

## GEN 2.3 CHART SYMBOLS

### TOPOGRAPHY

1	Contours		8	Gravel		12	Highest elevation on chart	Alternative	<b>17456</b>
2	Approximate contours		9	Levee or esker	Alternative	13	Spot elevation		.6397 .8975
3	Relief shown by hachures		10	Unusual land features appropriately labelled		14	Spot elevation (of doubtful accuracy)		.6370±
4	Bluff, cliff or escarpment			Active volcano		15	Coniferous trees		
5	Lava flow		11	Mountain pass		16	Other trees		
6	Sand dunes					17	Palms		
7	Sand area								

18	Areas not surveyed for contour information or relief data incomplete	Caution
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### HYDROGRAPHY

19	Shore line(reliable)		30	Abandoned canal <i>Note. Dry canal having landmark value</i>		38	Reservoir		
20	Shore line(unreliable)		31	Lakes (perennial)		39	Dry lake bed	Alternative	
21	Tidal flats		32	Lakes (non-perennial)	Alternative	40	Wash	Alternative	
22	Coral reefs and ledges		33	Salt lake		41	Shoals		
23	Large river(perennial)		34	Salt pans(evaporator)		42	Glaciers and ice caps		
24	Small river(perennial)		35	Swamp		43	Danger line (2 m or one fathom line)		
25	Rivers and streams (non-perennial)	Alternative	36	Rice field	Alternative	44	Charted isolated rock		+
26	Rivers and streams (unsurveyed)		37	Spring, well or water hole	perennial	45	Rock awash		⊕
27	Rapids				intermittent	46	Unusual water features appropriately labelled		
28	Falls								
29	Canal								

CULTURE

BUILT-UP AREAS

47	City or large town	
48	Town	
49	Village	
50	Buildings	

HIGHWAYS AND ROADS

57	Dual highway	
58	Primary road	
59	Secondary road	
60	Trail	
61	Road bridge	
62	Road Tunnel	

MISCELLANEOUS (Cont.)

69	Pipeline	
70	Oil or gas field	
71	Tank farms	
72	Nuclear power station	
73	Coast guard station	
74	Lookout tower	
75	Mine	
76	Forest ranger station	
77	Race track stadium	
78	Ruins	
79	Fort	
80	Church	
81	Mosque	
82	Pagoda	
83	Temple	

RAILROADS

51	Railroad (single track)	
52	Railroad (two or more tracks)	
53	Railroad (under construction)	
54	Railroad bridge	
55	Railroad tunnel	
56	Railroad station	

MISCELLANEOUS

63	Boundaries (international)	
64	Outer boundary	
65	Fence	
66	Telegraph or telephone line (when a landmark)	
67	Dam	
68	Ferry	

AERODROMES

84	Civil	Land	
85	Civil	Water	
86	Military	Land	
87	Military	Water	

88	Joint Civil and military	Land	
89	Joint Civil and military	Water	
90	Emergency aerodrome or aerodrome with no facilities		
91	Abandoned or closed aerodrome		

92	Sheltered anchorage	
93	Aerodrome for use on charts on which aerodrome classification is not required e.g. Enroute Charts	
94	Heliport Note. Aerodrome for the exclusive use of helicopters	

95	Note. Where required by the function of the chart, the runway pattern of the aerodrome may be shown in lieu of the aerodrome symbol, for example :	
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AERODROMES (Cont.)

AERODROME DATA IN ABBREVIATED FORM WHICH MAY BE  
IN ASSOCIATION WITH AERODROME SYMBOLS














96	<p>Elevation given in the units of measurement (metres or feet) selected for use on the chart</p> <p>Length of longest runway in hundreds of metres or feet (whichever unit is selected for use on the chart)</p> <p>Minimum lighting – obstacles, boundary or runway lights and lighted wind indicator or landing direction indicator</p> <p>Note.— A dash (–) is to be inserted where L or H do not apply.</p>	<p>Name of aerodrome</p> <p>LIVINGSTONE</p> <p>357 L H 95</p>	<p>Runway hard surfaced, normally all weather</p>

AERODROME SYMBOLS FOR APPROACH CHARTS

97	Aerodromes affecting the traffic pattern on the aerodrome on which the procedure is based		98	The aerodrome on which the procedure is based	
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RADIO NAVIGATION AIDS\*

