spacing at 30m apart) as follow: 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 follow: From THR to 600m from RWY end: White, 600m to RWY end: Amber.	Red	Elevated Red

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
02R	CAT II High Intensity Approach Lights (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, 415m from THR. 2 White lights and 2 Red lights (19.7m), 3 White lights and 1 Red light (23.6m), 4 White lights (26.0m). ACFT with eye-to-wheel height greater than 8m are advised to fly with 2 White and 2 Red lights visible so as to achieve sufficient wheel clearance.	White. 900m (From THR) TDZ. Every 60m from THR.	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	Elevated Red
20L	CAT II High Intensity Approach Lights (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, 415m from THR. 2 White lights and 2 Red lights (19.7m), 3 White lights and 1 Red light (23.6m), 4 White lights (26.0m). ACFT with eye-to-wheel height greater than 8m are advised to fly with 2 White and 2 Red lights visible so as to achieve sufficient wheel clearance.	White. 900m (From THR) TDZ. Every 60m from THR.	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	Elevated Red

2.5.2 When reduced Runway Separation Minima is applied, the successive landing aircraft may be given a clearance to land before the first aircraft has cleared the runway-in-use after landing or crossed the runway end on departure provided there is reasonable assurance that the following separation distances will exist when the landing aircraft crosses the runway threshold:

	Landing following Landing	Landing following Departure
RWY 02L/20R	The preceding aircraft has landed and has passed a point at least 2500m from the threshold of runway (abeam TWY W4 for RWY 02L or TWY V8 for RWY 20R), is in motion and will vacate the runway without backtracking.	The departing aircraft is/will be airborne and has passed a point at least 2500m from the threshold of the runway (abeam TWY W4 for RWY 02L or TWY V8 for RWY 20R).
RWY 02C/20C	The preceding aircraft has landed and has passed a point at least 2500m from the threshold of the runway (abeam TWY E4 for RWY 02C or TWY E7 for RWY 20C), is in motion and will vacate the runway without backtracking.	The departing aircraft is/will be airborne and has passed a point at least 2500m from the threshold of the runway (abeam TWY E4 for RWY 02C or TWY E7 for RWY 20C).
RWY 02R/20L	The preceding aircraft has landed and has passed a point at least 2500m from the threshold of the runway, (abeam TWY A5 for RWY 02R or TWY A8 for RWY 20L) is in motion and will vacate the runway without backtracking.	The departing aircraft is/will be airborne and has passed a point at least 2500m from the threshold of the runway (abeam TWY A5 for RWY 02R or TWY A8 for RWY 20L).

2.6 Phraseology

2.6.1 When issuing a landing clearance following the application of these procedures, ATC will issue the second aircraft with the following instructions:

".... (call sign) .... after the landing / departing .... (Aircraft Type) Runway .....(Designator) cleared to land".

3 AIRPORT COLLABORATIVE DECISION MAKING (A-CDM) MODE OF OPERATIONS

3.1 A-CDM aims to optimise airport operations by having an efficient turnaround process and improving the predictability of operational events. It also helps to improve gate management, flight punctuality, reduce apron taxiway and holding point congestion which is beneficial to all airport partners. A-CDM involves sharing of accurate and timely operational information amongst airport partners through different airport systems and improving work processes by implementing a set of operational procedures.

3.2 The A-CDM procedures apply to all scheduled flights departing Singapore Changi Airport except for VVIP, CASEVAC, SAR and aircraft on special tasks. ATC shall have full discretion in conduct of such operations.

3.3 Definition of commonly used terms in A-CDM

a. Target Off Block Time (TOBT) – The time an aircraft operator (AO) or ground handling agent (GHA) estimates that an aircraft will be ready, all doors closed, boarding bridge removed, pushback vehicle available and ready to start-up / pushback immediately upon receipt of clearance from ATC.
b. Target Start Up Approval Time (TSAT) – The time provided by ATC that an aircraft can expect start-up / push back approval.
c. Calculated Take Off Time (CTOT) – A time calculated as a result of tactical slot allocation, at which a flight is expected to become airborne.

4 A-CDM PRE-DEPARTURE PROCEDURES

4.1 Singapore Changi Airport's A-CDM portal will automatically calculate a system TOBT for each departure flight taking into account the estimated or actual in-block time (EIBT / AIBT), minimum turnaround time (MTT) and scheduled time of departure (STD)

4.2 If the calculated TOBT (EIBT / AIBT + MTT) is earlier than STD, the system will take the STD as TOBT.

4.3 If the calculated TOBT (EIBT / AIBT + MTT) is later than STD, the amount of turnaround delay that system predicts is equal to TOBT – STD.

4.4 AO are required to assess the system generated TOBT at 40 minutes prior to departure and update it if the prediction of departure readiness is different. Thereafter, TOBT needs to be monitored and updated constantly if it is expected to differ by 5 minutes or more until the flight commences pushback. AO can consider delegating the responsibility of TOBT submission to their ground handling agent (GHA) subject to prior internal arrangements between AO and GHA.

4.5 TOBT shall be updated through the following systems:

a. Airport Operations Centre System (AOCS) A-CDM web based portal; or
b. Gate Message Input Display (GMID) at boarding rooms;

4.6 AO/GHA is encouraged to update TOBT through ONLY one of the above systems in order to avoid any chance of a miscommunication.

4.7 TOBT information is available through the following channels:

a. AOCS A-CDM portal;
b. GMID;
c. Aircraft Docking Guidance System (ADGS) at contact stands;
d. Radio communication with GHA or AO.

4.8 The Pre-Departure Sequencer (PDS) will calculate the TSAT automatically by taking into account factors such as TOBT, calculated take-off time (CTOT), variable taxi times (VTT), wake turbulence category, departure separation, etc. A pre-departure sequence is determined from the calculated TSATs, thus the accuracy of TOBT is vital to an optimal TSAT.

4.9 Flights with an invalid or expired TOBT will be instructed by ATC to update TOBT when requesting for clearance. For non-compliant flights, delays can be expected. AO or GHA are strongly encouraged to update TOBT as soon as any expected delay to the aircraft readiness for pushback is made available to avoid unnecessary hold-ups.

4.10 TSAT information is available through the following channels:

a. AOCS A-CDM portal;
b. GMID;
c. ADGS at contact stands;
d. Radio communication with GHA or AO;
e. ATC - Upon issuance of ATC clearance (for flights parked at aircraft stands without ADGS).

5 A-CDM START-UP PROCEDURES

5.1 Pilot shall ensure aircraft is ready for pushback at TOBT.

5.2 Pilot to maintain communication with the AO / GHA as they are responsible for updating the TOBT. Notify the AO / GHA to update the TOBT if it is expected to differ by 5 minutes or more.

5.3 Pilot utilising the DCL service on selected routes shall request for ATC clearance through 'Request for Departure Clearance Downlink' (RCD) message no earlier than 20 minutes before TOBT. Refer to WSSS AD 2.22 paragraph 8.4 on the applicable routes for DCL service and procedures.

5.4 Pilot using voice request to contact Ground Movement Planner (Clearance Delivery) and request for ATC clearance within 5 minutes of TOBT using the following phraseology:

- Callsign
- Destination
- Proposed flight level and alternate level, if any
- Parking position

a. Pilot shall only request for ATC clearance provided aircraft is ready to pushback at TOBT.

