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Singapore****AIP SUP****076/2016****Effective from 10 NOV 2016****UFN****Published on 01 SEP 2016****SINGAPORE CHANGI AIRPORT - REVISIONS TO THE INSTRUMENT LANDING  
SYSTEM (ILS) INSTRUMENT APPROACH PROCEDURES (IAPs) FOR RUNWAY  
20C AND RUNWAY 20R****1 INTRODUCTION**

1.1 The purpose of this AIP Supplement is to provide details on the revisions to the instrument approach procedures (IAPs) for WSSS ICC ILS/DME RWY 20C and WSSS ICH ILS/DME RWY 20R due to changes in the missed approach climb gradient for the two IAPs.

1.2 The revised WSSS ICC ILS/DME RWY 20C and WSSS ICH ILS/DME RWY 20R IAPs shall be effective from **0000UTC, 10 November 2016**.

**2 DETAILS ON THE REVISED IAPs**

2.1 The revisions to the missed approach climb gradients for the two IAPs are to allow better air traffic management at and around Singapore Changi Airport and carried out in accordance to ICAO's Procedure for Air Navigation – Aircraft Operations (PANS-OPS Doc 8168).

2.2 The Missed Approach Climb Gradient for WSSS ICC ILS/DME RWY 20C has been revised from "2.5%" to "2.8%".

2.3 The Missed Approach Climb Gradient for WSSS ICH ILS/DME RWY 20R has been revised from "2.5%" to "3.7%".

2.4 The pilot-in-command shall fly in strict accordance to the restrictions imposed in the IAPs. In the event that the aircraft is not able to meet the revised missed approach climb gradient, the pilot-in-command shall observe the higher Obstacle Clearance Altitude/Height (OCA/H) for missed approaches executed at 2.5% climb gradient.

2.5 The IAP charts for WSSS ICH ILS/DME RWY 20R and WSSS ICC ILS/DME RWY 20C will be updated to denote the revised Missed Approach Climb Gradient required (see charts in **Appendix A**).

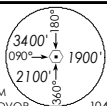
**3 CANCELLATION**

3.1 This AIP Supplement 076/2016 will remain current until the information is incorporated into AIP Singapore.

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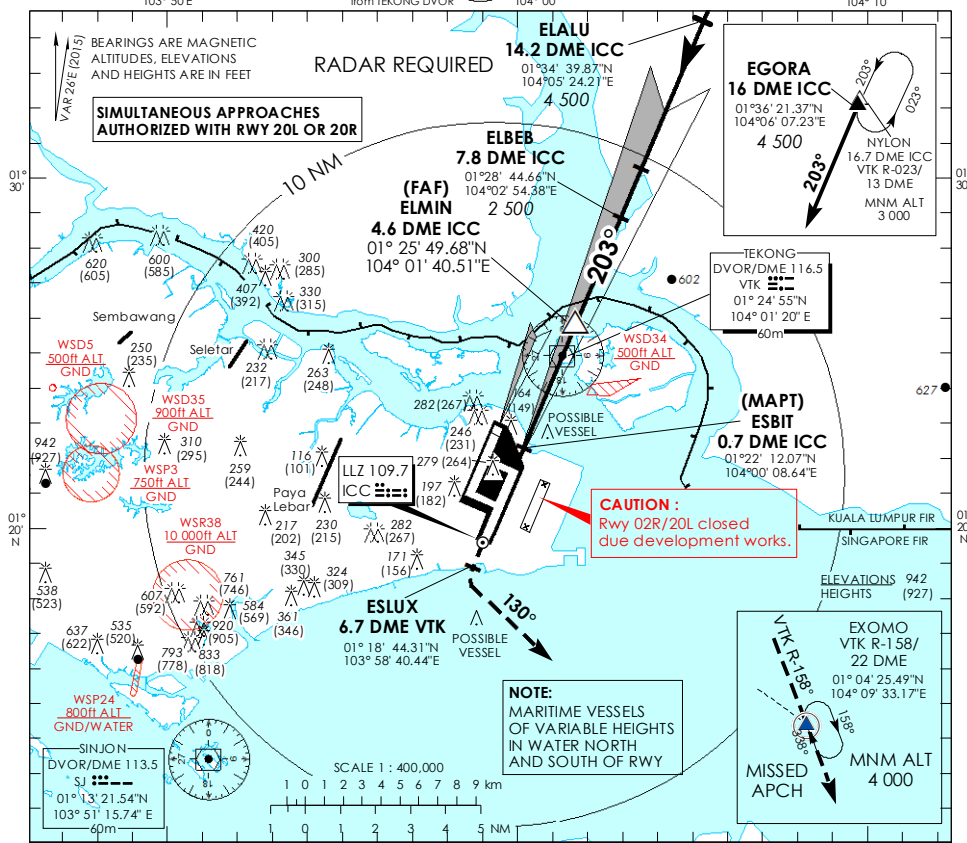
**INSTRUMENT APPROACH CHART**

AERODROME ELEV 22ft  
HEIGHT RELATED TO  
THR RWY 20C - ELEV 15ft



D-ATIS	AP ID WSSS
APP	128.6
TWR	120.3
	119.3
	118.6
	118.25

SINGAPORE/  
SINGAPORE CHANGI  
ICC ILS/DME  
RWY 20C

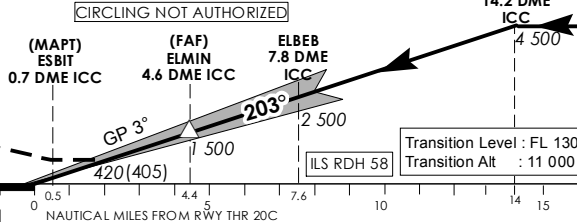


This procedure requires a missed approach climb gradient of 2.8% (171 ft/NM) until passing 2,000ft.  
For aircraft which can only achieve a 2.5% (152 ft/NM) climb gradient, the CAT I OCA (OCH) is 315ft (300#).