99	Basic radio navigation aid symbol <i>Note. This symbol may be used with or without a box to enclose the data.</i>			107	Collocated VOR and TACAN radio navigation aids		VORTAC	
100	Non-directional radio beacon NDB			108	Instrument landing system ILS	PLAN VIEW		
101	VHF omnidirectional radio range VOR					Electronic		
102	Distance measuring equipment DME					FRONT COURSE		
103	Collocated VOR and DME radio navigation aids VOR/DME					BACK COURSE		
104	DME distance	Distance in kilometres (nautical miles) to DME — 15 km Identification of radio navigation aid — KAV		109	Radio marker beacon	Elliptical		
105	VOR radial	Radial bearing from, and identification of, VOR R 090 KAV				Bone Shape		
106	UHF tactical air navigation aid TACAN				<i>Note. Marker beacon may be shown by outline, or stipple, or both.</i>			

110	Compass rose To be orientated on the chart in accordance with the alignment of the station (normally Magnetic North)		Compass rose to be used as appropriate in combination with the following symbols:	<table><tr><td>VOR</td><td></td></tr><tr><td>VOR/DME</td><td></td></tr><tr><td>TACAN</td><td></td></tr><tr><td>VORTAC</td><td></td></tr></table>	VOR		VOR/DME		TACAN		VORTAC	
	VOR											
VOR/DME												
TACAN												
VORTAC												
	<i>Note.—Additional points of compass may be added as required.</i>											

\* Note. Guidance material on the presentation of radio navigation aid data is given in the Aeronautical Chart Manual(Doc 8697).

Change : Establishment of note.

AIR TRAFFIC SERVICES

111	Flight information region	FIR		117	Air defence identification zone	ADIZ	
112	Aerodrome traffic zone	ATZ		118	Advisory route	ADR	
113	Control area Airway Controlled route	CTA AWY	Alternative 	119	Visual flight path	compulsory with radio communication requirement	
114	Uncontrolled route					compulsory, without radio communication requirement	
115	Advisory airspace	ADA				recommended	
116	Controlled zone	CTR		120	Scale-break (on ATS route)	Alternative 	

Significant Point Functionality								
			Significant point depiction for conventional navigation		Significant point depiction for area navigation			
121	Basic symbols with functionality	REPORTING FLY-BY/FLY-OVER	On request (N/A)	Compulsory (N/A)	On request fly-by	Compulsory fly-by	On request flyover	Compulsory flyover
		VFR reporting point						
		Intersection INT						
		VORTAC						
		TACAN						
		VOR						
		VOR/DME						
		NDB						
		Waypoint WPT	Not used	Not used				

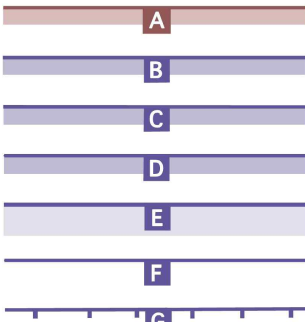
122	Change-over point To be superimposed on the appropriate route symbol at right angles to the route	COP		123	AIS/MET reporting point	MRP	Compulsory	124	Final approach fix	FAF	
							On request				

Change : Amended phrase(requirement recommended → recommended) and table.

AIR TRAFFIC SERVICES (cont.)

125	Altitudes/flight levels	Altitude/flight level "window"	<u>17 000</u> <u>10 000</u>	<u>FL 220</u> <u>10 000</u>
		"At or above" altitude/flight level	<u>7 000</u>	<u>FL 070</u>
		"At or below" altitude/flight level	<u>5 000</u>	<u>FL 050</u>
		"At" altitude/flight level	<u>3 000</u>	<u>FL 030</u>
		"Recommended" altitude/flight level	5 000	FL 050
		"Expected" altitude/flight level	Expect 5 000	Expect FL 050

AIRSPACE CLASSIFICATIONS

126	Airspace classifications		Aeronautical data in abbreviated form to be used in association with airspace classification symbols :		
		127	Alternative	<div><div>TMA DONLON 119.1 <b>C</b> 200m AGL - FL 245</div><div>Type Name or call sign Radio frequency(ies) Airspace classification Vertical limits</div></div> <div><div>TMA DONLON</div><div><b>C</b> FL 245</div><div>200m AGL</div><div>119.1</div></div>	