5.5 Regardless of clearance through voice or datalink, all departing aircraft must report to Clearance Delivery when ready for push within 5 minutes of TOBT.

5.6 ATC will advise the pilot whether the proposed flight level or other alternate flight level is available and an ATC clearance will be issued accordingly. If pre-departure coordination with an adjacent unit or centre is required, the pilot will be instructed to standby.

5.7 ATC will update TSAT changes if any, during issuance of ATC clearances. Note that TSAT displayed on ADGS may not be final and can be revised due to en-route clearance restrictions, ground congestion or flow measures.

5.8 Pilot shall request for pushback from Ground Movement Control within 5 minutes of TSAT after obtaining ATC clearance, or as directed by ATC.

a. ATC may swap pushback sequence based on real-time readiness of aircrafts to maximise apron and runway capacity and reduce the overall delay to traffic as and when required.
b. At the end of pushback, the departing aircraft must have all engines started and be ready to taxi immediately, unless otherwise instructed by ATC.

AERODROME CHART - ICAO

01° 21′ 33"N
103°59′ 22"E

AERODROME ELEVATION 6.66m

TWR	118.6 / 118.25 / 131.4
GND	124.3 / 121.85 / 121.725 / 127.275
DELIVERY	121.65 / 119.6

RAMP TWR	
GND	122.55 (GMC 4 EAST)
	125.65 (GMC 4 WEST)

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	19.8m	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.

RWY	DIRECTION	THR	GEOID UNDULATION	BEARING STRENGTH
02L	023°	01 20 56.27N 103 58 38.82E	10.24m	PCN 72/F/B/W/U
20R (DISP THR)	203°	01 22 33.95N 103 59 20.06E	10.25m	
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	PCN 82F/B/X/T
20L	203°	01 21 20.45N 104 00 50.05E	10.36m	

TAXIWAYS — BEARING STRENGTH
PCN 85/R/B/W/U - Taxiways W1, W9, E1, E3, E11 and EP (between E10-E11)
PCN 80 F/B/X/T - Taxiways J and K (between Taxiways K2 and J12)
PCN 90 R/B/W/T - Taxiways A (between A1 and A2, and between A11 and A12), A1, A2, A11, A12, B (between B1 and B2, and between B13 and B14), B1, B2, B13, B14.
PCN 82 F/B/X/T - Taxiway P1 (between N and N5) and all other A, B, J, K Taxiways.
PCN 72/F/B/W/U - All other Taxiways

APRONS — BEARING STRENGTH
PCN 85/R/B/W/U

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.

AREA CLOSED FOR CHANGI EAST CONSTRUCTION WORKS
(INCLUDING RUNWAY 02C/20C)

ANNUAL CHANGE NEGLIGIBLE
VAR 0° 23'E (2020)

LEGEND	
	Aircraft Stands and Taxiways Markings
	Runway Centre Line Lights
	Runway Edge Lights
	White Touchdown Zone Lights
	Blue Taxiway Edge Lights
	Green Taxiway CentreLine Lights
	Cat II Holding Position Markings Red Stop Bar Lights Controllable ON/OFF
	Twy Intersection Holding Position Markings Red Stop Bar Lights Controllable ON/OFF
	Blue Taxiway Edge Markers
	FOD Detection Masts
	Cat I/II Holding Position Markings Red Stop Bar Lights Controllable ON/OFF

Metres 100 0 100 200 300 400 500 600 700 800 900 1000 Metres

Changes : Decommissioned Navaid Buildings and equipments along Runway 02C/20C removed. East Perimeter Road revised.

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 55.87	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	5.09m (16.70ft)
	B9	01 21 42.19	103 59 16.16	5.13m (16.83ft)
	B10	01 21 44.47	103 59 17.12	5.10m (16.73ft)
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	5.07m (16.63ft)
	C13	01 21 49.64	103 59 24.75	5.05m (16.57ft)
	C15	01 21 51.90	103 59 25.71	5.05m (16.57ft)
	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	5.09m (16.70ft)
	D32	01 21 46.73	103 59 31.07	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	5.08m (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 24.15	103 59 32.67	4.71m (15.45ft)
	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	E1	01 21 20.02	103 59 25.58	4.91m (16.11ft)
	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)
	F30	01 21 14.71	103 59 23.33	4.92m (16.14ft)
	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 47.91	103 59 18.88	4.74m (15.55ft)
	208	01 20 49.48	103 59 19.54	4.74m (15.55ft)
	209	01 20 51.06	103 59 20.21	4.75m (15.58ft)
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 33.05	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)
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)
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)

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

LOCATION	STAND NR	NORTH LAT	EAST LONG	ELEVATION
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 40.89	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 P1/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 EP 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 C6 (behind aircraft stands F50 to F54) can only be used by aircraft with maximum wingspan 65m (towing and pushback exempted).

9) Taxilane L5 can only be used by aircraft with maximum wingspan 36m.

10) TWY L8, L9 and L10 can only be used by aircraft with maximum wingspan 65m.

11) Pilots are advised to exercise caution when taxiing near Taxilane L5, L8, L9 and L10.

12) Pilots are advised to apply speed limit of 20 knots when taxiing along TWY SOUTH CROSS 1 and SOUTH CROSS 2.

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.