**MISSED APPROACH**

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

ILS/DME co-located with GP  
ELEV 15



\*TIMING NOT AUTHORIZED WHEN GP INOP

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

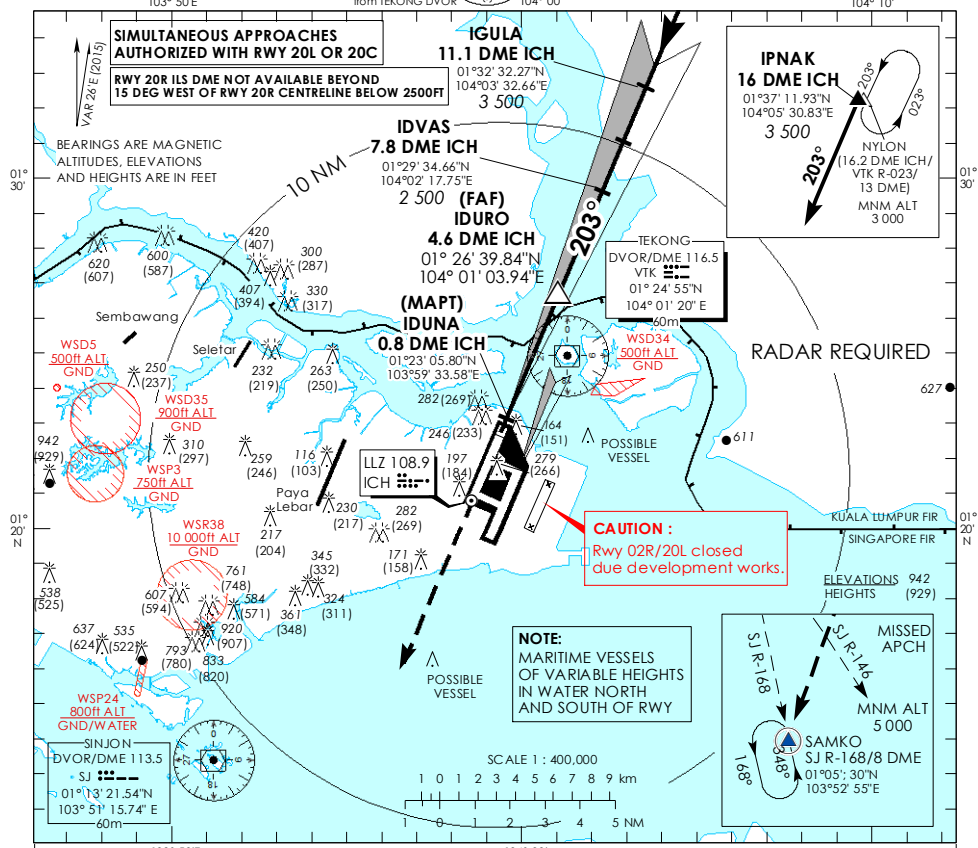
Distance	4 DME	3 DME	2 DME		
Altitude (Height)	1290 (1275)	980 (965)	660 (645)		
Speed	knots 70	120	150	185	
FAF - MAPT 3.9nm	min : s*	3 : 21	1 : 57	1 : 34	1 : 16
Rate of descent/GS	ft/min	370	635	795	980

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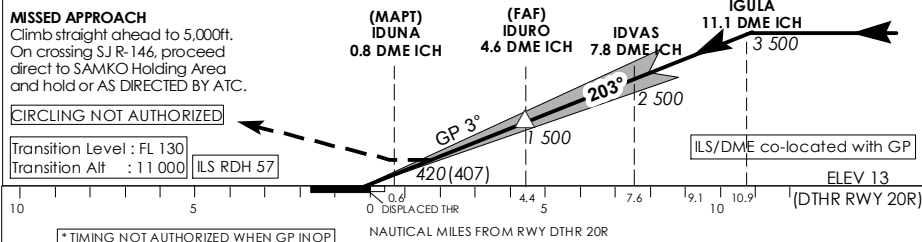
**INSTRUMENT APPROACH CHART** AERODROME ELEV 22ft  
 HEIGHT RELATED TO DTHR RWY 20R - ELEV 13ft

SINGAPORE/ SINGAPORE CHANGI ICH ILS/DME RWY 20R

D-ATIS	AP ID	WSSS
APP	128.6	120.3
TWR	119.3	118.6
	118.25	



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



		OCA (OCH)				
Category of Aircraft		A	B	C	D	D <sub>L</sub>
Straight-in	CAT I ILS	152 (139)	159 (146)	179 (166)	192 (179)	195 (182)
	GP INOP	420 (407)				
Distance	4 DME	3 DME		2 DME		
Altitude (Height)	1290 (1277)	970 (957)		650 (637)		
Speed	knots	70	120	150	185	
FAF - MAP3 3.9nm	min : s *	3 : 21	1 : 57	1 : 34	1 : 16	
Rate of descent/GS	ft/min	370	635	795	980	

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