AIRSPACE RESTRICTIONS

128	Restricted airspace (prohibited, restricted or danger area)		Common boundary of two areas	
<i>Note. The angle and density of rulings may be varied according to scale and the size, shape and orientation of the area.</i>				
129	International boundary closed to passage of aircraft except through air corridor			

OBSTACLES

130	Obstacle		134	Exceptionally high obstacle (optional symbol)	
131	Lighted obstacle		135	Exceptionally high obstacle-lighted (optional symbol)	
132	Group obstacles		<p><i>Note. For obstacles having a height of the order of 300 m (1 000 ft) above terrain.</i></p> <p>136 Elevation of top (italics)  Height above specified datum (upright type in parentheses)</p>		
133	Light group obstacles				

Change : Withdrawal of note and Amended phrases and item number.

MISCELLANEOUS

137	Prominent transmission line		140	Wind Turbine - unlighted and lighted	 
138	Isogonic line or isogonal		141	Wind Turbine - minor group and group in major area, lighted	
139	Ocean station vessel (normal position)				

VISUAL AIDS

142	Marine light <i>Note 2. Characteristics are to be indicated as follows :</i>		Alt Alternating B Blue F Fixed	<i>Note 1. Marine alternating lights are red and white unless otherwise indicated. Marine lights are white unless colours are stated.</i> Fl Flashing G Green Gp Group Occ Occulting R Red SEC Sector sec Second (U) Unwatched W White	
143	Aeronautical ground light		Electronic 	144	Lightship 

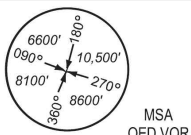
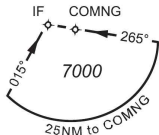

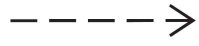
SYMBOLS FOR AERODROME/HELIPORT CHARTS

145	Hard surface runway		154	Point light	 
146	Pierced steel plank or steel mesh runway		155	Obstacle light	
147	Unpaved runway		156	Landing direction indicator (lighted)	
148	Stopway SWY		157	Landing direction indicator (unlighted)	
149	Taxiways and parking areas		158	Stop bar	
150	Helicopter alighting area on an aerodrome		159	Runway-holding position Pattern A Pattern B	 
151	Aerodrome reference point ARP			<i>Note. For application, see Annex 14, Volume I, 5.2.10.</i>	
152	VOR check-point		160	Intermediate holding position <i>Note. For application, see Annex 14, Volume I, 5.2.11.</i>	
153	Runway visual range (RVR) observation site		161	Hot spot <i>Note. Hot spot location to be circled.</i>	







SYMBOLS FOR AERODROME OBSTACLE CHARTS - TYPE A, B AND C

	Plan	Profile		Plan	Profile
162	Tree or shrub		167	Terrain penetrating obstacle plane	
163	Pole, tower, spire, antenna, etc.		168	Escarpment	
164	Building or large structure		169	Stopway SWY	
165	Railroad		170	Clearway CWY	
166	Transmission line or overhead cable				