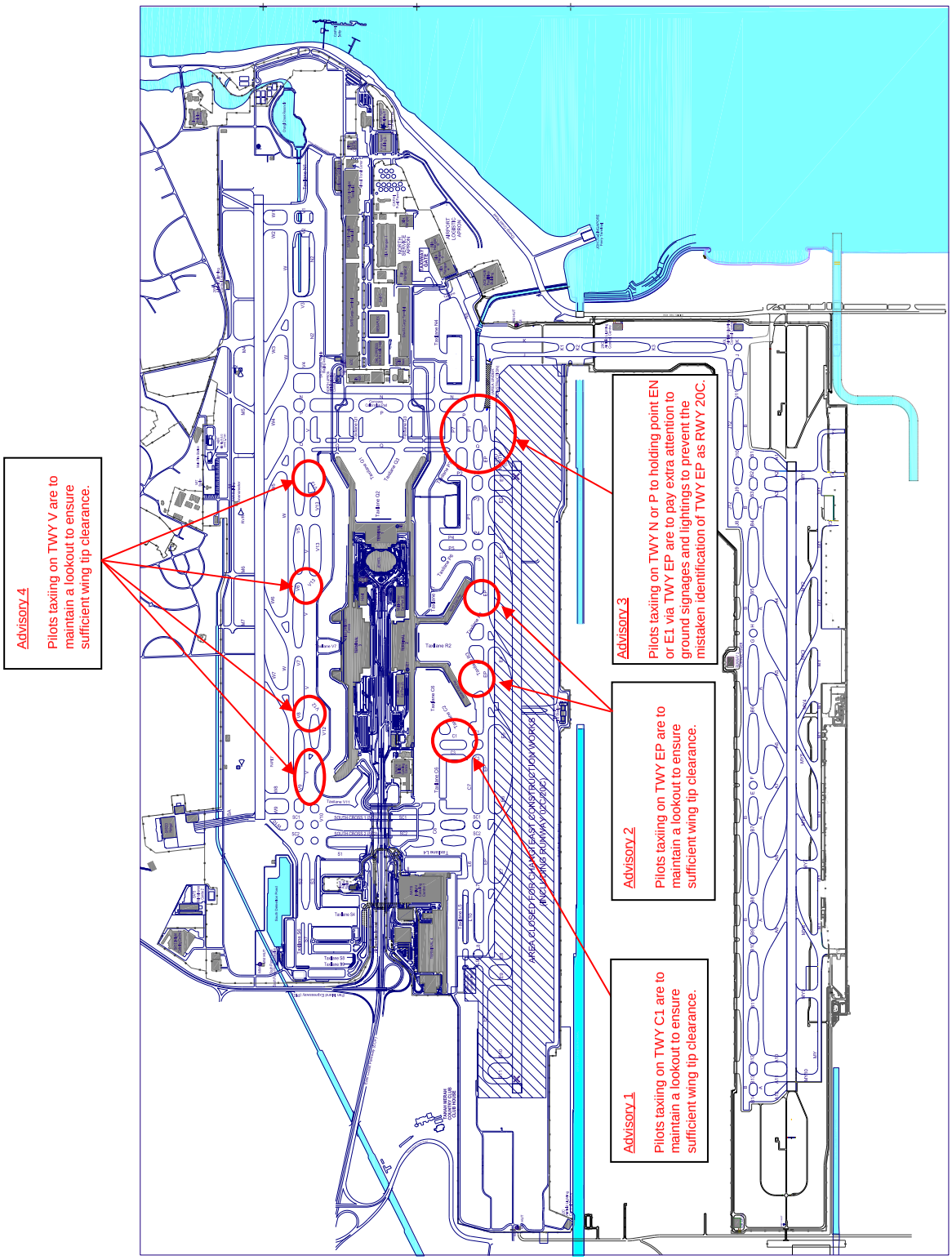
RADIO ALTIMETER OPERATIONS AREA

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.

TOTAL AIRCRAFT PARKING POSITIONS : 230

AERODROME ADVISORY CHART



Changes : Decommissioned Navaid Buildings and equipments along Runway 02C/20C removed. East Perimeter Road revised.

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DIMENSIONS AND ELEVATIONS IN METRES

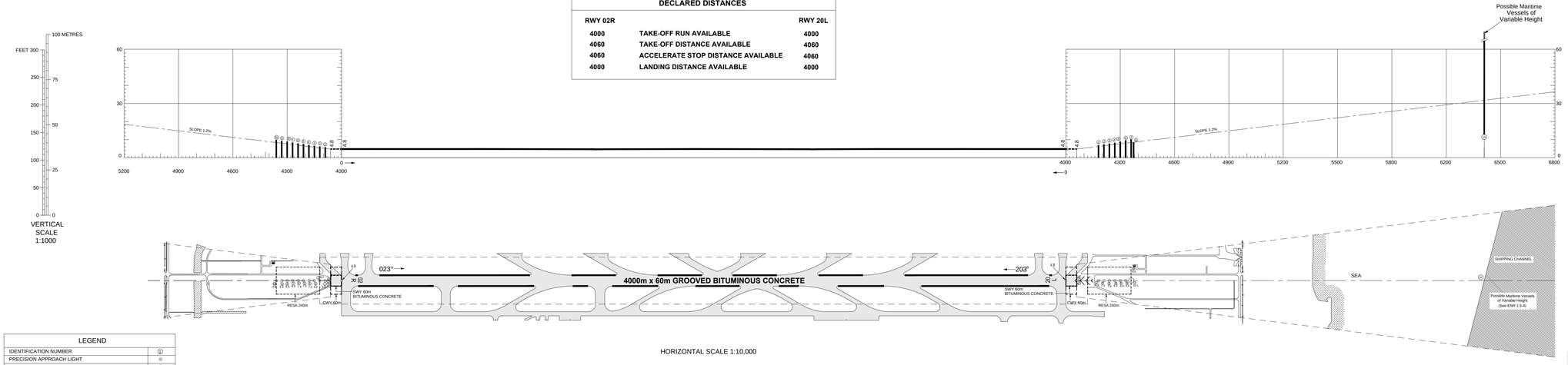
AERODROME OBSTACLE CHART - ICAO
TYPE A (OPERATING LIMITATIONS)

SINGAPORE/Singapore Changi

MAGNETIC VARIATION 0°23'E (2020)

RWY 02R/20L

DECLARED DISTANCES		
RWY 02R		**RWY 20L**
4000	**TAKE-OFF RUN AVAILABLE**	**4000**
4060	**TAKE-OFF DISTANCE AVAILABLE**	**4060**
4060	**ACCELERATE STOP DISTANCE AVAILABLE**	**4060**
4000	**LANDING DISTANCE AVAILABLE**	**4000**



HORIZONTAL SCALE 1:10,000

METRES 400 200 0 500 1000 1500 2000 METRES

FEET 1000 500 0 1000 2000 3000 4000 5000 6000 FEET

LEGEND	
IDENTIFICATION NUMBER	①
PRECISION APPROACH LIGHT	⊙
ANTENNA	⊙
ROAD	
FENCE	
DRAIN	
BUILDING	

ORDER OF ACCURACY
HORIZONTAL : ±1m
VERTICAL : ±1m

AMENDMENT RECORD		
NO.	DATE	ENTERED BY

CHANGES : Clearway elevations at both ends of Runway 02R/20L revised.
Obstacles revised.

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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
	124.6
TWR	131.4

SINGAPORE/ SINGAPORE CHANGI

RNP RWY 02R

104° 10'

ALL ARRIVALS INTO WSSS WILL BE ISSUED INSTRUCTIONS BY ATC TO MAINTAIN 180KT TILL 8NM FROM TOUCHDOWN AND THEREAFTER 150KT TILL 4NM FROM TOUCHDOWN

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' 03.18"N
104°05' 14.4"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

KUALA LUMPUR FIR
SINGAPORE FIR

01° 20'

WSR16 200ft ALT GND
WSR38 10 000ft ALT GND

CAUTION : Rwy 02C/20C closed due development works.

3 NM 023°

(MAPT) RW02R
01°19' 20.59"N
103°59' 59.44"E

2 NM 023°

(FAF) MOPSI
01°16' 34.76"N
103°58' 49.43"E
1 030

(IF) LUVUL
01°14' 44.21"N
103°58' 02.76"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

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

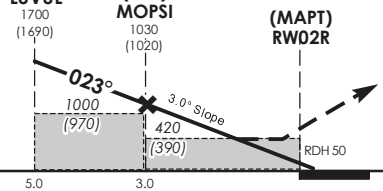
104° 00'

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 CAT I OCA (OCH) is 820ft (800ft) and aircraft shall climb straight to 1200ft before commencing right turn climbing to 7000ft 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 straight to 500ft, turn right direct to IGODO. Cross IGODO at 2 000ft or above. Thereafter, turn right climbing to 7 000ft 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 : FAF value, Intermediate Segment altitude and TAB table revised. Approach heading 055° removed.