ADDITIONAL SYMBOLS FOR USE ON PAPER AND ELECTRONIC CHARTS

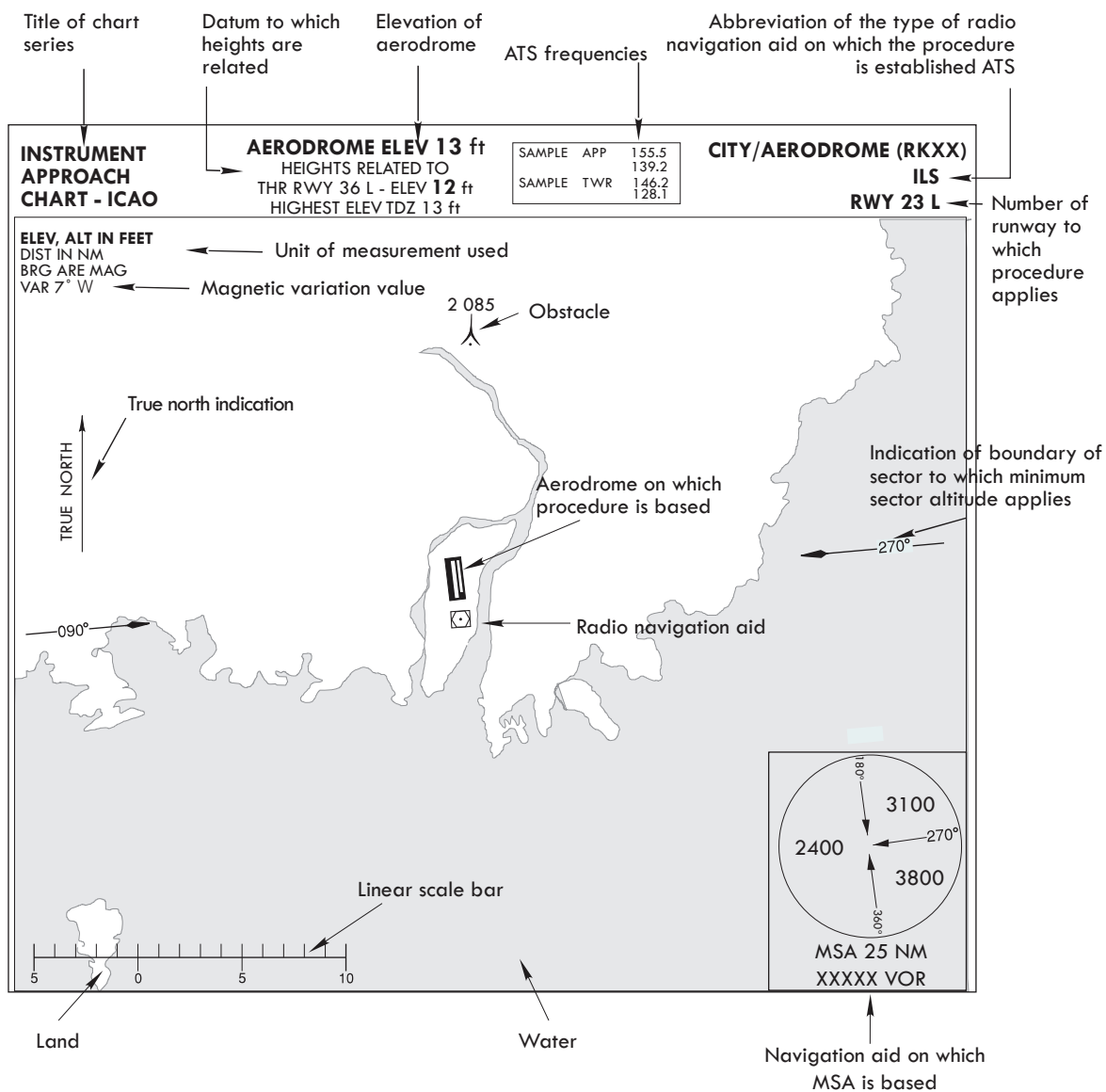
PLAN VIEW		Electronic
171	Minimum sector altitude <i>Note. This symbol may be modified to reflect particular sector shapes.</i> MSA	
172	Terminal arrival altitude <i>Note. This symbol may be modified to reflect particular TAA shapes.</i> TAA	
173	Holding pattern	
174	Missed approach track	

PROFILE

175	Runway	
176	Radio navigation aid (type of aid and its use in the procedure to be annotated on top of the symbol)	
177	Radio marker beacon (type of beacon to be annotated on top of the symbol)	
178	Collocated radio navigation aid and marker beacon (type of aid to be annotated on top of the symbol)	
179	DME fix (distance from DME and the fix use in the procedure to be annotated on top of the symbol)	
180	Collocated DME fix and marker beacon (distance from DME and the type of beacon to be annotated on top of the symbol)	