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	-	1030+	150	-	RNP APCH
TF	RW02R	Y	023 (023.4)	-0.4	3	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’ 44.21” N	103° 58’ 02.76” E
MOPSI (FAF)	01° 16’ 34.76” N	103° 58’ 49.43” E
RW02R	01° 19’ 20.59” N	103° 59’ 59.44” E
IGODO	01° 24’ 03.18” N	104° 05’ 14.40” E
HOSBA	01° 19’ 48.00” N	104° 24’ 18.00” E

INSTRUMENT APPROACH CHART

AERODROME ELEV 22ft
HEIGHT RELATED TO THR RWY 20L - ELEV 16ft
MSA 25 NM from TEKONG DVOR

D-ATIS	AP ID WSSS
	128.6
APP	124.05
	124.6
TWR	131.4

SINGAPORE/ SINGAPORE CHANGI
RNP RWY 20L

104° 10'
104° 00'

ALL ARRIVALS INTO WSSS WILL BE ISSUED INSTRUCTIONS BY ATC TO MAINTAIN 180KT TILL 8NM FROM TOUCHDOWN AND THEREAFTER 150KT TILL 4NM FROM TOUCHDOWN

EXPECT RADAR VECTORS TO OBGIS

SCALE 1 : 300,000

RADAR REQUIRED

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

(IF) OBGIS
01°25' 56.83N
104°02' 46.74"E
1 700

(FAF) OVMAV
01° 24' 06.28"N
104° 02' 00.06"E
1 030

10 NM
3 NM
203°
WSD34
500ft AMSL
GND

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

PIC
2000ft
SFC

POSSIBLE VESSEL

(MAPT) RW20L
01°21' 20.45"N
104°0' 50.05"E

KUALA LUMPUR FIR
SINGAPORE FIR

Seletar
Paya Lebar

CAUTION :
Rwy 02C/20C closed due development works.

TO HOSBA

POSSIBLE VESSEL

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

MNM ALT
7 000
079°
259°
HOSBA
MISSED APCH
01°19' 48"N
104°24' 18"E

BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS AND HEIGHTS ARE IN FEET

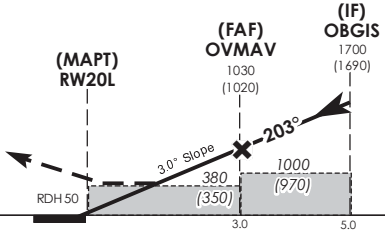
VAR 0° 23'E (2020)

01° 30'
01° 20' N

This procedure requires a missed approach climb gradient of 5% (304 ft/NM) until passing 3,000ft.
For aircraft which can only achieve a 2.5% (152 ft/NM) climb gradient, the CAT I OCA (OCH) is 1080ft (1050ft).

Transition Level : FL 130
Transition Alt : 11 000

MISSED APPROACH
Climb straight to 1 500ft, turn left climbing to 7 000ft to HOSBA.
Hold at HOSBA or AS DIRECTED BY ATC.
No turn before MAPt.



CIRCLING NOT AUTHORIZED

MINIMUM TEMPERATURE FOR BARO-VNAV APPROACHES: 5°C

ELEV 16
(THR RWY 20L)

		OCA (OCH)			
Category of Aircraft		A	B	C	D
LNAV/VNAV	5%	**280 (260)**			
LNAV	5%	**380 (350)**			

Distance		OBGIS		OVMAV	
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**

SINGAPORE CHANGI RNP-APCH RWY 20L – Approach from OBGIS

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	OBGIS	-	203 (203.4)	-0.4	-	-	1700+	180	-	RNP APCH
TF	OVMAV	-	203 (203.4)	-0.4	2	-	1030+	150	-	RNP APCH
TF	RW20L	Y	203 (203.4)	-0.4	3	-	-	-	-3.0° / 50	RNP APCH
CA	-	-	203 (203.4)	-0.4	-	L	1500+	-	-	RNP APCH
DF	HOSBA	-	-	-	-	-	7000+	-	-	RNP APCH

Waypoint Coordinates

Name	Latitude	Longitude
OBGIS (IF)	01° 25’ 56.83” N	104° 02’ 46.74” E
OVMAV (FAF)	01° 24’ 06.28” N	104° 02’ 00.06” E
RW20L	01° 21’ 20.45” N	104° 00’ 50.05” E
HOSBA	01° 19’ 48.00” N	104° 24’ 18.00” E

1.5.3 From SJ
Cross SJ at 4,000ft or as cleared by ATC. On passing SJ, descend to 3,000ft for PONJO. On passing PONJO, descend in VMC to 2,000ft or altitude cleared by ATC and join downwind RWY 21 via RECHI-SETHI. (RECHI is located at 012033N 1034908E or Radial 235 PU and SETHI is located at 012439N 1035006E or Radial 263 PU)

i. Straight-in-Approach
Join downwind RWY 21 via SETHI at 2,000ft (keeping clear of Sembawang ATZ) at a speed of not more than 170kt. When downwind, descend from 2,000ft for visual approach, or as cleared by ATC. Pilots should have the runway in sight.

ii. Circling Approach
Join downwind RWY 21 via SETHI at 2,000ft (keeping clear of Sembawang ATZ) at a speed of not more than 160kt. At end of downwind, turn right and overfly the runway. When passing over south-end of the runway (THR RWY 03), descend from 2,000ft to 1,500ft and turn right for downwind RWY 21. At downwind, descend for visual approach or as cleared by ATC. Pilots should have the runway in sight.

1.5.4 Procedures are illustrated in the following charts:

- AD-2-WSSL-VAC-4 : Visual Approach Chart - RWY 21
- AD-2-WSSL-IFR-2 : Seletar Aerodrome Joining Procedures (IFR flights) from JB, KK and SJ - RWY 21

1.6 Holding Procedure

1.6.1 A low level holding procedure is established at SJ DVOR/DME. Suitably equipped aircraft bound for Seletar which may wish to hold for weather improvement may use this procedure (ENR 3.6-3 refers)

1.7 Approaches to Seletar Aerodrome

1.7.1 A deep-water shipping channel approximately 1525m from the northern threshold cuts across the extended centreline of Seletar RWY 21.

1.7.2 Information on the mast heights of tall vessels is relayed to ATC by Maritime and Port Authority of Singapore. ATC shall inform pilots of landing and departing aircraft of such information if the reported mast height of the vessel is above 30m.

1.7.3 At night ATC shall not permit landing on RWY 21 when vessels of mast height above 30m are reported.

1.7.4 Aircraft making approaches into Seletar are required to keep clear of Sembawang ATZ and any Prohibited/Restricted/Danger Areas (e.g. WSR38 and WSD4) within the vicinity.

1.7.5 Aircraft are restricted from overflying built-up residential areas around Seletar Airport (charts AD-2-WSSL-VAC-1 to AD-2-WSSL-VAC-4 refer) at an altitude of below 1,500ft. Aircraft types which are unable to safely manoeuvre clear of the built-up residential areas are not allowed to operate at Seletar Airport.

2 DEPARTURES FROM SELETAR AERODROME

← 2.1 Aircraft departing Seletar are required to keep clear of Sembawang ATZ and any Prohibited/Restricted/Danger Areas (e.g. WSR38 and WSD4) within the vicinity.

2.2 The pilot-in-command or the operator of IFR flight operating out of Seletar is required to file via KK or RECHI - PONJO - SJ under item 15 of the flight plan. All departure clearances subject to ATC coordination.

2.3 Aircraft departing Seletar are required to adhere to the speed restrictions (charts AD-2-WSSL-VDC-1 and AD-2-WSSL-VDC-2 refer).

WSSL AD 2.23 ADDITIONAL INFORMATION

1 BIRD CONCENTRATION IN THE VICINITY OF THE AIRPORT

1.1 A number of varieties of birds are found in Singapore throughout the year. The larger birds commonly found in Seletar Airport includes the following:
- Cattle egrets (weighing approximately 300g each)
- Brahminy kites (weighing approximately 600g each)

1.2 There could be an increase in bird activities during the usual migratory months of September to April. During this period, migratory birds may use the airport as their feeding ground.

1.3 Handheld laser device, long range acoustic device and alternating amplified bird cries of distress are used for bird dispersal within Seletar Airport.

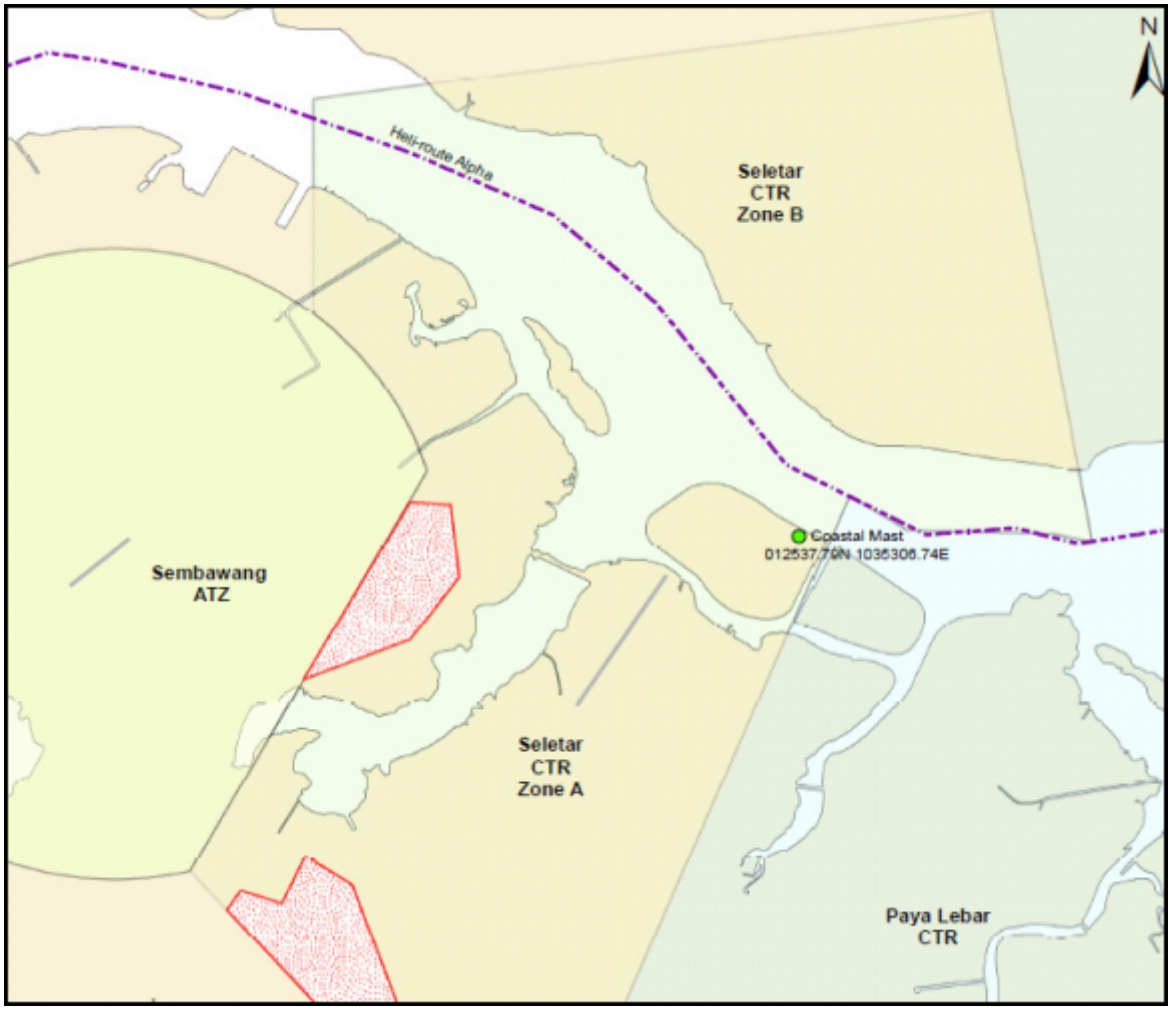
2 HELICOPTER CROSSING SELETAR NORTHERN EXTENDED CENTRELINE

2.1 Due to flying activities in Seletar Control Zone, all helicopters flying on Heli-route Alpha and intending to cross the northern extended centreline of Seletar Aerodrome shall obtain a positive clearance from Seletar Tower on 118.45MHz prior to crossing (see chart below).

2.2 For eastbound crossing, all helicopters are to hold over the western tip of Seletar Island until a clearance has been issued by Seletar Tower.

2.3 For westbound crossing, all helicopters are to hold on Heli-route Alpha abeam the coastal mast until a clearance has been issued by Seletar Tower.