## INSTRUMENT APPROACH CHART - FORMAT

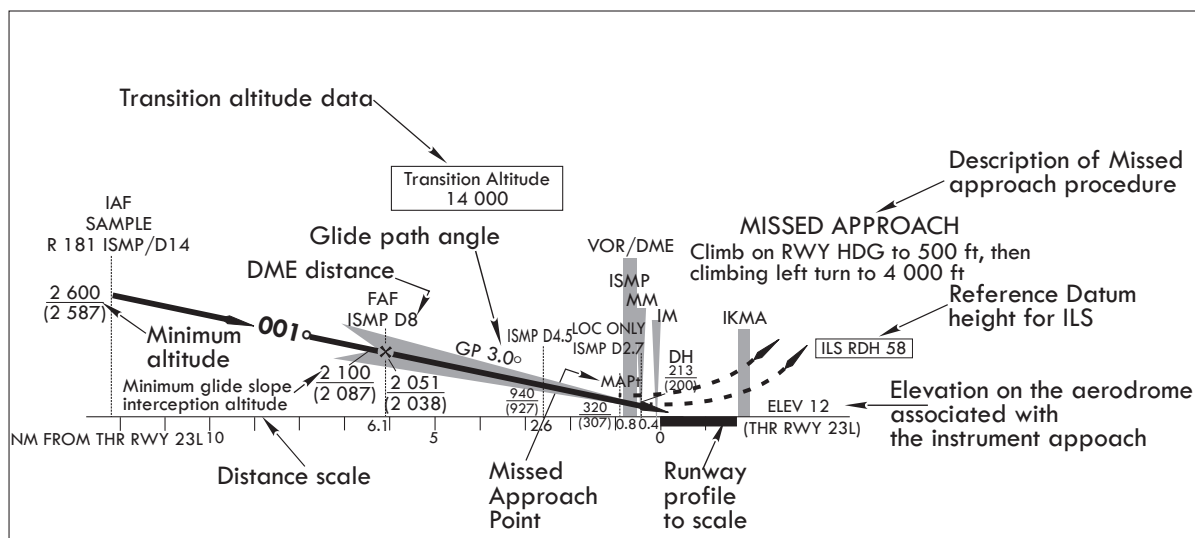
### 1. PLAN VIEW





## INSTRUMENT APPROACH CHART - FORMAT(Cont)

### 2. PROFILE VIEW



### 3. AERODROME OPERATING MINIMA

- MDA/MDH and, DH/DA are shown in feet.
- RVR visibility values are charted only when the value is not the same as the prevailing visibility value. When a difference occurs, the respective RVR and prevailing visibility values are prefixed with "RVR" and "VIS". When there is no difference, the minimum is shown only once and means either RVR (if RVR is reported for that runway) or visibility if measured otherwise.
  - When RVR and visibility values are the same, it is indicated as "800 m".
  - When RVR and visibility values are not the same, it is indicated as "RVR 800 m VIS 1 600 m".

**IFR LANDING MINIMA - for FAA format**

\* Aerodrome operating minima for joint civil/military aerodrome and military aerodrome is tabulated as follows:

	Decision Height(DH) MSL Decision Altitude(DA) MSL		* Prevailing Visibility/RVR (RVR in 100s of feet)		Height of DH (using QFE) above touchdown zone(HAT)		Ceiling in feet & Prevailing Visibility in SM	
Aircraft Category	A	B	C	D				
Precision Straight-in to Runway 27	S-ILS 27	362 / 24	200	(200-1/2)				
Non-Precision (Localizer) Straight-in to Runway 27	S-LOC 27	440 / 24	278 (300-1/2)	440 / 40	278 (300-3/4)			
	CIRCLING	520-1 350 (400-1)	620-1 1/4 450 (500-11/4)	620-1 3/4 450 (500-13/4)	720-2 1/4 550 (600-21/4)			
Precision Approach Radar straight-in to Runway 27	S-PAR 27	262 / 16	100 (100-1/4)	GS 2.50°				
	Minimum Descent Altitude (MDA)	Height of MDA (using QFE) above touchdown zone(HAT)		Glide Slope Angle	Height of MDA (using QFE) above airport (HAA)			

\* Slash(/) denotes RVR Values and a dash(-) denotes Prevailing Visibility.

Aerodrome Operation Minima CONVERSION CHART

CEILING				RUNWAY VISIBILITY			
PUBLISHED MINIMA FEET	REQUIRED EQUIVALENT METERS	RVR VALUES PUBLISHED IN HUNDREDS OF FEET		STATUTE MILE EQUIVALENT	NAUTICAL MILE EQUIVALENT	METERS EQUIVALENT	KILOMETERS EQUIVALENT
100	..... 30	12	.....	1/4(Helicopter Only)	... 2/10	..... 370	..... .4
200	..... 60						
300	..... 90	16	.....	1/4	..... 2/10	..... 490	..... .5
400	..... 120	20	.....	3/8	..... 3/10	..... 610	..... .6
500	..... 150	24	.....	1/2	..... 4/10	..... 730	..... .7
600	..... 180	32	.....	5/8	..... 6/10	..... 970	..... 1.0
700	..... 210	40	.....	3/4	..... 7/10	..... 1 220	..... 1.2
800	..... 240	45	.....	7/8	..... 8/10	..... 1 370	..... 1.4
900	..... 270	50	.....	1	..... 9/10	..... 1 520	..... 1.5
1 000	..... 300	60	.....	1-1/4	..... 1-1/10	..... 1 830	..... 1.8
1 100	..... 330						
1 200	..... 360						
1 300	..... 390						
1 400	..... 420						
1 500	..... 450						