2.4 The holding altitude is 200 feet or otherwise instructed by ATC.



WSSL AD 2.24 CHARTS RELATED TO SELETAR AIRPORT

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VISUAL DEPARTURE CHART

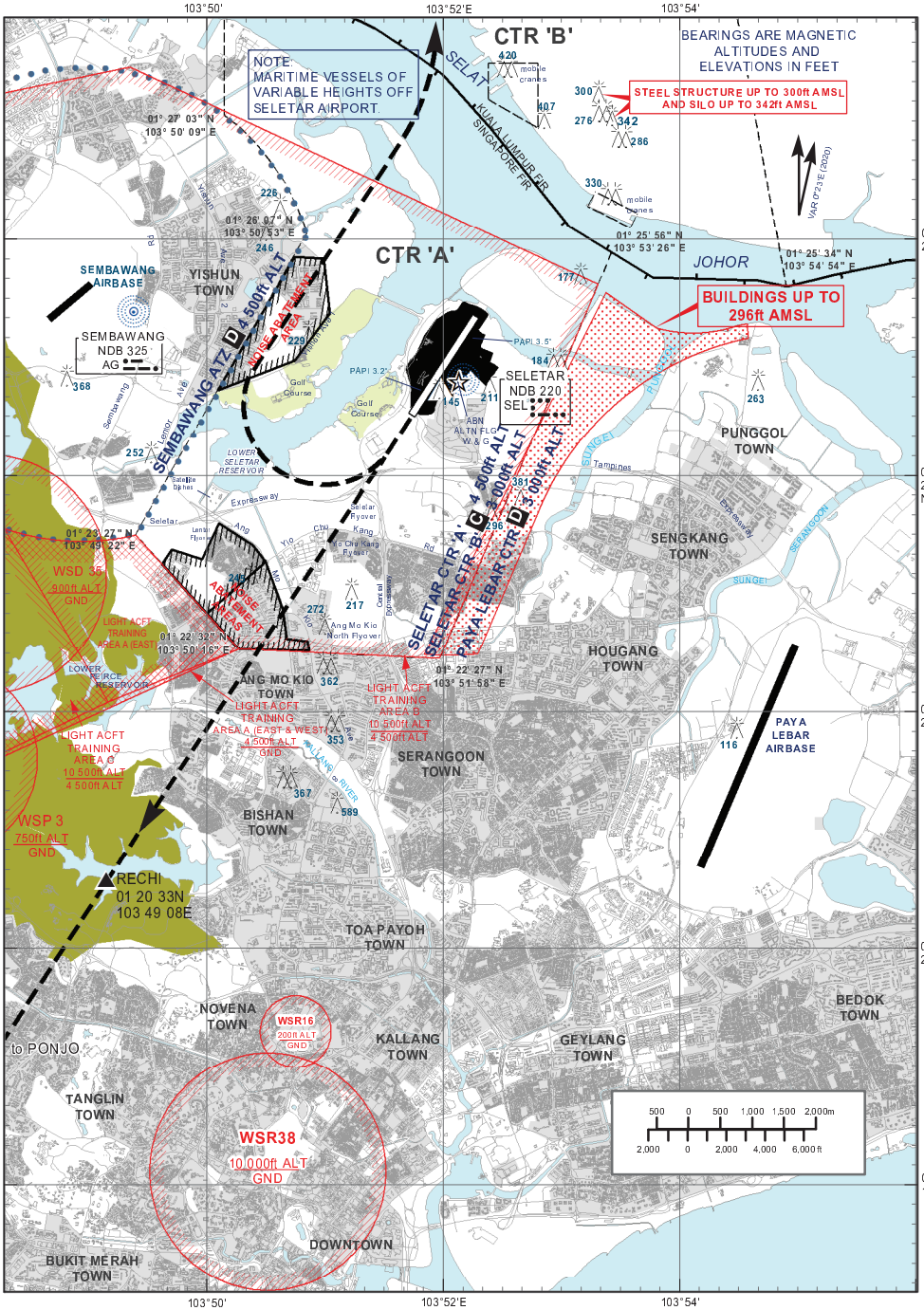
AD ELEV 46 ft

ATIS AP ID-WSSL 128.425

APP 124.05
TWR 118.45
270.4

SINGAPORE/SELETAR

RWY 21



CHANGES : Caution note added on flip side.

ADVISORY DEPARTURE PROCEDURES FOR RUNWAY 21

On departure, pilots can expect climb to an initial altitude cleared by ATC. Pilots of fixed-wing aircraft navigating to KK 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 KK 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 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 obstructions in sight, including the steel structure 300ft AMSL and the 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 KK, Pilots shall maintain a speed of not more than 185kts until established on the downwind leg to mitigate risk of encroaching into Sembawang ATZ.

WSAT AD 2.10 AERODROME OBSTACLES

In approach / TKOF areas	*In circling area and at aerodrome*
RWY 18/36 APCH / TKOF Areas ILS LLZ co-located with LLZ antenna, HGT 21m AGL, 004 degrees MAG 260m from THR RWY 18 ILS LLZ co-located with LLZ antenna, HGT 15m AGL, 184 degrees MAG 290m from THR RWY 36	2 masts, HGT 6m, located on eastern shoulders of RWY 36, 233m from THR, 100m from RWY centreline and RWY 18, 273m from THR, 100m from RWY centre line. Masts LGTD at NGT. PAR hut co-located with GP antenna mast, HGT 16m AGL, 074 degrees MAG, 100m from WSAT ARP. ILS GP huts co-located with GP antenna mast, HGT 19m AGL, at 029 degrees MAG, 322m from THR RWY 36 and 123 degrees MAG, 303m from THR RWY 18. 1 Monopole located at 012432N 1034035E, HGT 117.5m AMSL, 304 degrees MAG, 4255m from WSAT ARP. 1 Lightning rod located at 012135N 1034425E, HGT 64.04m AMSL, 131 degrees MAG, 4719m from WSAT ARP. 1 Lightning rod located at 012133N 1034426E, HGT 64.17m AMSL, 131 degrees MAG, 4783m from WSAT ARP. 2 Lightning rod located at 012051N 1034419E, HGT 60.23m AMSL, 142 degrees MAG, 5591m from WSAT ARP.

WSAT AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY NR	*TRUE &MAG BRG*	*Dimensions of RWY (m)*	*Strength (PCN) and surface of RWY and SWY*	*THR coordinates*	*THR elevation and highest elevation of TDZ of precision APCH RWY*
1	2	3	4	5	6
18	184.5	2743 x 46	PCN 100 F/A/W/T	-	50 FT
36	004.5	2743 x 46	PCN 100 F/A/W/T	-	50 FT

12	*Remarks*	a.	Intensive fixed wing flying operation east of runway.
		b.	Helizone adjacent east of runway up to 800ft QNH.
		c.	Arrestor Barrier both ends of runway.
		d.	Hookwire cable installed 366m inwards from each end of runway.
		e.	Intense bird activity after rain, and up to 2 hour after dusk and dawn.

WSAT AD 2.13 DECLARED DISTANCES

RWY Designator	*TORA (m)*	*TODA (m)*	*ASDA (m)*	*LDA (m)*	*Remarks*
1	2	3	4	5	6
18	2743	3115	2743	2743	Nil
36	2743	3030	2743	2743	Nil

WSAT AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	*APCH LGT Type, LEN INTST*	*THR LGT colour WBAR*	*VASIS (MEHT) PAPI*	*TDZ LGT LEN*	*RCL LGT, LEN,spacing, colour, INTST*	*RWY edge LGT, LEN, spacing, colour,INTST*	*RWY End LGT, colour WBAR*	*SWY LGT, LEN colour*	*Remarks*
1	2	3	4	5	6	7	8	9	10
18	High INTST white centreline and two bars, PAPI, Sequenced flashing lights	Green	4 units PAPI on each side of RWY at 3.0° Glide Slope	Nil	Nil	High INTST omni-directional white variable INTST	Red	Nil	Distance to run markers illuminated
36	High INTST white centreline and five bars, PAPI, Sequenced flashing lights	Green	4 units PAPI on each side of RWY at 3.0° Glide Slope	Nil	Nil	High INTST omni-directional white variable INTST	Red	Nil	Distance to run markers illuminated

WSAT AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

TWY Lighting	blue edge lights
IBN	012400N 1034254E, FLG R 'TN', operating hours HN and IMC.
Remarks	WDI lighted. Dispersal area floodlights

WSAT AD 2.17 ATS AIRSPACE

1	*Designation and Lateral Limits*	**TENGAH ATZ** 010842N 1034336E thence clockwise around the arc of radius 14 NM centred on 012242N 1034203E to 011351N 1033117E thence east along the Singapore - Kuala Lumpur FIR boundary to 012728N 1034302E 012620N 1034544E 012150N 1034524E 011845N 1034414E 010842N 1034336E.
2	*Vertical Limits*	SFC to 3000 FT ALT
3	*Airspace Classification*	D
4	*ATS Unit Callsign* *Language(s)*	TENGAH APPROACH English
5	*Transition altitude*	11000 FT (3,350m)
6	*Remarks*	Controlling Authority: Tengah Approach During Aerodrome operating hours: Contact Tengah APP on 130.0 MHz, 263.4 MHz or 122.0 MHz Outside Aerodrome operating hours: Contact SATCC (RSAF element) on 123.4MHz or 288.2MHz