PREVAILING VISIBILITY

STATUTE MILES	NAUTICAL MILES	METERS	KILOMETERS	STATUTE MILES	NAUTICAL MILES	METERS	KILOMETERS
1/8	.... 1/10	... 200	.... .2	1-3/4	..... 1-5/10	... 2 800	..... 2.8
1/4	.... 2/10	... 400	.... .4	1-7/8	..... 1-6/10	... 3 000	..... 3.0
3/8	.... 3/10	... 600	.... .6	2	..... 1-7/10	... 3 200	..... 3.2
	..... 4/10	... 700	.... .7		..... 1-8/10	... 3 400	..... 3.4
1/2		800	.... .8	2-1/4	..... 1-9/10	... 3 600	..... 3.6
	..... 5/10	... 900	.... .9		..... 2	... 3 700	..... 3.7
5/8	.....	1 000	.... 1.0		..... 2-1/10	... 3 900	..... 3.9
	..... 6/10	... 1 100	.... 1.1	2-1/2	..... 2-2/10	... 4 000	..... 4.0
3/4	.....	1 200	.... 1.2	2-5/8	.....	4 200	..... 4.2
	..... 7/10	... 1 300	.... 1.3		..... 2-3/10	... 4 300	..... 4.3
7/8	.....	1 400	.... 1.4	2-3/4	.....	4 400	..... 4.4
	..... 8/10	... 1 500	.... 1.5		..... 2-4/10	... 4 500	..... 4.5
1	.....	1 600	.... 1.6	2-7/8	.....	4 600	..... 4.6
	..... 9/10	... 1 700	.... 1.7		..... 2-5/10	... 4 700	..... 4.7
1-1/8	.... 1	... 1 800	.... 1.8	3	..... 2-6/10	... 4 800	..... 4.8
1-1/4	.... 1-1/10	... 2 000	.... 2.0		..... 2-7/10	... 5 000	..... 5.0
1-3/8	.... 1-2/10	... 2 200	.... 2.2		..... 2-8/10	... 5 200	..... 5.2
1-1/2	.... 1-3/10	... 2 400	.... 2.4		..... 2-9/10	... 5 400	..... 5.4
1-5/8	.... 1-4/10	... 2 600	.... 2.6		..... 3	... 6 000	..... 6.0

Procedure Coding Tables - for ICAO format

RNP APCH ← Procedure Identification

Waypoint/Fix Sequence Numbers → Waypoint/Fix Names → Magnetic Track/True Track between each successive designated significant point → Speed Limit  
+ "Minimum" Speed  
- "Maximum" Speed  
@ "Mandatory" Speed  
± Speed "Window"

Serial Number	Path Descriptor	Waypoint Identifier	Fly-Over	Course/Track ◦ M(◦ T)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	Coordinates	VPA /TCH	Navigation specification	Remarks
001	IF	DANAN	-	-	-	-	+5000	-	373226.0N 1261104.0E (R 291 NCN/D12, R 305 WNG/D14)	-	RNP APCH	IAF
002	TF	RWY 15L	Y	153(144.6)	2.0	-	@450	-	372902.2N 1262624.6E (R 152 NCN/D1, R 359 WNG/D3)	-3.01/50	RNP APCH	
004	HM	KESAN	Y	033(025.0)	-	R	-5000 +4000	-	371753.0N 1261558.0E (R 222 NCN/D14, R 235 WNG/D12)	-	RNP APCH	1 min (Outbound Timing)

Fly-Over Waypoint "Y"  
Fly-By Waypoint "-"

Nautical mile between each successive designated significant point

Required navigation performance or basis for the approval applicable to the procedure

+ "at or above" Altitude/Flight  
- "at or below" Altitude/Flight  
@ "Mandatory" Altitude/Flight  
± Altitude/Flight Level "Window"