WSAT AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	*Call sign*	*Frequency P - Primary S - Secondary*	*Hours of operation*	*Remarks*
APP	TENGAH APPROACH	P130.0 MHz P263.4 MHz S122.0 MHz	BTN 2300-1100 SUN/MON to THU/FRI; and On SUN, Public holidays and outside the above times, PPR from RSAF HQ via Tengah Ops.	Nil
TWR	TENGAH TOWER	P122.0 MHz P282.5 MHz S263.4 MHz		
	TENGAH GROUND	122.0 MHz 337.8 MHz		
	TENGAH TALKDOWN	130.0 MHz 290.8 MHz 328.5 MHz		
Flight Information Service	SINGAPORE RADAR	119.1 MHz	H24	Nil
ACC	SINGAPORE RADAR	P123.7 MHz S127.3 MHz	H24	for ATS Routes B469, G219, G334, R208, L625, L629, L635, L642, L644, M751, M753, M758, M761, M763, M771, N875, N884, N891, N892 and Y514.
		133.8 MHz	0000-1430	
		P134.7 MHz S134.15 MHz	H24	for ATS Routes G334, L625, L644, M758, M761, M771, N875, N884 and N892.
		P133.25 MHz S135.8 MHz		for ATS Routes A457, A464, A576, B466, L762, M630, R325 and R469.
		P134.2 MHz S133.35 MHz		for ATS Routes G334, G580, L625, L644, M646, M767 and N875.
		P134.4 MHz S128.1 MHz		for ATS Routes B338, B469, B470, G579, L504, L644, M635, M774, N502, N875, P501 and in area in the immediate vicinity of Singapore.
	SINGAPORE CONTROL	P134.35 MHz S133.6 MHz	H24	AUTOMATIC DEPENDENT SURVEILLANCE BROADCAST (ADS-B) OUT EXCLUSIVE AIRSPACE WITHIN PARTS OF THE SINGAPORE FIR - L642, L644, M753, M771, M904, N891, N892, Q801, Q802, Q803 and T611 within airspace bounded by 073605N 1090045E, 040713N 1063543E, 041717N 1061247E (MABLI), 044841N 1052247E (DOLOX), 045223N 1041442E (ENREP), 045000N 1034400E, thence north along the Singapore FIR boundary to 070000N 1080000E at or above FL290.

Service designation	*Call sign*	*Frequency P - Primary S - Secondary*	*Hours of operation*	*Remarks*
ACC	SINGAPORE RADIO	6556 kHz 11297 kHz	H24	SEA 1. Emission: A3AJ. SSB suppressed carrier, SATCOM service available.
		5655 kHz 8942 kHz 11396 kHz		SEA 2. Emission: A3AJ. SSB suppressed carrier, SATCOM service available.
		6556 kHz		SEA 3. Emission: A3AJ. SSB suppressed carrier, SATCOM service available.
APP	SINGAPORE APPROACH	P124.05 MHz S124.6 MHz S126.3 MHz	H24	TAR – flow control service provided for ARR/DEP ACFT. Intermediate approach to Singapore Changi AP and other airports in Singapore. DEP from all airports in Singapore.

WSAT AD 2.19 RADIO NAVIGATION AND LANDING AIDS

RADIO NAVIGATION AND LANDING AIDS					
Type of Aid	*IDENT*	*FREQ*	*OPR Hour*	*Coordinates*	*Remarks*
TACAN	TNG	CH86X	2300-1100 from SUN/MON to THU/FRI; SUN, Public holidays and outside the above times prior permission required from RSAF HQ via Tengah Operations.	012336.00N 1034242.00E	043° MAG 0.55km from ARP Maint Period: 0001-0900 second SAT of EV month
SINJON DVOR/DME	SJ	113.5 MHz CH82X	H24	011319.28N 1035120.08E	201° MAG 14.5km from THR RWY 02 (Paya Lebar) Antenna HGT: 194ft AMSL. Coverage 200NM Maint Period: 0200-0600 third THU of EV month
ILS LLZ RWY 36	ITN	108.1 MHz	H24	012408.43N 1034234.34E	Located 260m from THR RWY 18 along centreline of RWY. Course width 3°
ILS GP RWY 36	-	334.7 MHz	H24	012240.84N 1034231.01E	GP antenna 3°
ILS DME RWY 36	ITN	CH18X	H24	012241.02N 1034226.67E	DME co-located with GP

WSAT AD 2.20 LOCAL TRAFFIC REGULATIONS - USE OF RSAF TENGAH AIR BASE AS AN EMERGENCY DIVERSION AERODROME FOR SINGAPORE CHANGI AIRPORT

1 INTRODUCTION

1.1 RSAF Tengah Air Base is nominated as the emergency diversionary aerodrome for Singapore Changi Airport. The arrangement outlined below is applicable for the handling of any civil aircraft movement that is diverted to RSAF Tengah Air Base.

1.2 It is emphasised that RSAF Tengah Air Base **is not an ICAO designated alternate aerodrome for Singapore Changi Airport** and therefore should not be flight planned as such. Its use by civil aircraft is permitted for emergency purposes only when Singapore Changi Airport runway is obstructed.

2 MANNING OF TENGAH AIR BASE

2.1 Tengah Air Base is open from 2300-1100 SUN/MON to THU/FRI. It is closed on SAT, SUN and public holidays. Outside the above stipulated operating hours, Tengah Air Base can be opened on 2 hours' prior notice. This arrangement, if necessary, will be undertaken by the Duty Tower Controller or SATCC Watch Manager of Singapore Changi Airport who will inform RSAF Headquarters via Tengah Ops.

2.2 Airline operators are requested to inform the Airport Manager and the Duty Tower Controller or SATCC Watch Manager at Singapore Changi Airport as soon as it is known that their service will require the use of Tengah Air Base. Revised ETAs/ETDs are to be notified as soon as known.

3 OPERATIONAL SERVICES

3.1 The layout of Tengah Airbase with the aircraft parking apron which is available for the use of civil aircraft (except B747 aircraft types) in the event of an emergency diversion from Singapore Changi Airport, is indicated in page WSAT AD 2-11. It is to be noted that only a limited number of civil aircraft can be accommodated at any one time.

3.2 Air-ground-air communication maintained by RSAF Tengah Tower/APP for AD Control Services is VHF 122.0MHz.

4 PASSENGER CLEARANCE

4.1 Once the aircraft has shutdown, only the Captain of the aircraft will be allowed out of the aircraft. All other passengers will remain in the aircraft due to space constraints and to avoid possible immigration problems.

4.2 Arrangements will be made to transport all the passengers back to Singapore Changi Airport for immigration processing.

4.3 The Airport Manager or his representative will be present at the Passenger Terminal to provide assistance when aircraft are required to land at Tengah Air Base.

4.4 No refreshment facilities are available.

5 SECURITY

5.1 All Airline personnel who are required to proceed to Tengah Air Base must wear their Singapore Changi Airport Passes at a prominent position and they will be escorted to the respective areas. All personnel not in possession of the laminated pass except Customs and Government Officers in uniform will be denied entry into Tengah Air Base by the RSAF Security Guard. Entry into the Air Base by both the airline personnel and service equipment is via the main gate. The Airline Engineering Coordinator shall be responsible for the proper positioning of the ground servicing equipment and vehicles in the Apron Area where arriving aircraft are to be parked.

5.2 No equipment, vehicles, stores, cargo or mail shall be left overnight at Tengah Air Base.

5.3 The security of civil aircraft parked in the Apron is the responsibility of the aircraft owner and any security service obtained shall first be cleared with the Tengah Air Base Security Authorities.

6 AIRCRAFT STAND ALLOCATION

6.1 Aircraft parking positions will be issued by the RSAF Tower Controller. A "follow-me" vehicle will be waiting at the accesses to guide the aircraft to the allocated parking stands.

7 COMMUNICATIONS

7.1 No VHF RTF surface movement frequency is available at Tengah Tower. Communication with the Tower will be by telephone, the nearest of which is in the Fire Station Building in front of the aircraft parking apron.

8 FUEL

8.1 Fuel available JET A1 F3X.

9 AIRCRAFT SERVICES

9.1 Airlines will have to provide their own services. Limited aircraft services can be obtained from the Aircraft Maintenance Unit by prior arrangement only.

9.2 Where essential facilities and services are not available at Tengah Air Base, such as the disposal of toilet waste or refuse, the resources available at Singapore Changi Airport shall be used.

10 RESCUE AND FIRE FIGHTING FACILITIES

← 10.1 The rescue and fire fighting facilities available at Tengah Airbase is up to ICAO CAT 8.

11 FULL EMERGENCY/CRASH PROCEDURE

11.1 In the event of a Full Emergency being declared on a civil aircraft diverted to Tengah Air Base, Full Emergency/Crash Procedures applicable to Singapore Changi Airport will equally apply to Tengah Air Base.

11.2 Alerting of all outside organisations such as the Singapore Civil Defence Force, Police, MINDEF and ambulance services shall be carried out by the Singapore Changi Airport Tower Controller.

11.3 The assembly point for all units attending to the Full Emergency incident will be at the Fire Station. No casualty clearance station is available at Tengah Air Base and in the event of an aircraft crash occurring, casualties if any, will be transported directly from the scene of crash to the Singapore General Hospital.

12 ATC SERVICE OUTSIDE OPERATING HOURS

12.1 Normal radar service will be provided by Singapore Radar (Civil). All aircraft diverting to Tengah will be vectored by Approach Control to SJ or to an agreed transfer control point before they are handed over to Tengah Tower. No radar service will be provided by Tengah.

WSAT AD 2.24 CHARTS RELATED TO AN AERODROME

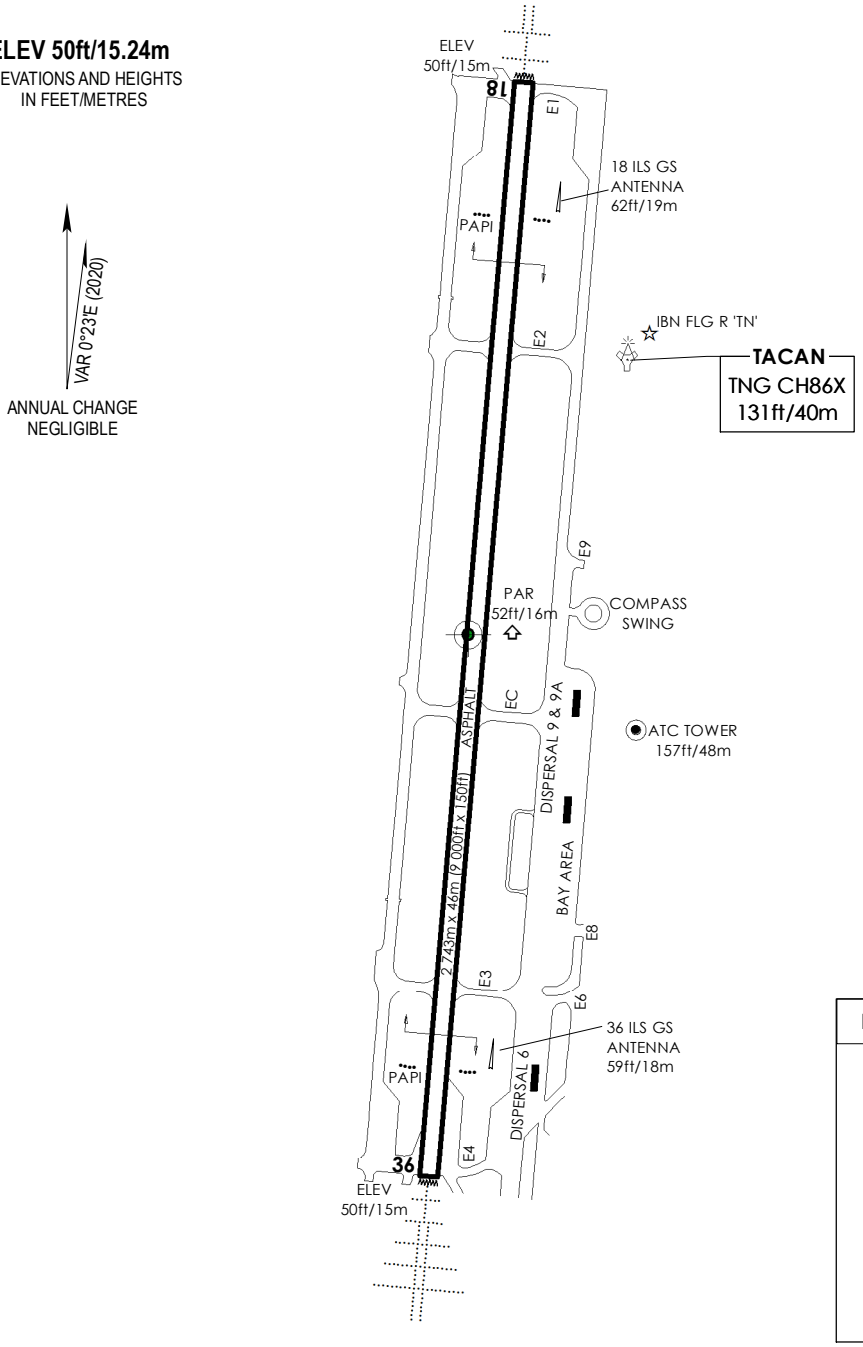
←

AERODROME CHART - TENGAH

01°23'15.40"N 103°42'29.80"E

RSAF TENGAH

ELEV 50ft/15.24m
ELEVATIONS AND HEIGHTS IN FEET/METRES



LEGEND

- Barrier
- Hookwire
- ILS Glideslope Antenna
- Precision Approach Radar
- Dispersal
- PAPI

AERODROME LIGHTING

APPROACH LIGHTING :

Approach RWY 18	High intensity white centre line and 2 bars.
Approach RWY 36	High intensity white centre line and 5 bars.
RWY 18/36	Sequenced flashing lights.

RUNWAY LIGHTING :

RWY 18/36	High intensity omni-directional white edge lights. Green THR lights. Red RWY end lights.
Ident Beacon	TN coding in RED.
Taxiway	Blue edge lights. Green centreline lights.
Dispersal	Blue edge lights. Floodlights

Illuminated distance to run marker boards.

CAUTION

1) RWY lights 0.3m out from RWY edge.

2) All circuits east of aerodrome within 3NM up to 1 500ft (457m).

3) RWY 36 - Right hand circuit.

4) Two masts, height 6m, located on the eastern shoulders :
   a) Runway 36 - 233m from threshold, 100m from runway centre line.
   b) Runway 18 - 273m from threshold, 100m from runway centre line.

Obstacles lit at night.
Helicopters operating in Helizone are to exercise extreme caution.

CHANGES : Red "T" Lighting removed.

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